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The Impact of Negative Affect and Positive Self-perception on Acquired Capability for Suicide in the Veteran Population

Abstract

Suicide is currently the 10th leading cause of death among Americans overall and is the second leading cause of death among American adults between the ages of 18 and 34 (Kochanek, Murphy, Xu, & Tejada-Vera, 2016). In addition to the number of people who die by suicide, each suicide death costs \$1,287,534 in lost revenue, mental health costs, and medical expenses (Centers for Disease Control and Prevention, 2017). Suicide also takes a toll on people who knew or were close with the person who died. For every one suicide, there are approximately 115 suicide survivors. Put another way, sixty percent of the population report they know at least one person who has attempted or died by suicide (Cerel, Maple, Aldrich, & van de Venne, 2013).

Document Type

Capstone

Degree Name

Psy.D.

Department

Graduate School of Professional Psychology

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Keywords

Suicide, American adults, Suicide survivors

Subject Categories

Applied Behavior Analysis | Psychology

Publication Statement


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The Impact of Negative Affect and Positive Self-perception on Acquired Capability
for Suicide in the Veteran Population


A DOCTORAL PAPER PRESENTED TO
THE FACULTY OF THE
GRADUATE SCHOOL OF PROFESSIONAL PSYCHOLOGY
OFFICE OF GRADUATE STUDIES UNIVERSITY OF
DENVER

IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE
DOCTOR OF PSYCHOLOGY

BY
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July 11, 2017

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Suicide is currently the 10th leading cause of death among Americans overall and is the second leading cause of death among American adults between the ages of 18 and 34 (Kochanek, Murphy, Xu, & Tejada-Vera, 2016). In addition to the number of people who die by suicide, each suicide death costs \$1,287,534 in lost revenue, mental health costs, and medical expenses (Centers for Disease Control and Prevention, 2017). Suicide also takes a toll on people who knew or were close with the person who died. For every one suicide, there are approximately 115 suicide survivors. Put another way, sixty percent of the population report they know at least one person who has attempted or died by suicide (Cerel, Maple, Aldrich, & van de Venne, 2013).

Despite the interpersonal and monetary costs of suicide, our current understanding of the true prevalence of suicide is lacking. The CDC tracks suicides using the National Violent Death Reporting System (NVDRS). However, only 42 states participate in that system. The remaining eight states, including two of the most populous U.S. states (Texas and Florida) and the two states estimated to have the highest percentage of suicides by population (Wyoming and Montana) continue to rely on coroner's reports, medical examiner's reports, and law enforcement as their sole source of non-cross checked suicide death data (Paulozzi, Mercy, Frazier, & Anest, 2004; Steenkamp et al., 2006). Since Wyoming, Montana, Texas, and Florida do not utilize NVDRS to differentiate their classification of violent deaths (i.e., homicide, suicide, etc.) when reporting data to the CDC, the current statistics may underestimate the true rate of suicide (Claassen et al., 2010; Crepeau-Hobson, 2010).

U.S. Veterans are particularly vulnerable to suicide. Title 38 of the Code of Federal Regulations defines a Veteran as “a person who served in the act of military, naval, or air service and was discharged or released under conditions other than dishonorable” (38 C.F.R. 3.1 (d)). There are 21.6 million living U.S. Veterans. As of 2014, they were more likely to die by suicide when compared to their age and gender-matched civilian peers (U.S. Department of Veterans Affairs, Office of Suicide Prevention, 2016). Despite having a mandate to address Veteran suicide since 2007, a 2016 U.S. Department of Veterans Affairs (VA) report shows that, although rates of suicide among male Veterans aged 40-49 have remained stable, rates of suicide among Veterans ages 18-39, 50-69, and over 80 have “increased substantially” (U.S. Department of Veterans Affairs, Office of Suicide Prevention, 2016). Furthermore, within the span of the last two years, non-fatal suicide attempts (where the attempter lived seven days or more) have increased by 50% in this population (Suicide risk factors and risk assessment tools: A systematic review.; U.S. Department of Veterans Affairs, Office of Suicide Prevention, 2016).

Compounding this risk is the rate at which Veterans seek VA healthcare. Only 8.5 million of the nearly 22 million US Veterans use Veterans Health Administration (VHA) services (U.S. Department of Veterans Affairs, Office of Suicide Prevention, 2016). Veterans who do not avail themselves of or who are not eligible for VA healthcare are missing out on specialized programs recently developed to reduce suicide rates.

The assessment of suicide risk poses many challenges. The VA health system does not endorse the use of any single suicide risk assessment tool, making the

assessment of Veteran suicide risk more difficult (The Assessment and Management of Risk for Suicide Working Group, 2013). Among the most commonly used instruments, the sensitivity to suicide risk among Veterans is as low as 17% (Denneson et al., 2010; Doran et al., 2016; Randall, Colman, & Rowe, 2011; Tucker, Crowley, Davidson, & Gutierrez, 2015). There are also significant cultural deterrents to disclosing suicidality or to using mental health services. This includes some Veteran's concerns that seeking mental health services will negatively impact their work and personal relationships, that fellow Veterans will see them as weak and unreliable, or that they will be permanently labeled as mentally ill (Held & Owens, 2013). There are also Veteran-specific values of sacrifice and the protection of others that deter Veterans from seeking help for themselves and add to the stigma of seeking help or talking about suicide (Bryan, 2016; Denneson et al., 2010; E. G. Smith et al., 2013). These concerns are rooted in military policies that allow an active duty service member to be classified as "do not arm (DNA)" (i.e., unfit for duty, sent for formal disability and retirement evaluation) if they report sadness, hostility, or a history of suicide attempt or non-suicidal self-injury (Ainspan, Bryan, & Penk, 2016). For all of these reasons, Veterans often deny suicidality when asked (Denneson et al., 2010; E. G. Smith et al., 2013). Given the unique Veteran culture and the relatively higher risk for completed suicide among Veterans, there is a clear need for better suicide risk assessment for the Veteran population (Jacobson, Osteen, Jones, & Berman, 2012; U.S. Department of Veterans Affairs, Office of Suicide Prevention, 2016).

