

DISSERTATION

UNDERSTANDING MILITARY AND VETERAN SUICIDE: A SOCIAL WORK
PERSPECTIVE ON RISK AND PROTECTIVE FACTORS

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ABSTRACT

UNDERSTANDING MILITARY AND VETERAN SUICIDE: A SOCIAL WORK PERSPECTIVE ON RISK AND PROTECTIVE FACTORS

Substantial efforts have been made to address the phenomenon of disproportionate veteran suicide deaths and rising active-duty military suicide. Nonetheless, the problem persists: despite considerable time, research, and financial investment suicide rates among veteran and military populations remain historically elevated. This three-article dissertation focuses on the role of risk and protective factors in contributing to stymied prevention efforts as well as their role in potential paths forward. To that end, how risk and protection are contextualized in existing research, what risk and protective factors have historically been attended to, the epistemological frameworks from which they are viewed, and the methodological practices applied, are central characteristics considered here.

Study one introduces a trans-conceptual model for understanding suicide in the context of social work practice. This conceptual piece serves to lay the foundation for a contextualized framing of suicide risk and protective factors. Study two is a thematic analysis exploring the role of suicide risk and protective factors among an online community targeting military personnel and veterans. Finally, study three uses Analysis of Variance and multinomial logistic regression to explore differences that exist between veteran students and non-traditional students in university settings on measures of suicide, loneliness, resilience, flourishing and distress.

Together, the research presented within this dissertation underscores the importance of an individual's unique social ecology in understanding their overall risk and protective makeup. It

highlights the importance of social work perspectives and the continuing need for social work contributions to the greater field of suicidological research.

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PREFACE

The views expressed are those of the authors and do not reflect the official views of the United States Air Force, nor the Department of Defense. Mention of trade names, commercial products, or organizations do not imply endorsement by the U.S. Government. The opinions, findings and conclusions presented/reported in Chapter 4 (Article 3) are in no way meant to represent the corporate opinions, views, or policies of the American College Health Association (ACHA). ACHA does not warrant, nor assume any liability or responsibility for the accuracy, completeness, or usefulness of any information presented.

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CHAPTER 1

INTRODUCTION

Suicide is a national public health crisis. After two years of decline in 2019 and 2020, the suicide rate has once again begun to rise in the United States (Curtin et al., 2021). Embedded within this increase, disparities among those who are dying also emerge: veteran populations die by suicide at a rate nearly 60% higher than non-veteran counterparts (Ramchand, 2022). These individuals enter military service with a range of diverse backgrounds that further encompass disparate suicide outcomes: American Indian/Alaska Native (AI/AN) persons die at rates 3.5 times higher than demographic categories with the lowest rates (Leavitt et al., 2018); men die by suicide at a rate nearly four times higher than women, although women are 1.8 times more likely to attempt suicide (American Foundation for Suicide Prevention [AFSP], 2022). Additionally, suicide rates among Black and Hispanic persons have begun to increase while rates among White identifying counterparts have remained relatively unchanged (Stone et al., 2023). Consequently, an individual's veteran status intersects with numerous characteristics further associated with disproportionate suicide outcomes compared to the general population. Military and veteran populations are thus a group of critical concern in the quest for reducing both suicidal ideation, attempt, and death.

The unique experiences of military populations result in an expansive network of characteristics that increase or mitigate the experience of suicidality: risk and protective factors. Within contemporary research, risk and protection serve as the foundational guideposts for identifying who may be at risk for suicidality and the implementation of suicide prevention. An

initial framework for theorizing the role of risk and protective factors was introduced by Hawkins et al. (1992). Originally presented in the context of substance abuse prevention, this approach has been applied to a wide-ranging number of public health initiatives, including suicide. Suicide prevention has since come to be understood largely through this framework.

It is through the lens of risk and protective factors that researchers attempt to build predictive ability and identify which veterans may be most likely to experience suicidal ideation or die by suicide (Nock et al., 2013). These indicators of risk are offset by contrasting considerations that support resilience, belonging, and survival - protective factors (McLean et al., 2008). The apparent straightforward nature of risk and protection belies the staggering complexity of the person-in-environment. These factors exist within biopsychosocial planes and vary in intensity and impact depending on individual experiences, oppression or marginalization, environment, and culture to name a few of the complicating variables (Bronfenbrenner, 1992; Hertler et al., 2018). Consequently, there is significant utility in framing risk and protective factors for veteran suicidality through the lens of social work practice.

Despite the urgent nature of veteran and military suicide, prevailing prevention methodologies, exemplified by a risk and protective factors framework, have arguably stalled. Although there have been periodic improvements in annual suicide occurrences, rates continue to increase (Curtin et al., 2021). For over 50 years, research has largely focused on the same risk factors: psychopathology, history of abuse, and history of suicidality (to name a few), without appreciable change (Franklin et al., 2017). Additionally, there have been negligible improvements in the effectiveness of interventions grounded in risk and protective factors (Fox et al., 2020). The predictive ability to identify when suicide may occur and among whom remains poor (Kessler et al., 2020). In short, we are currently unable to accurately determine who

will die by suicide and have failed to appreciably alter veteran and military suicide rates. Understanding *why* these earnest and substantial efforts to reduce suicide have been unsuccessful may be attributable to a dogged persistence in framing suicide as pathology - the product of an unsound mind.

This perspective of individual pathology is reified by a biomedical model of psychological health (White et al., 2015). Through this formulation, the primary locus of suicidality resides within the individual and their own psychopathology. This is reinforced by a disproportionate focus on risk factors rather than protective factors (Nock et al., 2013). The frequently cited tautology that 90% of individuals who die by suicide have a diagnosable mental illness stems from this standpoint (Arsenault-Lapierre et al., 2004). In effect, this perspective purports that those who want to end their lives have a mental illness, yet also have a mental illness because they want to end their lives. Consequently, the trajectory of interpreting risk and protective factors follows the assumption that suicide is a fundamentally individualized problem.

Diagnosing why an individualized focus on suicidality has persisted might be attributable to the abstract nature of interpersonal, communal, and cultural-structural characteristics (Mueller et al., 2021). However, just as factors like burdensomeness and belongingness are treated as tangible and measurable psychological factors to assess risk, other levels of social ecological processes should be treated as equally real and alterable (Abrutyn & Mueller, 2021). The disproportionate reliance on schema that prioritize individual and psychological characteristics, inadvertently contributes to the development of shame and stigma. This has been tacitly acknowledged through a shift in language: “committing suicide” is no longer common parlance as it connotes fault, guilt, and moral wrongfulness (Bylotas, 2023; Harrell & Berglass, 2011). Despite this acknowledgement of the urgent need to de-pathologize suicide, conceptualizations

of suicidality persist in applying overly generalized measurements and approaches. “Changing the words used is easy; changing the frames by which we think about suicide is much more difficult” (Bylotas, 2023, p. 9). Nonetheless, when the responsibility and problematization of suicide among veterans and military members rests upon the shoulders and psyche of the individual, social, political, and cultural structures that perpetuate harm evade culpability and change.

Therefore, the problem remains that despite considerable time, research, and financial investment by the Department of Defense (DoD) (Ramchand et al., 2014), suicide rates among veteran and military populations remain historically elevated. This problem has been perpetuated by an epistemological reliance on the biomedical model, narrow interpretation of risk and protective factors, and a failure to incorporate a consideration of social and cultural factors that contribute to the problem. This leaves fertile ground for the incorporation of social work perspectives and of social justice approaches into the heretofore intransigent challenge of veteran suicide.