There are several conventional methods to assess risk for self-harm in professional settings. SAD PERSONS (Patterson, Dohn, Bird, & Patterson, 1983) is a suicide risk assessment mnemonic. SAD PERSONS evaluates the risk for suicide based on ten risk factors including male **s**ex, **a**ge (19 to 45), **d**epression, **p**revious attempt, **e**xcess alcohol or substance use, **r**ational thinking loss, **s**ocial supports lacking, **o**rganized plan, **n**o spouse, and **s**ickness. Despite widespread use in medical, nursing, first responder, and mental health settings, there are important limitations to conducting assessments using this guide. In one study, among those who screened as 'high risk' by the SAD PERSONS mnemonic, only 24% of them actually qualified for psychiatric services due to a suicide attempt (Bolton, Spiwak, & Sareen, 2012; Saunders, Brand, Lascelles, & Hawton, 2014). Additionally, in that study, half of the individuals who presented for psychiatric admission after a suicide attempt were erroneously classified as 'low risk' by SAD PERSONS (Bolton et al., 2012). Another study found that the sensitivity of SAD PERSONS was only 20% (Saunders, Brand, Lascelles, & Hawton, 2014). Finally, the SAD PERSONS mnemonic generates an unacceptable rate of both false positives (87%) and false negatives (14%) when used with a Veteran population (Herman, 2006).

IS PATH WARM is another mnemonic tool, this one developed by the American Association of Suicidology (Juhnke, G.A., Granello, P.F., & Lebron-Striker, M., 2007). It is intended to help professionals correctly identify people at risk for suicide. IS PATH WARM determines the presence or absence of risk for suicide based on the following factors: suicide **i**deation, **s**ubstance abuse, **p**urposelessness, **a**nger, **t**rapped, **h**opelessness, **w**ithdrawing, **a**nxiety, **r**ecklessness, and **m**ood

change. There are also limitations with this tool. The inter-rater reliability of IS PATH WARM has been recorded to be as low as .42 when distinguishing between attempted suicide and malingering (Lester, McSwain, & Gunn, 2011). That value has been classified as 'weak' for tools used in healthcare settings (McHugh, 2012). Additionally, there is a fairly low correlation ($r = .58$) between scores on IS PATH WARM and objective risk level (i.e., suicidal ideation vs. attempt vs. completed suicide; Lester, McSwain, & Gunn, 2011).

There are also single item assessments, or clinical techniques, which include asking clients a single question related to suicide including, "Have you attempted suicide in the past?" "Are you thinking about suicide?" or "Are you feeling depressed?" (Hom, Joiner, & Bernert, 2016). Single item interview question techniques are most commonly used but are fraught with limitations. The questions and responses misclassify suicide risk when compared to a multi-item survey with follow-up questions or clinical interview (Plöderl, Kralovec, Yazdi, & Fartacek, 2011). In addition, they often do not distinguish between past attempters, passive and active suicide ideators, those who engage in non-suicidal self-injury, and those who are at imminent risk of a lethal suicide attempt (Hom et al., 2016; Tucker et al., 2015). Furthermore, one study found that up to 78% of individuals who eventually die by suicide may be more likely to deny current suicidality when asked directly (Busch, Fawcett, & Jacobs, 2003).

Asking about previous suicide attempts may be more useful. A history of suicide attempt has been found to relate to increasingly lethal future suicide attempts in both Veteran and non-Veteran populations (Joiner, Van Orden, Witte, &

Rudd, 2009; Bostwick, Pabbati, Geske, & McKean, 2016). In fact, a previous suicide attempt is a better predictor of risk than hopelessness and psychopathology (Cavanagh, Owens, & Johnstone, 1999; Joiner et al., 2005; Joiner, Van Orden, Witte, & Rudd, 2009). Several studies have found that a history of a suicide attempt increases the intensity of subsequent suicidal crises (Joiner & Rudd, 2000; Joiner, Rudd, Rouleau, & Wagner, 2000). That is to say that a previous suicide attempt increases the severity of future suicidality because it equips the attempter with the capability for self-harm by eroding the psychological barriers to lethal self-harm. The capability to engage in lethal self-harm is comprised of fearlessness about death and elevated psychological pain tolerance (Ribeiro et al., 2014).

A significant limitation of single item assessments and some mnemonic devices is their failure to assess both cognitive and affective factors. Promising data suggests that cognitive and affective risk factors are equally strong predictors of suicide risk (Yamokoski, Scheel, & Rogers, 2011). Both affect and cognition are widely cited in the literature as distinct constructs in the assessment of suicidality. Affect is defined as an emotional sensation that presupposes or sometimes is never assigned a cognitive appraisal (Zajonc, 1984). Cognition is defined as an intellectual appraisal with the potential to create an emotional response (Ekman & Davidson, 1994). In a 20-year prospective study, Brown, Beck, Steer, & Grisham (2000) found that both cognitive (e.g., suicide ideation) and affective factors (e.g., depression and bipolar mood disorders) uniquely predicted fatal suicide attempts. Another study found that negative mood, coupled with pessimistic cognitions, was the most robust predictor of hospitalization for a suicide attempt within a six-month period (Mrnak-

Meyer et al., 2011). Yamokoski et al. (2011) found that heightened affective states, combined with negative cognitions, were more strongly correlated with suicidal ideation and behaviors than negative cognitions or affect alone. Despite the advantage conferred by assessing affect and cognition together, only 25% of instruments assess both (Harris et al., 2015; Range & Knott, 1997).