Relevance to Social Work

In the ongoing campaign to reduce suicide deaths among veteran and military populations, social workers will play a critical role in shaping how suicide risk and protective factors are conceptualized and implemented. In a clinical context, social workers comprise the largest portion of the mental health workforce (Heisler, 2018). For the veteran experiencing acute suicidality, intervention is likely to be provided by a social work professional. However, in contrast to the social worker’s direct role in assessing risk and protection, the profession has contributed comparatively little to the generation of research, theory, and interpretation of risk and protective factors (Bylotas, 2023; Maple et al., 2016). Consequently, the person-in-

environment perspectives (National Association of Social Workers [NASW], 2017) and social justice goals central to social work practice (Council on Social Work Education [CSWE], 2022) are insufficiently reflected in how risk and protection are interpreted.

Risk and Protective Factors Research in Social Work

Risk and protective factors research have played a notable role in the framing of suicidality for military members and veterans. Yet, when these issues are considered from the lens of one's social ecology, critical gaps emerge. An overwhelming proportion of research – discussed later in an overview of the literature – either focuses upon individual-level factors or oversimplifies broader cultural-structural concerns and overlays them onto individuals. Consequently, risk and protective factors are targeted to intervene on individual thoughts and actions. However, this is a misapplication of the substantial knowledge that has been amassed over decades. Targeting the individual represents a path of least resistance. Leveraging our understanding of risk and protection to enact change upon veterans and military service members may appear to be a straightforward task, while identifying causal processes within the ecological system outside of the individual can be a much more abstract and fraught process. Changes in individual level progress are measured in days, while community, social, and cultural change is measured generationally. Consequently, an excessively individualized focus pathologizes risk, de-prioritizes protection, and diminishes the complexity of how suicidality is interpreted in the literature base.

A symptom of this approach has been that research disproportionately focuses upon risk factors rather than protective factors. This deficit focus perpetuates the pathology of both risk factors and suicidality among veterans and military personnel, while undervaluing the potential strengths that may be bolstered to support prevention efforts. Consistent with findings nearly a

decade ago, protective factors research continues to lag risk, atheoretical framing persists, and sociocultural construction of factors remains limited (Nock et al., 2013). This discrepancy highlights the importance of social work perspectives of risk and protective factors. We must focus upon the individual, their strengths, *and* the co-occurring systems in which they exist.

Risk Factors, Protective Factors, and Social Justice

The social work profession has a longstanding commitment to social justice, from education to clinical practice and research (Council on Social Work Education [CSWE], 2022; National Association of Social Workers [NASW], 2017). As such, application of a social work lens commensurately demands a reflection on the role of social justice as it applies to veteran suicide. A growing body of critical suicidological research has established the essential role of social justice as it relates to suicide:

The analytic and normative framework of social justice is appropriate and necessary in the case of suicide because it highlights the role that social-structural processes can play in the formation of vulnerability to suicide without presuming that this framework could ever serve as the full or complete account of all deaths by suicide (Button & Marsh, 2019, p. 2)

Despite the relevance of social justice perspectives in suicide risk and protective factors, this approach has only recently begun to be fully acknowledged within the social work profession. Recently reified in a commentary issued in *Social Work*, Hightower et al. (2023) articulate the critical role of social work education and research in helping to advance the intersection of suicide and social justice. In effect, ensuring that social work perspectives are foundational in the training of new clinicians can support the critical application of risk and protective factors to the issue of veteran and military suicidality.

Explicit acknowledgment of issues of oppression or social justice in risk and protective factors research is extremely limited, though not entirely absent. Research targeting transgender veterans reflects on the impacts of prejudice and oppression in perpetuating risk factors for veteran suicide (Tucker et al., 2019; Tucker et al., 2019). Similarly, explorations of the relationship between Military Sexual Trauma (MST), help seeking, and stigma explore cultural-structural impacts of military service (Blais et al., 2023; Nichter et al., 2020). When considering relationships between race, suicide, and where one lives, Shiner et al. identify specific impacts of racism and historical marginalization (2021). Yet these few examples are the exception to the greater body of research. Research among veteran populations largely neglects to consider social justice or oppression and represents a significant opportunity for the contribution of social workers. In the context of this dissertation, social work perspectives are applied through a deliberate grounding in two distinct epistemological approaches.

Theoretical Foundations

The use of theory provides a lens for describing the nature of suicidality (Stewart & Klein, 2016). It shades the ways in which research is undertaken, how risk and protective factors among veterans are interpreted, and how prevention and intervention is implemented based on understanding of those same factors. Several suicidological theories and conceptual frameworks have been forwarded, such as the three-step theory, motivational volitional model, and social ecological model (Cramer & Kapusta, 2017; Klonsky & May, 2014; O'Connor & Kirtley, 2018). However, the interpersonal psychological theory of suicide (IPTS) is arguably the most cited theory and well-integrated into contemporary suicide prevention (Chu et al., 2017; Van Orden et al., 2010). Yet despite its prevalence within contemporary suicidology and in the interpretation of veteran risk and protective factors, IPTS is not without critical detractors – the cultural-

structural theory of suicide (CSTS) is one notable alternative particularly applicable to military populations (Abrutyn & Mueller, 2018). This dissertation opts to blend these two theoretical approaches: IPTS represents the broader landscape of suicidological epistemology, while CSTS contextualizes the gaps that result from the singular use of a prevailing interpretation.

Prevailing Interpretations: The Interpersonal Psychological Theory of Suicide

IPTS is firmly established within contemporary literature examining risk and protective factors among military populations and traces its ideological lineage to the research of Émile Durkheim (Van Orden et al., 2010). Given its hegemony within veteran suicide research, IPTS is utilized in the context of this writing to further exemplify the contemporary conceptual approach applied to veteran risk and protective factors. IPTS highlights three essential characteristics that, when present, are sufficient to lead to death by suicide. These characteristics include thwarted belongingness and perceived burdensomeness, which are necessary in the generation of suicidal ideation (Joiner, 2005; Van Orden et al., 2010). When combined with an acquired capacity for suicide, lethal or near lethal action is possible (Van Orden et al., 2010).

Burdensomeness refers to notion that one's death is worth more than their life – that they are a liability upon others. Belongingness includes considerations of social connectedness and the degree to which one is embedded within the community around them (Rogers & Joiner, 2019). For example, veterans experiencing risk factors like financial strain, chronic health problems, or mental health challenges may come to believe that their difficulties make them a burden upon those around them. When paired with a felt sense of isolation and lack of belonging, thoughts of suicide may occur. Acquired capacity is defined by a decreased fear of death and increased tolerance of pain (Van Orden et al., 2010). This is particularly relevant to military personnel and veteran's whose training necessitates an ability to endure physical hardship and

encounter potential death or dying. When coupled with exposure to combat, a service member's acquired capacity for suicide may be particularly high when compared to civilian counterparts.

IPTS is notable for its parsimony. This intuitive and accessible framework has resulted in several attempts to measure the suicidal experience framed by belongingness, burdensomeness, and capacity (Chu et al., 2018). A consequence of these attempts at quantification has led to the central constructs of IPTS becoming perceived as being objective and measurable characteristics of suicidality (Bylotas, 2023; Joiner, 2005; Van Orden et al., 2010). A result of the increasingly entrenched IPTS epistemology in veteran suicide risk and protective factors, is the view that suicide can be predicted through the measurement of set variables like belongingness, burdensomeness, risk factors, and protective factors (Hjelmeland & Knizek, 2020).