Additionally, the predictive power of suicide risk assessment measures may be even greater when cognitive and affective risks are considered together with protective factors (Gutierrez & Osman, 2008; Sommers-Flanagan & Shaw, 2016). A 'protective factor' is a supportive resource or cognitive belief that safeguards or buffers against suicidal behaviors or risk factors for suicide and can include: family connectedness, caring for and feeling protective of one's physical body, and self-esteem (Gutierrez & Osman, 2008). In a landmark study, Linehan and colleagues identified several reasons for living (i.e., protective factors) that differentiated suicidal from nonsuicidal respondents in both clinical and non-clinical samples (Linehan, Goodstein, Nielsen, & Chiles, 1983). These results suggest that protective factors always be included in suicide risk assessment.

The present study seeks to confirm a body of mostly civilian literature that suggests that affective and cognitive risk factors, together with protective factors, are predictive of the capability to engage in lethal self-harm. The present study applied this model to a Veteran population. It was hypothesized that positive self-perception, as measured by the Multidimensional Suicide Inventory-28 (MSI-28/MSRI-28; Osman, Gutierrez, Freedenthal, Wong, & Bagge, 2010), would be negatively correlated with the ability to engage in lethal self-harm as measured by

the Acquired Capability for Suicide Scale (Van Orden, Witte, Gordon, Bender, & Joiner, 2008). Positive self-perception is defined by the MSI-28 as a cognitive factor, while negative affect is defined as an affective construct.

It was also hypothesized that negative affect, as measured by the MSI-28, would positively correlate with the ability to engage in lethal self-harm as measured by the ACSS. Further, because a history of suicide attempt has been shown to increase acquired capability for suicide (Van Orden et al., 2008), the presence or absence of past suicide attempts in the current sample was expected to moderate the relationship between both negative affect and the acquired capability for suicide as well as the relationship between positive self-perception and the acquired capability for suicide (Baron & Kenny, 1986; Cohen, Cohen, West, & Aiken, 2003; Hayes, 2013; Kenny, 2015). In this way, it was expected that the presence of one or more previous suicide attempts would be related to increased negative affect, which is related to an increased acquired capability for suicide. Similarly, the absence of a previous suicide attempt was expected to increase the protective effect of positive self-perception upon acquired capability for suicide. Results from this study will improve our understanding of the factors contributing to suicide risk in the Veteran population.

Method

Participants

The present study is a secondary data analysis of de-identified data collected from Veteran participants (N= 484) at a large VA medical center (VAMC) in the course of another study designed to examine the psychometric properties of

measures that quantify suicide risk as defined by Joiner's interpersonal-psychological theory of suicide (IPTS; 2005). The sample consisted of 484 individuals, of which 11.8% were females and 87.8% were males (one respondent failed to indicate male or female). Their ages ranged from 22 to 86 years with a mean age of 49 years. More than fifty-five percent (55.8) of the sample identified as Caucasian, 30% identified as Black/African American, 2.5% as multiple races, 2.1% as Native American, 0.6% as Asian, and 0.6% identified as American Indian. Thirty-one percent (30.6%) of the sample reported previously attempting suicide.

Measures

The Acquired Capability for Suicide Scale (ACSS; Van Orden, et al., 2008) was used as the measure of acquired capability for suicide. The ACSS reflects the capacity for a lethal suicide attempt. Different from risk, the ability to engage in a lethal suicide attempt reflects the translation of risk factors into the action of killing oneself. Acquired capability is part of Joiner's Interpersonal Psychological Theory of Suicide (IPTS), which hypothesizes that acquired capability is a necessary component of suicidal behavior (Joiner et al., 2009) in order for death to be possible. Research with the ACSS has shown satisfactory estimates of internal consistency in both non-Veteran (Cronbach's α ranging from .68 to 0.83; Bender, Gordon, Bresin, & Joiner, 2011; P. N. Smith, Cukrowicz, Poindexter, Hobson, & Cohen, 2010; Van Orden et al., 2008) and Veteran samples (internal consistency coefficient- $w = .738$; Gutierrez et al., 2016).

The Multidimensional Suicide Inventory-28 (MSI-28; Osman, et al. 2010) assesses negative affect and positive self-perception. The MSI-28 was developed to

assess suicide risk in both Veteran and civilian populations and is an empirically validated measure of risk and protective factors as well as cognitive and affective constructs (Bezdjian, Burchett, Schneider, Baker, & Garb, 2015). There are four factors comprising the MSI-28: Family Connectedness, Suicidal Ideation, Negative Affect, and Positive Self-Perception. For the purposes of this study, only two of the subscales were examined. Those two subscales are negative affect and positive self-perception. Negative affect is defined as distress involving mixed emotions, rapid changes in mood, and irritability. Positive self-perception is defined as the recognition of personal resources and awareness of one's own opinions, ideas, and sense of direction. Research with the MSI-28 has shown satisfactory estimates of internal consistency and reliability (coefficients ranging from .87 to .94 and .90 to .94 respectively) in a non-Veteran student sample (Emmerich, 2012) and an active duty military sample (Bezdjian et al., 2015).

Statistical Analyses

For the purposes of this study, two separate linear regressions were utilized to examine both the relationship between negative affect and the acquired capability for suicide and the relationship between positive self-perception and the acquired capability for suicide. The results report the slope with 95% confidence interval, r -squared, and p -value. A Post hoc power analysis ($1 - \beta$) using G*Power software suggested adequate power ($1 - \beta = .74$) with a conservative effect size ($f = .10$) and robust power ($1 - \beta = 1.0$) with both a medium and large effect size ($f = .25$ and $f = .40$).

Linear regression analyses were conducted using SPSS 24.0 to assess hypotheses one and two, whereas moderation analyses were conducted using PROCESS 2.16 in SPSS 24.0 to test hypotheses three and four. PROCESS evaluates two- and three-way interactions in moderation models together with regions of significance and simple slopes for probing interactions.