IPTS in Military and Veteran Suicide Research

To date, a full exploration of the extent to which IPTS is reflected within the literature has yet to be published. Nonetheless, IPTS' popularity is difficult to deny, Van Orden et al.'s foundational manuscript has been referenced nearly 5,000 times and concepts of belongingness and burdensomeness have been incorporated into VA/DoD standard practices for managing and assessing suicide risk and protective factors (Sall et al., 2019). Among the research included for review within this writing, articles citing a specific theoretical lens for understanding suicidality overwhelmingly included the interpersonal theory of suicide. IPTS appeared either explicitly or implicitly through the discussion of thwarted belongingness, perceived burdensomeness, and acquired capacity in more than half of identified research articles. This is consistent with existing knowledge regarding suicidological approaches and the significant attention given to the IPTS (Chu et al., 2017; Hjelmeland & Knizek, 2019). Among the reviewed literature, nearly one third of the selected articles were atheoretical and did not identify a specific theoretical grounding.

However, IPTS was frequently implied, with references made to foundational concepts: thwarted belongingness and perceived burdensomeness (Hoffmire et al., 2021). These allusions were frequently supported through citation of IPTS' contributing developers.

Both meta-analyses and systematic review have been conducted in an attempt to measure and validate IPTS, with mixed results. The variables within IPTS (thwarted belongingness, perceived burdensomeness) have been shown to have some utility in identifying suicidality, with generally modest effect sizes (Chu et al., 2016; Ma et al., 2016). Yet, although IPTS may have some practicality in understanding suicide risk, this is not sufficiently reflected in the ability to reliably identify who will die by suicide. That is, IPTS is a useful tool in understanding the ideation to action framework (how one moves from thinking about suicide to engaging in suicidal behavior), however its parsimony necessitates supplemental conceptual frameworks to capture a more comprehensive understanding of suicide among groups (Smith et al., 2020), such as military personnel and veterans. In other words, IPTS does not fully incorporate the immense complexity of suicidality and the human experience (Hjelmeland & Knizek, 2020). However, its central components (belongingness and burdensomeness) remain important aspects of suicidality and the expression of risk and protective factors (Forkmann et al., 2020).

Critical Theoretical Perspectives: The Cultural-Structural Theory of Suicide

In response to an IPTS framework which centers intrapersonal experience, critical perspectives have emerged which challenge the internally driven framework for understanding suicidality (Hjelmeland & Knizek, 2020). Consequently, CSTS rises from critical suicidological inquiry, a framework which “brings together academics, community activists, service users...and persons with lived experience, to rethink what it means to study suicide and enact practices of

suicide prevention” (White, 2017, p. 472). Developed by Abrutyn and Mueller in 2018, CSTS centers the role of excessive regulation on the development of suicidality. In short, cultures and structures shape a military member’s social environment.

CSTS introduces a lens for exploring the ways in which excessive regulation, observed in processes like cultural and social norms, may foster the internalized beliefs that contribute to suicidality (Abrutyn & Mueller, 2018; Bylotas, 2023). Failed efforts to build meaningful relationships lead to the emergence of (to use language borrowed from IPTS) thwarted belongingness. CSTS further highlights the ways that cultural-structural systems with high levels of regulation, such as military service, contribute to the emergence of suicidality (Abrutyn & Mueller, 2018; Hinojosa, 2010). While IPTS centers the role of the individual in the etiology of suicidality through one’s psychological characteristics, CSTS presents a framework that incorporates systemic processes in the development of suicidal thoughts and behavior (Abrutyn & Mueller, 2018; Bylotas, 2023). Rather than an internally driven pathology, it is existing cultural and structural systems that exhibit disordered functioning.

The interchange between cultural and social regulation is bidirectional. Group pressures and social-cultural norms become internalized by the individual. These internalized expectations regarding behavior and action are then reflected outward to others (Abrutyn & Mueller; 2018; Maynard, 1984). Internalized norms are externalized as expectations for behavior and action – leading to a circular process of norm development that impacts risk and protective factors across all domains of an individual’s social ecology. Success within the military system for example, delivers culturally embedded messages that are received by veterans and military service members. A failure to meet these expressed norms contributes to a process by which suicidality develops and is expressed through a variety of risk factors.

CSTS in Military and Veteran Suicide Research

The role of cultural and structural experiences as a variable are difficult to quantify and lack the same intensive study given to individual and psychological level suicide risk and protective factors (Bantjes & Swartz, 2017; Ullman et al., 2021). Unsurprisingly the application of theory rooted in these concepts – CSTS specifically – is absent from the literature concerning military and veteran suicide risk and protective factors. CSTS has been cited in a very narrow, non-military context regarding suicide risk and protection more generally, though even this is exceedingly limited. One study applied CSTS to moral intuition and suicide (Silver et al., 2022), another explored unemployment and religious disintegration (Trovato, 2021), and a final study explored personal and occupational factors in correctional officer suicide (Frost & Monteiro, 2020). Given this dearth of data within academic research, the more abstract features of human experience demand more thorough exploration. Social work is well equipped to support this endeavor. In this context, CSTS’ applicability to the systemic factors influencing the lives of military members may provide utility for considering macro and meso level variables in understanding suicidal behavior. CSTS offers a pathway for framing how social workers might interpret this challenge, yet heretofore has been unutilized in this capacity.

An Overview of the Literature

This review of the literature casts a wide gaze, exploring the breadth of risk and protective factors research that has been conducted over the past decade. While the following three chapters present their own, distinct literature reviews, the landscape of risk and protective factors research is outlined here. The gaps that emerge present opportunities for research and intervention from a range of conceptual and methodological approaches, which may ultimately contribute to alleviating the problem of military and veteran suicide deaths. Applying social

work perspectives to existing research on risk and protective factors for veteran suicidality can serve to advance the existing knowledge base. Rather than abandoning risk and protective factors for their limitations in predicting and preventing suicidality, this review recontextualizes their use by leveraging person-in-environment and biopsychosocial perspectives central to social work. To that end, an ecological framework is incorporated to critically examine existing risk and protective factors. Such a framework can highlight the ways in which singular factors exist within and across individual, interpersonal, communal, and cultural-structural levels.

This approach parallels a recent evidence map conducted by Ullman et al. (2021), who placed risk and protective factors within an ecological framework. This review, however, is distinct in that a critical lens is applied to the ecological categorization of factors (e.g., financial strains are explored as society-level challenges). That is, a person-in-environment perspective and issues of social justice are central in both synthesis and interpretation (National Association of Social Workers [NASW], 2017). Factors may span multiple levels and are discussed accordingly. For example, Adverse Childhood Experiences (ACEs), are categorized as interpersonal, yet also are acknowledged for how they reflect community level stressors that warrant consideration.

Cramer and Kapusta (2017) present a robust social-ecological framework for exploring risk and protection when applied to the general population. Factors discussed in this review mirror that methodology: individual, interpersonal, communal, and cultural-structural (societal) levels are used as a scaffold for interpretation. The presence of compiled risk and protective factors by both Ullman et al. (2021) as well as Cramer and Kapusta, serves as a useful cross-check to compare previously identified gaps and interpretations of findings. Examining risk and protective factors, with a focus on *how* they are discussed provides useful insight into where

current gaps truly exist and serves to justify and bridge the research studies presented in Chapters 2, 3, and 4.

Military and Veteran Populations

Prior to exploring risk and protective factors, understanding how military and veteran populations represent a distinct group is relevant. The 2021 census estimates that among individuals over the age of eighteen, nearly 6.5% or 16.5 million people, are veterans (United States Census Bureau, 2023). Three distinct characteristics distinguish these individuals from their civilian counterparts: “an organization with a formal structure, a cultural group governed by norms, and a social group that provides people with identities” (Atuel & Castro, 2018, p. 75). These three qualities of military life represent a common thread that is shared between veterans despite the numerous differences that may exist individually.

The formal chain of command is defined by clearly identified roles and norms for social interaction organized within a hierarchical power structure. This structure determines an individual’s role within the greater military system. The force structure dictates how communication is organized and defines authority and responsibility within the system. Norms reflect the rich heritage, traditions, history, language, and values of military members (Atuel & Castro, 2018). These norms are further facilitated using indoctrination or basic training courses, in which traits that may be harmful to the military structure are removed, values of the organization are inculcated, and individuals are trained to see themselves as a collective (McGurk et al., 2006). Finally, immersion in the history, language, and shared experience of military life facilitates the development of an identity that is shared with the veteran social group. This contributes to an experience distinct from civilian life.

The unique risk and protective factors experienced by veterans and military personnel contribute to the complexity involved when attempting to apply them to suicide prevention. For example, a notable suicide risk factor impacting military members is the development of stigma and reluctance to seek formal support. Fears that a service member may be alienated from their unit, let down peers, or become disqualified from military service, amplify help-seeking barriers (Hom et al., 2017). These ecologically diverse pressures perpetuate risk factors and further justify the importance of a contextual and person-in-environment perspective.

Individual Risk and Protective Factors

The individual level of risk and protective factors is typically characterized as those which encompass physical health, mental health, and demographic characteristics (Ullman et al., 2021). This level of risk and protection is listed first, not because it is the most important, but because of its primacy within the available evidence. Among existing systematic reviews of risk and protective factors that distinguish between social ecological risk levels, the individual domain comprises the largest proportion of identified variables affecting veteran suicidality (Cramer & Kapusta, 2017; Ullman et al., 2021). These previous findings are consistent with this review of the literature: individualized perspectives of risk and protection are ascendant within veteran suicide.

Researchers have found that veterans who identify as male are at an increased risk for suicide (LeardMann et al., 2013), while female veterans are at an increased likelihood to experience suicidal ideation (Stefanovics et al., 2023). These sex-specific risk factors are further granularized to identify females who report suicidal ideation as having a history of non-suicidal self-injury and being less resilient, while male suicidal ideation is correlated with loneliness, hostility, and low sense of purpose (Stefanovics et al., 2023). Yet other studies report contrary

findings indicating that female military members may experience *less* suicidal ideation (Rogers et al., 2017). Although underrepresented in research targeting veteran and military populations, LGBT individuals are identified as being at an increased risk for suicide (Matarazzo et al., 2014).

Among a study of army personnel, American Indian/Alaskan Native persons had a suicide risk 1.5 times higher than White individuals; both Black and Hispanic persons were at a risk .65 times that of White counterparts (Brenner et al., 2023). However, another review of multi-year DoD suicide event reports found less distinct differences when considering demographic characteristics such as race (Pruitt et al., 2019). In sum, these demographic risk factors are highly dependent upon the individual sample used and speak to the difficulty in generalizing a single study to the greater population of veterans and military members. A more pernicious threat of overreliance on demographic characteristics as a risk factor is the conflation of one's demographic characteristics with their overall suicidality. That is, misplacing the notion that because an individual possesses a certain characteristic they are at a certain level of risk for suicide (i.e., because someone is AI/AN they must be at a higher risk for suicide). Rather, we should be asking what shared experiences of this group are contributing to an increase in suicidality?

Individual level risk factor research frequently targets two broad categories: access to firearms (Theis et al., 2021) and mental health symptoms (Ullman et al., 2021). Sixty-nine percent of veteran suicide deaths involved the use of a firearm, with similarly high rates among Active-Duty personnel (Pruitt et al., 2019). An attributable cause to the disproportionality of firearm deaths is their lethality, which possess a 90% case-fatality rate (Theis et al., 2021). Among mental health diagnoses, depression is the most robustly reviewed risk factor, with multiple empirical reports suggesting an association to suicidal ideation and behavior (Bullman

et al., 2019; Lemaire & Graham, 2011; Nichter et al., 2021). PTSD is another commonly researched mental health diagnosis in relationship to its potential association with veteran suicide. However, results are mixed overall, with some studies indicating that PTSD may be associated with *lower* risk for suicide (Holliday et al., 2020). Anxiety disorder was associated with suicidality in a cohort study involving U.S. Air Force members, though to a lesser degree than depression and PTSD (Conner et al., 2012). Alcohol, substance use, and gambling disorders have also been associated with suicidality among veteran and military populations across multiple samples (Bryan et al., 2016; Etuk et al., 2020; Hill et al., 2021). Other individual level risk factors, including sleep disorders and low cognitive functioning, have been associated with suicide ideation and death (Ullman et al., 2021). History of suicidal ideation, thoughts, and behaviors have additionally been identified as a common risk factor among veteran and military suicide decedents (Nichter et al., 2021).

There are notably fewer individual level protective factors within the literature base. Partially this is a matter of framing. Resilience for example, while undoubtedly a protective factor (Pietrzak et al., 2010; Sher, 2019), may also be framed in its deficit (Stefanovics et al., 2023). That is, lack of resilience may predict a higher likelihood for suicidality among veterans. In consideration for *how* risk and protective factors are portrayed, observers must be wary in assuming that the lack of specific factors indicates the presence of an opposite protective factor. For example, the absence of depressed mood does not indicate that an individual feels a sense of flourishing or contentment. Generally, the reviewed literature refrains from such broad strokes. Nonetheless the ability to cast a protective factor such as resilience in terms of both its presence and deficit, creates the potential for such a fallacy to develop.

Other notable individual level protective factors for veterans and military members include hopefulness, coping skills, spirituality, engagement in mental health treatment, and perceived reasons for living (Bryan et al., 2015; Deutsch & Lande, 2017; Elbogen et al., 2020; Nock et al, 2013). Coping skills is a broad concept, but can include measures of self-care and mindfulness, which have been associated with lower suicidal ideation among post 9/11 veterans (Elbogen et al, 2020). Reasons for living is another generalized protective factor that may be defined differently depending on who is conducting the research. Like other risk and protective factors (such as measures of depression, PTSD, resilience, and coping skills) these multiple characteristics are frequently compiled and placed within a validated assessment tool (Deutsch & Lande, 2017). Some of these ‘reasons for living’ include values, beliefs, spirituality, child-care concerns, and family concerns.

A challenge related to these protective factors among veterans, is the overlap that exists between factors. Resilience appears frequently throughout the body of evidence and generally describes an individual’s ability to experience stressors and continue functioning (Walker, 2020). However, this concept is also fundamentally interconnected to factors like coping skills and reasons for living. This interactivity between internal strengths and protective factors highlights the complexity in applying research to prevention. Can these factors exist independently? Furthermore, the nature of a concept such as ‘resilience’ or ‘coping skills’ is fundamentally distinct from risk factors like depression or PTSD. While risk factors (in many cases) reflect a moment-in-time measurement of experience, protective factors are developed over the course of a lifetime. Thus, further highlighting the importance of context and systems perspectives in the conceptualization of protective factors.

Interpersonal Risk and Protective Factors

Interpersonal risk and protective factors among veterans and military service members refer to the relationships that exist between people. This includes familial relationships, intimate partnerships, friendship and social support, and the relationships that exist within the military unit (Cramer & Kapusta, 2017). Low relationship satisfaction was found to be associated with suicidal ideation and suicide risk among National Guard members and service member/veterans (SMVs) (Blais, 2020; Blow et al., 2019). Among veterans who had been recently hospitalized for suicidal thoughts and behaviors, the incorporation of concerned significant others (CSOs) in safety planning was found to be protective (DeBeer et al., 2019). Similarly, participation in a peer suicide prevention support group among recently hospitalized veterans was found to be protective (Simons et al., 2018).