Results

All variables were converted from discrete to continuous and checked for multicollinearity prior to analysis. Factor analysis confirmed that the following constructs were unitary: positive self-perception and negative affect. To prepare the moderator analyses, positive self-perception, negative affect, and total score on the ACSS were centered. Interactions were run between the ACSS and positive self-perception and negative affect, respectively, and all linear regression assumptions were met.

Results from linear regression analyses to test the hypothesis that positive self-perception decreased the ability to engage in lethal self-harm (hypothesis 1) indicated that there was no statistically significant relationship between positive self-perception and ability to engage in lethal self-harm, $r = .031$, $F(1, 460) = .439$, $p = .508$. There was also no statistically significant relationship between negative affect and the ability to engage in lethal self-harm (hypothesis 2), $r = -.057$, $F(1, 458) = 1.456$, $p = .227$. The means, standard deviations, and bivariate correlations between the research variables of hypotheses 1 and 2 are presented in Table 1.

Table 1

Pearson Correlation Coefficients

	Mean (SD)	PSP	Past Attempt	NA
PSP	25.45(6.54)	1.00		
Past Attempt	2.09(6.36)	.031	1.00	
NA	17.76(7.45)		-.057	1.00

PSP, positive self-perception; NA, negative affect

* $p < .05$

Hypotheses 3 and 4 examined the moderating effects of past suicide attempt on the relationships between positive self-perception and the ability to engage in lethal self-harm and negative affect and the ability to engage in lethal self-harm, respectively. There was no significant main effect for positive self-perception ($p = .500$) or lethal self-harm ($p = .143$) and no significant interaction between the two variables ($p = .943$). Suicide attempts did not moderate the relationship between positive self-perception and the acquired capability to engage in lethal harm. There was no significant main effect for negative affect ($p = .297$) or the acquired capability to engage in lethal self-harm ($p = .201$) and there was no significant interaction between the two variables ($p = .520$). Suicide attempts did not moderate the relationship between negative affect and acquired capability to engage in lethal self-harm (see Figures 1 and 2).

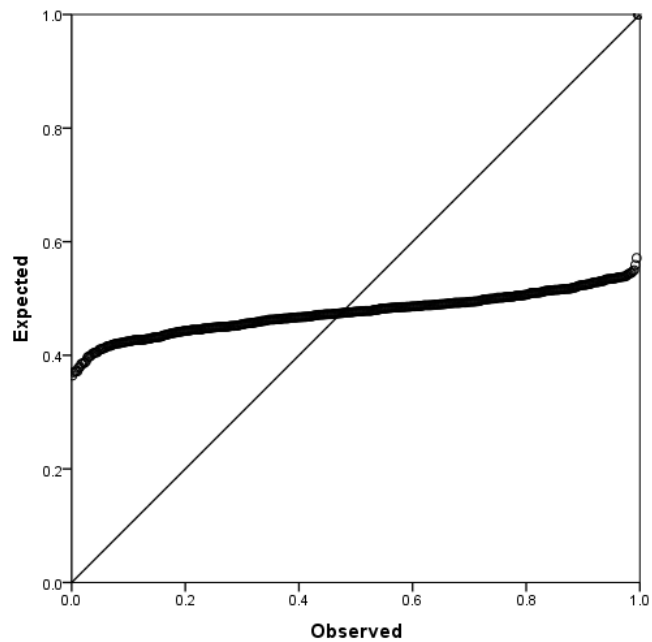


Figure 1. Interaction graph for prior suicide attempt as moderator of positive self-perception and acquired capability to engage in lethal self-harm.

Figure 1 displays how the observed results deviated from the expected results suggesting that a prior suicide attempt does not moderate the relationship between positive self-perception and acquired capability to engage in lethal self-harm.

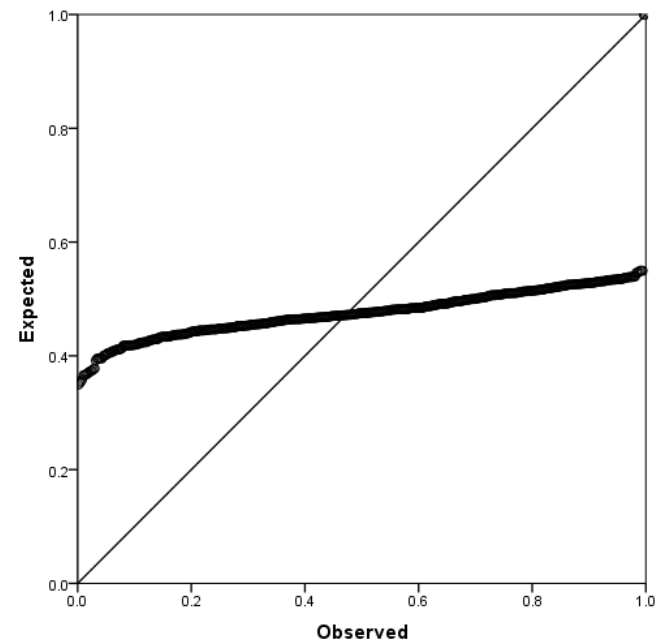


Figure 2. Interaction graph for prior suicide attempt as moderator of negative affect and acquired capability to engage in lethal self-harm.

Figure 2 displays how the observed results deviated from the expected results suggesting that a prior suicide attempt does not moderate the relationship between negative affect and acquired capability to engage in lethal self-harm.

Discussion

The results failed to identify a significant relationship between positive self-perception or negative affect and the ability to engage in lethal self-harm.

Furthermore, because there was no relationship, suicide attempts did not moderate the relationship between positive self-perception and the ability to engage in lethal self-harm or between negative affect and the ability to engage in lethal self-harm.