Relationship problems were found to be associated with increased suicidal ideation across several studies, including active duty Remotely Piloted Aircraft (RPA) operators (Bryant-Lees et al., 2021), veteran suicide decedents (Lane et al., 2021), and U.S. Air Force members (Langhinrichsen-Rohling et al., 2019). The nature of relationship problems and their measurement varies - sometimes this factor is referred to as violence, or conflict, or simply relationship instability (Cramer & Kapusta, 2017). While each of these risk factors may be associated with suicide, the degrees of separation that may exist between them are unclear. Relationship satisfaction, marriage and an increased length of intimate partnership were found to be protective against suicidal ideation (Lane et al., 2021; Langhinrichsen-Rohling et al., 2019).

MST was among the most frequently researched risk factors within the interpersonal category of risk and protective factors. It is relevant to note that MST exemplifies the challenges associated in quantifying with which social-ecological level a factor should be associated. While

MST is fundamentally interpersonal, sexual violence cannot be disentangled from the intersecting roles of power and sociocultural contexts in which it occurs (Kalra and Bhugra, 2013). This impacts people of all genders. For preventionists seeking to understand the relationship between a risk factor (in this case MST) and suicide, ecological framing matters. Using a strictly interpersonal lens, interventions that rely on risk factors research will be led to focus solely on the interaction that occurs between people. While this is certainly important, it neglects to consider community, cultural, and structural messages about power (and who has it), intimacy, sex, and violence.

Both self-stigma and anticipated enacted stigma were associated with suicidal ideation among female service members and veterans who had experienced MST (Blais et al., 2023). Self-stigma refers to the beliefs an individual holds about themselves, while anticipated enacted stigma is defined by the perspective that others may react negatively (Blais & Renshaw 2014). Among male and female identifying Veterans Healthcare Administration (VHA) patients, MST was associated with suicidal ideation (Decker et al., 2021; Monteith et al., 2019). Comparable results were found for Army National Guard soldiers. There were additionally contrasting findings suggesting that sexual harassment, but not sexual assault was strongly associated with suicidal ideation among a sample of VHA patients (Khan et al., 2019). This provides yet another example of contradictory findings and the difficulty in generalizing from individual samples to the general population of veterans and military members.

Like challenges that arise in understanding the contextual factors contributing to MST, Adverse Childhood Experiences (ACEs) represent another risk factor rife with interpersonal, community, and cultural-structural contributing etiologies among military and veteran samples. Generally, ACEs were found to be associated with suicidal ideation and behaviors among both

groups (Blosnich et al., 2021; Nichter et al., 2021; Ryan et al., 2020; Simons et al., 2021). One study found total ACEs to be a strong differentiator between ideation and attempt (Nichter et al., 2021). Another found a linkage from childhood neglect and sexual abuse to the likelihood of hospitalization for suicide attempt among military members (Ryan et al., 2020). Interestingly, this did not translate to individuals hospitalized for suicidal ideation.

Community Risk and Protective Factors

Community risk and protective factors generally represent characteristics or experiences that are bound by a specific space or group. Bryant-Lees et al. (2021) explore several factors related to the workplace experience of RPA operators. Notably, a shift-work schedule and low professional efficacy emerged as predictors for suicidal ideation. Conversely, member social support was found to be protective for shift-workers but not day-time personnel. In a similar context, higher levels of unit cohesion, a sense of purpose provided by leaders, and wider unit social networks were found to be associated with lower levels of suicidal ideation among Army soldiers (Anderson et al., 2019; Dempsey et al., 2021; Trachik et al., 2019).

The role of social integration, or the embeddedness which one experiences within their communities, was a factor of considerable attention. Higher levels of social support and integration were found to be associated with lower reports of suicidal ideation among veterans and Army soldiers (Mavandadi et al., 2019; Taylor et al., 2022; Waliski et al., 2021). These designs were framed in the context of relative risk or the odds by which an individual may report thinking about suicide. One mixed-methods design framed the role of social integration through the lens of protection and strengths as a means of decreasing suicidality (Williamson et al., 2021). However, a deficit and risk-based framework remains the primary structure through which community factors impacting suicidality are understood.

Other community-based risk and protective factors remain more difficult to quantify. Characteristics typically defined as Social Determinants of Health appear in multiple contexts (Braveman & Gottlieb, 2014). These factors were frequently reported as multiple covariates and included financial strain, financial stability, legal problems, and homelessness. These factors simultaneously reflect both cultural-structural conditions and community characteristics. For example, hardships experienced by a veteran (e.g., family stress, combat trauma, challenges reintegrating into civilian life) may be directly connected to governmental policymaking and operational requirements of military service. Financial strain and not having basic needs met were associated with increased suicidal ideation among National Guard members and veterans (Bryan & Bryan, 2019; Blosnich et al., 2020; Elbogen et al., 2021). Stratified analysis of suicide ideation by reported sex found that veterans identifying as female who experienced housing and financial stress reported thoughts of suicide at higher rates compared to male counterparts (Hoffmire et al., 2021). Homelessness was additionally associated with increased risk of treatment for suicidality among veterans (Culhane et al., 2019). Interestingly, increased suicide rates among rural inhabitants compared to urban residents was found to be negated when accounting for differences in race and ethnicity (Shiner et al., 2021). That is, AI/AN and White individuals, who tend to be at a higher risk for suicide, were more likely to live in rural areas, while persons identifying as Black frequently lived in more densely populated areas.

Cultural-Structural Risk and Protective Factors

Cultural-structural factors are particularly difficult to define. Ullman et al. (2021), who did not identify any factors cultural-structural factors in their evidence map, define these societal risk and protective factors as those that “contain large-scale issues such as social and cultural norms, policies, or other guiding rules and laws” (p. 28). Every risk and protective factor noted

in this review is fundamentally connected to the greater framework of culture, policy, and norms in which veterans exist every day. For example, a military members' exposure to combat, reintegration into civilian life, and experience of food insecurity are all inextricably related to policy and legislation. Cramer and Kapusta identify poverty, mental health stigma, economic conditions, and mental health policy/funding as being potential examples for risk and protective factors that occur on this level (2017).

While combat trauma was not found to be associated with suicide attempts directly, specific combat exposures, particularly when distinguished by severity were found to increase suicidality (LeardMann et al., 2021). Deploying within the first twelve months of one's career was found to be associated with suicidality, with the level of risk while deployed increasing to a peak at nine months (Naifeh et al., 2020). Additionally, service members who receive a non-honorable discharge status may be at an increased risk of suicidality (Barr et al. 2023). Consistent with existing literature, both internal and external stigma are associated with increased suicidal ideation among MST survivors (Blais et al., 2023). Food insecurity was associated with increased suicidal ideation among veterans (Kamdar et al., 2021). Risk and protective factors experienced by veterans with intersecting identities were generally underrepresented within the body of literature. Among transgender and gender-diverse veterans, reported minority stress, rejection, and discrimination were positively associated with suicidal ideation (Tucker et al., 2019). Additionally, a person's exposure to another's suicide attempt and ideation was associated with higher risk of suicide attempt, but not ideation (Tucker et al., 2018). Despite being experienced by individuals, these risk and protective factors represent the cultural-structural level given that they are large scale concerns emerging from behavioral norms and laws.

Contributions to Understanding the Problem

Distillation of the collected literature on risk and protection generally indicates the following: experiences that create distress, hardship, or human suffering increase a veteran's risk of suicide, those that facilitate resilience or flourishing reduce risk of suicide. Such a statement may be interpreted as reductionistic. However, the reviewed body of literature largely fails to critically consider the ways in which risk and protective factors are perpetuated or mitigated by communities and the cultural-structural systems in which veterans and military members exist. In part, this is a symptom of rigid adherence to biomedical perspectives and narrow application of theory. Additionally, risk and protective factors research focused on individual pathology far outnumbers studies that explore other ecological domains. Among those that explore interpersonal, community, or cultural-structural characteristics, the role of the individual is centered.

To be sure, the existing body of research provides a robust understanding of the many challenges a veteran might experience which elevate the overall risk for suicide or protect from it. Access to firearms, a history of suicidal behavior, and depression are particularly well established within the literature (Cramer & Kapusta, 2017; Theis et al., 2021; Ullman et al., 2021). Among protective factors, the role of social support is notable for its frequent association with lower risk for suicidality (Mavandadi et al., 2019; Taylor et al., 2022; Waliski et al., 2021). However, considering the problem of continued elevated suicide deaths among military members and veterans, this approach is insufficient. While the nature of both risk and protective factors contributing to veteran suicide is recognized as broad, the general interpretation of existing research continues to be narrow.

The idiom that one ‘cannot see the forest for the trees,’ seems particularly apt in this regard. Robust research has been conducted regarding risk and (to a lesser extent) protective factors – such that, from a population perspective, we broadly understand what individual level characteristics may either contribute to suicidality or protect from it. However, knowledge is notably more limited from a communal or structural perspective, particularly when considering issues of social justice. Despite the volume of existing research, the fact remains: identifying *who* and *when* remains (for now) out of reach. This is likely an artifact of the disproportionate individualization of risk and protection, as well as limited theoretical and methodological diversity. When broad characteristics of a population are generalized to a specific veteran, absent cultural-structural context, the full picture is obscured.

Gaps in the Literature

Through the course of review, several gaps within the literature emerge. These gaps range from the empirical knowledge base to theoretical understanding. They represent critical areas for ongoing research when addressing the problem of rising veteran and military suicides and the role of risk and protective factors. Taken together, the following gaps represent areas of need, in which the presented studies in Chapters 2, 3, and 4 demonstrate the potential role for social workers in suicidology.

Lack of Methodological Diversity

There is a notable lack of diversity in the types of research designs and methods applied to the current understanding of suicide risk and protective factors affecting military service members and veterans. The reviewed literature relies almost exclusively on quantitative methods. This is consistent with a similar evidence map conducted by Ullman et al. (2021) which did not identify any qualitative studies, despite not being explicitly part of the exclusion

criteria. The inclusion of qualitative methods within suicidological research is particularly necessary, given the phenomena's extremely low base rate of occurrence at approximately 24.1 per 100,000 for Active-Duty personnel (Garamone, 2022) and 31.7 for Veterans (U.S. Department of Veterans Affairs, 2023). In other words, the highly contextualized experiences of individual veterans and military members may offer significant benefit in understanding the experience of suicidality.

Measures of Suicidality

Suicidality, how it is defined, and how it is measured was highly inconsistent across the reviewed literature. The broad range of methods used to measure suicidality suggests that there may be poor validity when attempting to translate research findings to prevention strategies. Among the reviewed literature, the Patient Health Questionnaire (PHQ-9) was the most frequently used suicidality measure. The PHQ-9 is a self-administered depression scale, which contains a single question addressing thoughts of being "better off dead" (Kroenke et al., 2001). The PHQ-9 was the primary suicidality measurement tool used by the Veterans Health Administration through 2020 (Gujral et al., 2023). Given the PHQ-9's high rate of false positive screenings for suicidality (Chung et al., 2023), it is likely that existing knowledge of risk and protective factors may reflect veterans in distress, but not those who are thinking about suicide.

The use of ICD 9 & 10 diagnostic codes provides another example of a measure with notable limitations. Specifically, this process relies on clinical opinion - which varies from professional to professional. Additionally, the use of a diagnostic process to identify suicidality requires clinicians to have formally recorded this experience as a diagnosis. This potential under-inclusion limits the full range of patients who may report suicidality either in the context of psychotherapy or on screening tools but did not necessarily receive a formally documented

diagnostic code. The numerous conceptualizations of suicidality within the research are likely a factor of convenience and necessity; researchers use the data and measures that are available to them. Nonetheless, when confronted with the limitations of contemporary prevention, one is led to ask, are we studying veterans with suicidality in our suicide research?

A Failure to Address Social Ecology

Another notable gap in the reviewed literature was an insufficient characterization and critique of social ecological factors. Risk factors with undeniable connection to community and social contexts were frequently reduced to individual characteristics in need of assessment. MST, homelessness, financial stress, abuse, and violence are all related to a complex web of governmental policy, allocation of resources, and interpretation through cultural practice. To reduce the existence of these factors to a tepid suggestion that a specific risk may be associated with suicide is insufficient. While to be sure, assessment is a necessary measure to support individuals and provide resources. A failure to connect homelessness (for example) to the greater breakdown of structural support for an individual who may experience challenges associated with their military service relieves communities and systems of responsibility. The individual is left to bear the burden of these shortcomings, suicidality and the attendant risk factors are further pathologized, and stigma is reinforced. Of course, this gap occurs on a spectrum and some reviewed studies provide insight into how this challenge may be ameliorated. For example, Shiner et al. (2020), in discussing rural-urban suicide disparities, contextualize their discussion of results with an acknowledgement of discrimination experienced by veterans of diverse backgrounds and the limited resources that may be experienced by persons in rural settings.

Hegemonic Theoretical Interpretation

The absence of a guiding theoretical framework in risk and protective factors research has been well documented (Hjelmeland, 2016; Nock et al., 2013; Wolfe-Clark & Bryan, 2017). While this appears to have changed to a limited degree, the improvement has resulted in an overly narrow epistemology of suicidality. In this review of veteran risk and protective factors, research citing a specific theoretical lens for understanding suicidality overwhelmingly included IPTS. This approach appeared in more than half of identified research articles. As previously noted, this is consistent with existing findings regarding suicidological approaches and the significant attention given to the IPTS (Chu et al., 2017; Hjelmeland & Knizek, 2019). This lack of theoretical diversity precludes rich explanations for human experience that can broaden the ways in which suicide is understood. For example, among the exceedingly limited theories represented within the literature, stigma theory addresses issues of power and oppression that result from a military service members experience of structural, associative, or internalized beliefs (Bos et al., 2013). Similarly, minority stress theory provides a framework for understanding the unique stressors experienced by individuals with marginalized identities (Cyrus, 2017). These perspectives provide contextualization at the epistemological level that supports social work perspectives and the ways in which veterans encounter oppression manifesting as various risk factors.

Why Veterans?

As previously noted, military service is characterized by distinct cultural attributes (Cooper et al., 2016) and military members exit service at an increased risk for disability, mental illness, and suicide (Campbell et al., 2020). However, a common theme among the reviewed literature was a limited justification for why the inclusion of veteran or military status as a

sample characteristic was necessary. Failing to connect a specific risk or protective factor to the veteran experience and explicitly identifying how these factors may be experienced differently from non-veteran peers is a necessary yet underrepresented component within the reviewed sample. For example, some risk factors, such as marital status and relationship problems were found to have little distinction between veteran and non-veteran groups, with limited contextualization or exposition as to why this might be (Lane et al., 2021). Insufficiently exploring how and why the experience of military and veteran populations may be unique serves to tokenize the population. This diminishes the contextuality that contributes to the problem of veteran suicide. Thus, although the literature provides concrete information regarding risk and protective factors, how and why these factors are unique (if at all) to military populations remains unclear.