These results do not suggest that cognitive and affective risk and protective factors are unrelated to the ability to engage in lethal self-harm but instead, that the variables selected for the current analyses did not perform as expected. Further, the results underscore the challenge of substantiating the relationships between a cognitive protective factor, affective risk factor, and acquired capability to engage in lethal self-harm. This study did not measure or control for other factors that can affect acquired capability such as the lethality of an attempt, the number, frequency and recency of attempts, whether a non-lethal attempt was interrupted by accidental discovery of the attempter, or if the attempter themselves aborted an attempt.

The purpose of this study was to explore the relationships between the acquired capability to engage in lethal self-harm and one cognitive protective factor and one affective risk factor. The specific factors of positive self-perception and negative affect were chosen because they reflect emerging literature that demonstrates the importance of assessing both cognitive protective and affective risk factors. These factors are also theoretically consistent with the outcome measure utilized in this study, the ACSS (Van Orden et al., 2008), which measures

the acquired capability to engage in a lethal suicide attempt. The acquired capability to engage in a lethal suicide attempt is one of the primary risk factors outlined by the Interpersonal Psychological Theory of Suicide (IPT; Joiner et al., 2009). The IPT provides a theoretical basis for the exploration of cognitive and affective risk and protective factors and their relationship to belongingness, feeling oneself to be a burden upon others, and the acquired capability to engage in lethal self-harm.

Factors that reduce perceived burdensomeness, thwarted belonging, or acquired capability for suicide include supportive resources or cognitive beliefs that safeguard or buffer against suicidal behaviors or risk for suicide (Gutierrez & Osman, 2008). Positive self-perception, one such protective factor, is defined as the recognition of personal resources and the awareness of one's own opinions, ideas, and sense of direction (Emmerich, 2012). Primarily, a recognition of one's own personal resources and sense of direction and, secondarily, an awareness of one's own opinions and ideas is a form of personal effectiveness. Personal effectiveness has been found to decrease burdensomeness as conceptualized by the IPT (Joiner et al., 2001; Kaslow et al., 2002). Because positive self-perception, as defined by the authors of the MSI-28, is a perception of personal effectiveness, it should act as a buffer against perceived burdensomeness. However, in the present study, positive self-perception did not create a significant buffering effect and did not reduce acquired capability to engage in lethal self-harm.

The risk factor selected for this study, negative affect, reflects an "increase in likelihood that an individual will experience thwarted belongingness and perceived burdensomeness..." (Joiner et al., 2009, p. 23). As with positive self-perception,

negative affect is also theoretically consistent with the IPTS. Despite this theoretical consistency, there was no significant relationship between negative affect and acquired capability for suicide.

Also, since past suicide attempts have been widely cited as a strong predictor of future attempts (Joiner & Rudd, 2000; Joiner et al., 2000; Ribeiro et al., 2014), this study examined whether past suicide attempts moderate the relationship between positive self-perception and negative affect and the ability to engage in lethal self-harm. Past attempts have been considered a pathway to the development of acquired capability, the third factor of the IPTS (Joiner et al., 2009) but in the present study, suicide attempts did not moderate the relationship between positive self-perception or negative affect and the acquired capability to engage in lethal self-harm.

A more complete assessment of the moderating effects of prior attempt on acquired capability to engage in lethal self-harm should include an assessment of the meaning made of the attempt by the attempter (Lewinsohn, Rohde, & Seeley, 1996; Rudd, Joiner, & Rajad, 1996). The meaning of an attempt can be thought of as the emotional and cognitive reactions of an attempt survivor and is assumed to inform whether or not an attempt is viewed as a painful and provocative experience (Bryan, Hernandez, Allison, & Clemans, 2013). Painful and provocative experiences can facilitate the acquired capability to engage in lethal self-harm because they break down aversions to previously noxious or provocative stimuli (e.g., fear of death and pain of inflicting self-injury). This is the mechanism by which painful and provocative experiences have been found to lead to acquired capability to engage in

lethal self-harm (Bender et al., 2011; Bryan et al., 2013). These relationships are illustrated in Figure 3.

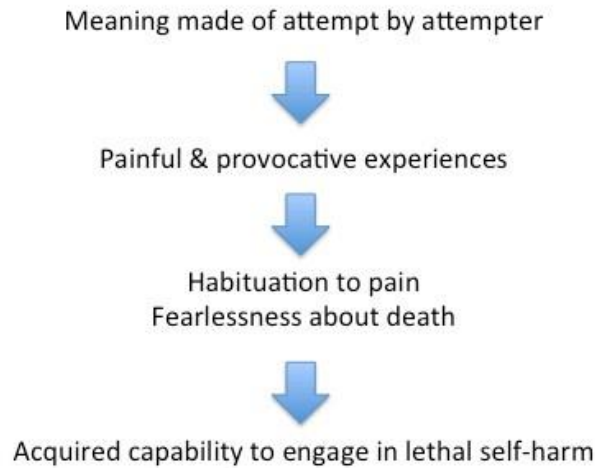


Figure 3. Diagram of relationships between meaning made of an attempt by attempter, painful & provocative experiences, habituation to pain & fearlessness about death, and acquired capability to engage in lethal self-harm.

The meaning made of a prior attempt can either increase or attenuate the painful and provocative valence of a prior suicide attempt, which in turn can effect habituation and fearlessness towards suicide. Measuring the meaning of the attempt to the individual is likely a more robust reflection of acquired capability than whether an attempt occurred at all (Joiner et al., 2009). Further, instruments to better measure habituation to pain and fearlessness of death are under development. For example, the ACSS-Fearlessness About Death Scale (ACSS-FAD; Ribeiro et al., 2014) was recently developed and includes seven items that better measure fearlessness about death than the original ACSS. Future analyses of moderation should include all of these variables and not simply the presence or

absence of a prior suicide attempt (Gutierrez, Osman, Barrios, & Kopper, 2001; Joiner, Rudd, & Rajab, 1997).