Research Questions and Methodologies

Together, the following three research studies address each of the previously noted gaps in the literature base. They incorporate both IPTS and CSTS as theoretical frameworks to apply a robust and contextualized understanding of suicide risk and protective factors among military personnel and veterans. Study 1 centers clinical social work practice, by presenting a conceptual framework for understanding and interpreting suicide risk and protective factors. Next, study 2 is an exploration of suicide risk and protective factors relating to suicidality in an online forum targeting veterans and military personnel. Finally, in study 3, differences among risk and protective factors experienced by veteran students in relationship to non-veteran peers are examined. These three distinct studies are unified by the social work lens applied to their consideration of risk and protective factors. Collectively, they showcase the opportunity for social work research to contribute to the highly complex and intransigent challenge of suicide

among military and veteran populations. In other words, thematically, this dissertation applies a critical social work lens to address gaps in existing risk and protective factors research on military populations, with the intent of informing how prevention and intervention approaches can ameliorate the ongoing problem of suicide death. Key elements of each study are listed in Table 1.1.

Table 1.1
Dissertation Study Elements

	Study 1	Study 2	Study 3
Method	Conceptual	Thematic Analysis	ANOVA, Multinomial Logistic Regression
Purpose/ Research Questions	Propose an alternative conceptual model of suicide that balances intrapersonal and social forces to guide future prevention activity.	RQ1 – What is communicated in this online forum about suicide? If present, how are risk and protective factors characterized? RQ2 – Using the lenses of IPTS and CSTS, what attitudes around suicide or features of the online community’s culture emerge in its discussion of suicidality?	RQ1 – Are there differences in suicidality, flourishing, loneliness, resilience, and psychological distress between non-traditional students and veteran students? RQ2 – How do risk factors (i.e., suicidality, loneliness, and psychological distress) predict group membership among veterans with hazardous duty and veterans without hazardous duty relative to non-veteran students? RQ2a: How does the addition of protective factors (i.e., flourishing and resilience) predict group membership among veterans with hazardous duty and veterans without hazardous duty relative to non-veteran students?
Primary Theories	IPTS & CSTS	IPTS & CSTS	IPTS & CSTS

Study 1

Study 1 is entitled, A trans-conceptual model for suicide prevention in social work practice: Military and veteran populations as an example. This study was published in *Social Work in Mental Health* on August 7, 2023. This study is a conceptual work, intended to provide a broad, social work focused framework that allows for the contextualization of risk and protective factors among military and veteran populations. The purpose of this paper was to

...explore prevailing contemporary theoretical perspectives in the study of suicide (i.e., as originating within the individual), identify social challenges that may contribute to rising suicide rates, and propose an alternative conceptual model of suicide that balances intrapersonal and social forces to guide future prevention activity (Bylotas, 2023, p. 2).

The intent of this framework is to support future research, education, and social work practice in maintaining a contextual understanding of risk and protection when they are applied to suicidality.

This study utilizes both IPTS and CSTS as central theoretical frameworks to present an alternative path forward. It addresses multiple gaps in the literature by acknowledging the need for epistemological diversity. Additionally, this study presents a clear justification for how it may be applied to military and veteran populations, addressing the tokenization that has previously occurred within the literature. Presented as chapter 2, this presentation of a trans-conceptual model lays the foundation for Chapters 3 and 4, which harness the progress that has been made by existing research while simultaneously shaking the narrow and pathologizing interpretations of suicide that have stymied continued forward momentum.

The included article contributes to social work research by adding to the wider body of knowledge for how suicide is understood. It advocates for a more active role played by social

workers in the generation of research and the implementation of prevention practices driven by risk and protective factors. With a formalized model for interpreting suicidality among military and veteran populations that incorporates social work perspectives, future education research and practice may begin to more accurately reflect the professional standards of the largest group of clinicians providing care to service members.

Study 2

The second study is a thematic analysis of an online forum targeting military members and Veterans. The purpose of this thematic analysis is to derive meaning from the community's online communication about suicidality, suicide risk factors, and suicide protective factors. This study applies a trans-conceptual lens of suicidality (Bylotas, 2023), supported by interpersonal and cultural-structural theoretical approaches. This pragmatic framework is used to identify themes emerging from an anonymous, digital landscape that lacks the highly regulated norms present within uniformed military service. To this end, the study asks the following questions: RQ1 – What is communicated in this online forum about suicide? If present, how are risk and protective factors characterized? RQ2 – What attitudes around suicide or features of the online community's culture emerge in its discussion of suicidality? Study 2 examines suicide risk and protective factors in a growing, yet critically under-examined area of veteran and military life. To date, no research has been conducted that qualitatively explores suicide risk and protective factors as expressed by military members and veterans in an anonymous and digital setting. The research proposed in Study 2 contributes to social work and suicidology by adding to the limited understanding of risk and protective factors that exists among military and veteran populations in an online space.

The importance of social media in the lives of veterans and military members has been highlighted in a recent news report on suicide prevention in social media. The journalist, Johnson (2022), highlights the unique role played by online forums in providing a resource to service members experiencing thoughts of suicide. The r/Army subreddit, an online social media site for Army personnel and veterans, receives over 700,000 visits each month. Forum moderators and peer participants respond to persons in crisis both online and via. This informal and voluntary process has resulted in the accumulation of best practices among moderators (Johnson, 2022). Despite the role of social media as a potentially preventive resource, there has been limited research and engagement through formalized efforts by governmental organizations and policy makers. Understanding how informal, frequently anonymous online communities serve as a risk or protective factor for military members and veterans separate from the highly structured military environment represents an area of emerging importance. The intended outcome will be to inform the field's understanding of risk and protective factors as they are expressed in online communities.

Study 3

Lastly, Study 3 employs quantitative methods to explore the differences among suicidality and multiple measures of risk and protective factors between non-traditional and veteran students. Nearly half of all veterans will make use of education benefits (Holian et al., 2020) and subsequently be identified as non-traditional students. Non-traditional student status is a broadly defined term in the literature, ranging from age, relationship status, commuter-status, employment, or the presence of children in the home (Chung et al., 2014). Veterans represent 4% of undergraduate students within the United States, are an average age of 25 years, and hold a variety of diverse backgrounds ranging from race and ethnicity, to having dependents, being

married or partnered, and having foreign-born citizenship status (Molina, 2015). Yet, similar to suicide research broadly, there is a paucity of data examining veteran student outcomes associated with protective factors (Moeck & Takarangi, 2022). Additionally, within existing research there is a general assumption that veteran student status confers greater risk (and therefore potentially less protection) when compared to other non-traditional student groups. Yet, this has not been explicitly examined. Uncovering these differences will better inform how suicide prevention resources for veterans might be implemented in university settings.

The purpose of Study 3 is to examine the prevalence of suicidality among non-traditional students, veteran students with hazardous duty experience, and veteran students without hazardous duty experience. It asks the following questions: RQ1 – Are there differences in suicidality, flourishing, loneliness, resilience, and psychological distress between non-traditional students and veteran students? RQ2 – Are there differences in suicidality, flourishing, loneliness, resilience, and psychological distress between veteran students with hazardous duty experience and veteran students without hazardous duty experience relative to non-veteran, non-traditional students? Analysis of Variance (ANOVA) and multinomial logistic regression are applied as the primary tools of analysis.

Conclusion

Cumulatively, the three studies presented here tackle the problem of military and veteran suicide by applying a contextualized, social work frame to risk and protective factors – a lens notably underrepresented within the overall body of research. Each study approaches the problem from a distinct angle that fills a gap in the literature. This includes applying ecological, person-in-environment perspectives that conceptualize suicidality as a highly complex phenomenon that is dramatically impacted by a veteran's social environment. This framework is

then applied through both qualitative and quantitative analysis. However, these studies are not only unified by epistemology. Together they present a focused analysis of risk and protection that expands beyond the stagnation of the past decades. Suicide is a global challenge, yet the distinct experiences of military members and veterans in the United States make them particularly at risk. The disproportionate suicide death of veterans compared to the general population is a social justice concern. The research presented here seeks to highlight the untapped potential for social work to contribute to this challenge by elevating the strengths and resilience of persons who have historically or are currently serving in the Armed Forces.