Limitations of the Present Study

The present study used an existing dataset that included a single cognitive protective factor and affective risk factor: positive self-perception and negative affect, respectively. This limited exploration of the relationship between cognitive protective and affect risk factors and acquired capability to engage in lethal self-harm. Had the available data set included multiple cognitive and affective risk and protective factors, a more thorough investigation would have been possible.

Additionally, information about the types and circumstances of prior suicide attempts was not available and prior suicide attempts were recorded only as present or absent. Specific information about the circumstances of the attempt and the meaning made of the attempt by the individual may provide a more meaningful assessment of acquired capability for a lethal suicide attempt (Joiner et al., 2009).

Future Directions

The VA's most recent data suggest that the suicide rate has remained stable or increased among all age groups (U.S. Department of Veterans Affairs, Office of Suicide Prevention, 2016). Results from this study were expected to confirm that one cognitive protective and one affective risk variable are related to the capability to engage in lethal self-harm among the Veteran population. While positive self-perception and negative affect were not found to be significantly related to ability to engage in lethal self-harm, other variables that are consistent with the IPTS may be. The larger body of research supports the continued assessment of cognitive

protective together with affective risk factors in the estimation of acquired capability to engage in lethal self-harm (Mrnak-Meyer et al., 2011; Ribeiro et al., 2014; Yamokoski et al., 2011).

Further, because no significant relationships between positive self-perception and acquired capability to engage in lethal self-harm and negative affect and the ability to engage in lethal self-harm were identified, conclusions about the use of prior suicide attempt as a moderator cannot be drawn. The complex nature of acquired capability for lethal self-harm and its relationship to other constructs such as the meaning made of an attempt by attempter, painful and provocative experiences, habituation to pain, and fearlessness about death suggest it be measured in the most thoughtful way possible.

References

38 C.F.R. 3.1 (d)

Ainspan, N. D., Bryan, C. J., & Penk, W. E. (2016). In Ainspan N. D., Bryan C. J. and Penk W. E. (Eds.), *Handbook of psychosocial interventions for veterans and service members: A guide for the non-military mental health clinician*. New York, NY, US: Oxford University Press.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182. doi:10.1037/0022-3514.51.6.1173

Bender, T. W., Gordon, K. H., Bresin, K., & Joiner, T. (2011). Impulsivity and suicidality: The mediating role of painful and provocative experiences. *Journal of Affective Disorders*, *129*(1-3), 301-307. doi:10.1016/j.jad.2010.07.023

Bezdjian, S., Burchett, D., Schneider, K. G., Baker, M. T., & Garb, H. N. (2015). Multidimensional suicide inventory-28 (MSI-28) within a sample of military basic trainees: An examination of psychometric properties. *Military Psychology*, *27*(6), 325-334. doi:10.1037/mil0000090

Bolton, J. M., Spiwak, R., & Sareen, J. (2012). Predicting suicide attempts with the SAD PERSONS scale: A longitudinal analysis. *The Journal of Clinical Psychiatry*, *73*(6), e735-e741. doi:10.4088/JCP.11m07362

- Bostwick, J. M., Pabbati, C., Geske, J. R., & McKean, A. J. (2016). Suicide attempt as a risk factor for completed suicide: Even more lethal than we knew. *Ajp*, *173*(11), 1094-1100. doi:10.1176/appi.ajp.2016.15070854
- Brown, G. K., Beck, A. T., Steer, R. A., & Grisham, J. R. (2000). Risk factors for suicide in psychiatric outpatients: A 20-year prospective study. *Journal of Consulting and Clinical Psychology*, *68*(3), 371-377. doi:10.1037/0022-006X.68.3.371
- Bryan, C. J. (2016). Addressing mental health stigma. In N. D. Ainspan, C. J. Bryan, W. E. Penk, N. D. Ainspan (Ed), C. J. Bryan (Ed) & W. E. Penk (Ed) (Eds.), (pp. 399-410). New York, NY, US: Oxford University Press.
- Bryan, C. J., Hernandez, A. M., Allison, S., & Clemans, T. (2013). Combat exposure and suicide risk in two samples of military personnel. *Journal of Clinical Psychology*, *69*(1), 64-77. doi:10.1002/jclp.21932
- Busch, K. A., Fawcett, J., & Jacobs, D. G. (2003). Clinical correlates of inpatient suicide. *The Journal of Clinical Psychiatry*, *64*(1), 14-19. doi:10.4088/JCP.v64n0105
- Cavanagh, J. T. O., Owens, D. G. C., & Johnstone, E. C. (1999). Life events in suicide and undetermined death in south-east scotland: A case-control study using the method of psychological autopsy. *Social Psychiatry and Psychiatric Epidemiology*, *34*(12), 645-650. doi:10.1007/s001270050187
- Centers for Disease Control and Prevention. (2017). Suicide: Consequences. Retrieved from <https://www.cdc.gov/violenceprevention/suicide/consequences.html>

- Cerel, J., Maple, M., Aldrich, R., & van de Venne, J. (2013). Exposure to suicide and identification as survivor: Results from a random-digit dial survey. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *34*(6), 413-419. doi:10.1027/0227-5910/a000220
- Claassen, C. A., Yip, P., Corcoran, P., Bossarte, R. M., Lawrence, B. A., & Currier, G. W. (2010). National suicide rates a century after durkheim: Do we know enough to estimate error? *Suicide and Life-Threatening Behavior*, *40*(3), 193-223. doi:10.1521/suli.2010.40.3.193
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences., 3rd ed.* Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Crepeau-Hobson, F. (2010). The psychological autopsy and determination of child suicides: A survey of medical examiners. *Archives of Suicide Research*, *14*(1), 24-34. doi:10.1080/13811110903479011
- Denneson, L. M., Basham, C., Dickinson, K. C., Crutchfield, M. C., Millet, L., Shen, X., & Dobscha, S. K. (2010). Suicide risk assessment and content of VA health care contacts before suicide completion by veterans in oregon. *Psychiatric Services*, *61*(12), 1192-1197. doi:10.1176/appi.ps.61.12.1192
- Doran, N., De Peralta, S., Depp, C., Dishman, B., Gold, L., Marshall, R., . . . Tiamson-Kassab, M. (2016). The validity of a brief risk assessment tool for predicting suicidal behavior in veterans utilizing VHA mental health care. *Suicide and Life-Threatening Behavior*, *46*(4), 471-485. doi:10.1111/sltb.12229

- Ekman, P., & Davidson, R. J. (1994). *The nature of emotion : Fundamental questions*. New York: New York : Oxford University Press.
- Emmerich, A. (2012). In Osman A., Fuhrman R. and Pillow D.(Eds.), *The multidimensional suicide inventory-28 (MSI-28): Evaluation of factor structure and psychometric properties* ProQuest Dissertations Publishing.
- Gutierrez, P. M., & Osman, A. (2008). *Adolescent suicide: An integrated approach to the assessment of risk and protective factors*. DeKalb, IL, US: Northern Illinois University Press.
- Gutierrez, P. M., Osman, A., Barrios, F. X., & Kopper, B. A. (2001). Development and initial validation of the self-harm behavior questionnaire. *Journal of Personality Assessment*, 77(3), 475-490. doi:10.1207/S15327752JPA7703_08
- Gutierrez, P. M., Pease, J., Matarazzo, B. B., Monteith, L. L., Hernandez, T., & Osman, A. (2016). Evaluating the psychometric properties of the interpersonal needs questionnaire and the acquired capability for suicide scale in military veterans. *Psychological Assessment*, doi:10.1037/pas0000310
- Harris, K. M., Syu, J., Lello, O. D., Chew, Y. L. E., Willcox, C. H., & Ho, R. H. M. (2015). The ABC's of suicide risk assessment: Applying a tripartite approach to individual evaluations. *PLoS ONE*, 10(6)
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY, US: Guilford Press.

- Held, P., & Owens, G. P. (2013). Stigmas and attitudes toward seeking mental health treatment in a sample of veterans and active duty service members. *Traumatology, 19*(2), 136-143.
doi:10.1177/1534765612455227
- Herman, S. M. (2006). Is the SADPERSONS scale accurate for the veterans affairs population? *Psychological Services, 3*(2), 137-141. doi:10.1037/1541-1559.3.2.137
- Hom, M. A., Joiner, T., & Bernert, R. A. (2016). Limitations of a single-item assessment of suicide attempt history: Implications for standardized suicide risk assessment. *Psychological Assessment, 28*(8), 1026-1030. doi:10.1037/pas0000241
- Jacobson, J. M., Osteen, P., Jones, A., & Berman, A. (2012). Evaluation of the recognizing and responding to suicide risk training. *Suicide and Life-Threatening Behavior, 42*(5), 471-485.
doi:10.1111/j.1943-278X.2012.00105.x
- Joiner, T., Conwell, Y., Fitzpatrick, K. K., Witte, T. K., Schmidt, N. B., Berlim, M. T., . . . Rudd, M. D. (2005). Four studies on how past and current suicidality relate even when 'everything but the kitchen sink' is covaried. *Journal of Abnormal Psychology, 114*(2), 291-303.
doi:10.1037/0021-843X.114.2.291
- Joiner, T., Pettit, J. W., Perez, M., Burns, A. B., Gencoz, T., Gencoz, F., & Rudd, M. D. (2001). Can positive emotion influence problem-solving attitudes among suicidal adults? *Professional Psychology: Research and Practice, 32*(5), 507-512. doi:10.1037/0735-7028.32.5.507
- Joiner, T., & Rudd, M. D. (2000). Intensity and duration of suicidal crisis vary as a function of previous suicide attempts and negative life events. *Journal of Consulting and Clinical Psychology, 68*(5), 909-916. doi:10.1037/0022-006X.68.5.909

Joiner, T., Rudd, M. D., & Rajab, M. H. (1997). The modified scale for suicidal ideation: Factors of suicidality and their relation to clinical and diagnostic variables. *Journal of Abnormal Psychology, 106*(2), 260-265. doi:10.1037/0021-843X.106.2.260

Joiner, T., Rudd, M. D., Rouleau, M. R., & Wagner, K. D. (2000). Parameters of suicide crises vary as a function of previous suicide attempts in youth inpatients. *Journal of the American Academy of Child & Adolescent Psychiatry, 39*(7), 876-880. doi:10.1097/00004583-200007000-00016

Joiner, T., Van Orden, K. A., Witte, T. K., & Rudd, M. D. (2009). *The interpersonal theory of suicide: Guidance for working with suicidal clients*. Washington, DC, US: American Psychological Association. doi:10.1037/11869-000

Juhnke, G.A., Granello, P.F., & Lebron-Striker, M. (2007). IS PATH WARM? A suicide assessment mnemonic for counselors. *Professional Counseling Digest, 3*

Kaslow, N. J., Okun, A., Young, S., Wyckoff, S., Parker, R., Thompson, M. P., . . . Goldin, J. (2002). Risk and protective factors for suicidal behavior in abused african american women. *Journal of Consulting & Clinical Psychology, 70*(2), 311.

Kenny, D. A. (2015,). Moderation. Retrieved from <http://davidakenny.net/cm/moderation.htm>

Kochanek, K., Murphy, S., Xu, J., & Tejada-Vera, B. (2016). Deaths: Final data for 2014. *National Vital Statistics Reports, 65*(4) Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_04.pdf

- Lester, D., McSwain, S., & Gunn, J. F. I,II. (2011). A test of the validity of the IS PATH WARM warning signs for suicide. *Psychological Reports, 108*(2), 402-404.
doi:10.2466/09.12.13.PR0.108.2.402-404
- Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1996). Adolescent suicidal ideation and attempts: Prevalence, risk factors, and clinical implications. *Clinical Psychology: Science and Practice, 3*(1), 25-46. doi:10.1111/j.1468-2850.1996.tb00056.x
- Linehan, M. M., Goodstein, J. L., Nielsen, S. L., & Chiles, J. A. (1983). Reasons for staying alive when you are thinking of killing yourself: The reasons for living inventory. *Journal of Consulting and Clinical Psychology, 51*(2), 276-286. doi:10.1037/0022-006X.51.2.276
- McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica, 22*(3), 276-282.
- Mrnak-Meyer, J., Tate, S. R., Tripp, J. C., Worley, M. J., Jajodia, A., & McQuaid, J. R. (2011). Predictors of suicide-related hospitalization among U.S. veterans receiving treatment for comorbid depression and substance dependence who is the riskiest of the risky? *Suicide and Life-Threatening Behavior, 41*(5), 532-542. doi:10.1111/j.1943-278X.2011.00051.x
- Patterson, W. M., Dohn, H. H., Bird, J., & Patterson, G. A. (1983). Evaluation of suicidal patients: The SAD PERSONS scale. *Psychosomatics: Journal of Consultation and Liaison Psychiatry, 24*(4), 343-349. doi:10.1016/S0033-3182(83)73213-5
- Paulozzi, L. J., Mercy, J., Frazier, L., & Annett, J. L. (2004). CDC's national violent death reporting system: Background and methodology. *Injury Prevention, 10*(1), 47.
doi:10.1136/ip.2003.003434

- Plöderl, M., Kralovec, K., Yazdi, K., & Fartacek, R. (2011). A closer look at self-reported suicide attempts: False positives and false negatives. *Suicide and Life-Threatening Behavior, 41*(1), 1-5. doi:10.1111/j.1943-278X.2010.00005.x
- Randall, J. R., Colman, I., & Rowe, B. H. (2011). A systematic review of psychometric assessment of self-harm risk in the emergency department. *Journal of Affective Disorders, 134*(1-3), 348-355. doi:10.1016/j.jad.2011.05.032
- Range, L. M., & Knott, E. C. (1997). Twenty suicide assessment instruments: Evaluation and recommendations. *Death Studies, 21*(1), 25-58. doi:10.1080/074811897202128
- Ribeiro, J. D., Witte, T. K., Van Orden, K. A., Selby, E. A., Gordon, K. H., Bender, T. W., & Joiner, T. (2014). Fearlessness about death: The psychometric properties and construct validity of the revision to the acquired capability for suicide scale. *Psychological Assessment, 26*(1), 115-126. doi:10.1037/a0034858; 10.1037/a0034858.supp (Supplemental)
- Rudd, M. D., Joiner, T., & Rajad, M. H. (1996). Relationships among suicide ideators, attempters, and multiple attempters in a young-adult sample. *Journal of Abnormal Psychology, 105*(4), 541-550. doi:10.1037/0021-843X.105.4.541
- Saunders, K., Brand, F., Lascelles, K., & Hawton, K. (2014). The sad truth about the SADPERSONS scale: An evaluation of its clinical utility in self-harm patients. *Emergency Medicine Journal : EMJ, 31*(10), 796-798. doi:10.1136/emmermed-2013-202781 [doi]
- Smith, E. G., Kim, H. M., Ganoczy, D., Stano, C., Pfeiffer, P. N., & Valenstein, M. (2013). Suicide risk assessment received prior to suicide death by veterans health administration patients with a history of depression. *The Journal of Clinical Psychiatry, 74*(3), 226-232. doi:10.4088/JCP.12m07853

- Smith, P. N., Cukrowicz, K. C., Poindexter, E. K., Hobson, V., & Cohen, L. M. (2010). The acquired capability for suicide: A comparison of suicide attempters, suicide ideators, and non-suicidal controls. *Depression and Anxiety, 27*(9), 871-877. doi:10.1002/da.20701
- Sommers-Flanagan, J., & Shaw, S. L. (2016). Suicide risk assessment: What psychologists should know. *Professional Psychology: Research and Practice, doi:10.1037/pro0000106*
- Steenkamp, M., Frazier, L., Lipskiy, N., Deberry, M., Thomas, S., Barker, L., & Karch, D. (2006). The national violent death reporting system: An exciting new tool for public health surveillance. *Injury Prevention, 12*, ii3. doi:10.1136/ip.2006.012518
- Suicide risk factors and risk assessment tools: A systematic review. Retrieved from <http://www.hsrd.research.va.gov/publications/esp/suicide-risk.cfm>
- The Assessment and Management of Risk for Suicide Working Group. (2013). *VA/DoD clinical practice guideline for assessment and management of patients at risk for suicide*. (No. Version 1.0). Department of Veterans Affairs and Department of Defense.
- Tucker, R. P., Crowley, K. J., Davidson, C. L., & Gutierrez, P. M. (2015). Risk factors, warning signs, and drivers of suicide: What are they, how do they differ, and why does it matter? *Suicide and Life-Threatening Behavior, 45*(6), 679-689. doi:10.1111/sltb.12161
- U.S. Department of Veterans Affairs, Office of Suicide Prevention. (2016). *Suicide among veterans and other americans 2001-2014*. (). Retrieved from <http://www.mentalhealth.va.gov/docs/2016suicidedatareport.pdf>
- Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of

suicidal behavior among adults. *Journal of Consulting and Clinical Psychology*, 76(1), 72-83. doi:10.1037/0022-006X.76.1.72

Yamokoski, C. A., Scheel, K. R., & Rogers, J. R. (2011). The role of affect in suicidal thoughts and behaviors. *Suicide and Life-Threatening Behavior*, 41(2), 160-170. doi:10.1111/j.1943-278X.2011.00019.x

Zajonc, R. B. (1984). On the primacy of affect. *American Psychologist*, 39(2), 117-123. doi:10.1037/0003-066X.39.2.117