REFERENCES

- Abrutyn, S., & Mueller, A. S. (2018). Toward a cultural-structural theory of suicide: Examining excessive regulation and its discontents. *Sociological Theory*, *36*(1), 48-66. <https://doi.org/10.1177/0735275118759150>
- American College Health Association. American College Health Association-National College Health Assessment, Fall 2020 & Spring 2021 [data file]. Silver Spring, MD: American College Health Association [producer and distributor]; (2022-02-28).
- American College Health Association. American College Health Association-National College Health Assessment, Spring 2021 Reference Group Executive Summary. Silver Spring, MD: American College Health Association [producer and distributor]. https://www.acha.org/documents/ncha/NCHA-III_SPRING-2021_REFERENCE_GROUP_EXECUTIVE_SUMMARY_updated.pdf
- American Foundation for Suicide Prevention. (2022). Suicide Data: United States. Retrieved April 26, 2023, from https://www.datocms-assets.com/12810/1649682186-14296_afsp_2022_national_fact_sheet_update_m1_v4.pdf
- Anderson, L., Campbell-Sills, L., Ursano, R. J., Kessler, R. C., Sun, X., Heeringa, S. G., Nock, M. K., Bliese, P. D., Gonzalez, O. I., Wynn, G. H., Jain, S., & Stein, M. B. (2019). Prospective associations of perceived unit cohesion with postdeployment mental health outcomes. *Depression and Anxiety*, *36*(6), 511–521. <https://doi.org/10.1002/da.22884>
- Arsenault-Lapierre, G., Kim, C., & Turecki, G. (2004). Psychiatric diagnoses in 3275 suicides: A meta-analysis. *BMC Psychiatry*, *4*(1), 37. <https://doi.org/10.1186/1471-244X-4-37>
- Atkinson, P., & Hammersley, M. (1994). Ethnography and participant observation. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (248-261). Sage Publications.
- Atuel, H. R., & Castro, C. A. (2018). Military Cultural Competence. *Clinical Social Work Journal*, *46*(2), 74–82. <https://doi.org/10.1007/s10615-018-0651-z>
- Bantjes, J., & Swartz, L. (2017). The cultural turn in critical suicidology: What can we claim and what do we know?. *Death studies*, *41*(8), 512-520.
- Barr, N., & Corral Rodríguez, A. (2023). Latent profile analysis of veterans' psychological risk and protective factors: Associations with nonroutine military discharge. *Psychological trauma: theory, research, practice, and policy*.
- BlackDeer, A., Silver Wolf, D. A., Maguin, E., & Beeler-Stinn, S. (2021). Depression and

- anxiety among college students: Understanding the impact on grade average and differences in gender and ethnicity. *Journal of American College Health*, 1–12. <https://doi.org/10.1080/07448481.2021.1920954>
- Blais, R. K. (2020). Lower intimate relationship satisfaction among partnered female service members/veterans is associated with the presence of suicidal ideation. *Journal of clinical psychology*, 76(7), 1353-1361.
- Blais, R. K., Cruz, R. A., Hoyt, T., & Monteith, L. L. (2023). Stigma for seeking psychological help for military sexual trauma is associated with more frequent suicidal ideation among women service members and veterans. *Psychology of Violence*. <https://doi.org/10.1037/vio0000461>
- Blais, R. K., & Renshaw, K. D. (2014). Self-stigma fully mediates the association of anticipated enacted stigma and help-seeking intentions in National Guard service members. *Military Psychology*, 26(2), 114–119. <https://doi.org/10.1037/mil0000036>
- Blocker, G. M., & Miller, J. A. (2013). Unintended Consequences: Stigma and Suicide Prevention Efforts. *Military Medicine*, 178(5), 473. <https://doi.org/10.7205/MILMED-D-13-00056>
- Blosnich JR, Dichter ME, Cerulli C, Batten SV, Bossarte RM. (2014). Disparities in Adverse Childhood Experiences Among Individuals With a History of Military Service. *JAMA Psychiatry*. 2014;71(9):1041–1048. doi:10.1001/jamapsychiatry.2014.724
- Blosnich, J. R., Garfin, D. R., Maguen, S., Vogt, D., Dichter, M. E., Hoffmire, C. A., Bernhard, P. A., & Schneiderman, A. (2021). Differences in childhood adversity, suicidal ideation, and suicide attempt among veterans and nonveterans. *American Psychologist*, 76(2), 284–299. <https://doi.org/10.1037/amp0000755>
- 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>
- Blow, A. J., Farero, A., Ganoczy, D., Walters, H., & Valenstein, M. (2019). Intimate Relationships Buffer Suicidality in National Guard Service Members: A Longitudinal Study. *Suicide and Life-Threatening Behavior*, 49(6), 1523–1540. <https://doi.org/10.1111/sltb.12537>
- Bos, A. E., Pryor, J. B., Reeder, G. D., & Stutterheim, S. E. (2013). Stigma: Advances in theory and research. *Basic and applied social psychology*, 35(1), 1-9. DOI: 10.1080/01973533.2012.746147
- Brenner, L. A., Forster, J. E., Walsh, C. G., Stearns-Yoder, K. A., Larson, M. J., Hostetter, T. A.,

- Hoffmire, C. A., Gradus, J. L., & Adams, R. S. (2023). Trends in suicide rates by race and ethnicity among members of the United States Army. *PLOS ONE*, *18*(1), e0280217. <https://doi.org/10.1371/journal.pone.0280217>
- Braveman, P., & Gottlieb, L. (2014). The social determinants of health: it's time to consider the causes of the causes. *Public health reports*, *129*(1_suppl2), 19-31.
- Bronfenbrenner, U. (1992). *Ecological systems theory*. Jessica Kingsley Publishers.
- Bryan, C. J., Garland, E. L., & Rudd, M. D. (2016). From impulse to action among military personnel hospitalized for suicide risk: Alcohol consumption and the reported transition from suicidal thought to behavior. *General Hospital Psychiatry*, *41*, 13–19. <https://doi.org/10.1016/j.genhosppsych.2016.05.001>
- Bryan, C. J., Graham, E., & Roberge, E. (2015). Living a life worth living: Spirituality and suicide risk in military personnel. *Spirituality in Clinical Practice*, *2*(1), 74–78. <https://doi.org/10.1037/scp0000056>
- Bryan, C. J., & Bryan, A. O. (2019). Financial strain, suicidal thoughts, and suicidal behavior among US military personnel in the National Guard. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *40*(6), 437–445. <https://doi.org/10.1027/0227-5910/a000592>
- Bryant-Lees, K. B., Martinez, R. N., Frise, A., Bryan, C. J., Goodman, T., Chappelle, W., & Thompson, W. (2021). Predictors and protective factors for suicide ideation across remotely piloted aircraft career fields. *Military Psychology*, *33*(4), 228–239. <https://doi.org/10.1080/08995605.2021.1902181>
- 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>
- Button, M. E., & Marsh, I. (Eds.). (2019). *Suicide and social justice: New perspectives on the politics of suicide and suicide prevention*. Routledge.
- Bylotas, J. (2023). A trans-conceptual model for suicide prevention in social work practice: military and veteran populations as an example. *Social work in mental health*, 1-17. doi: 10.1080/15332985.2023.2244624
- Campbell, S. B., Gray, K. E., Hoerster, K. D., Fortney, J. C., & Simpson, T. L. (2021). Differences in functional and structural social support among female and male veterans and civilians. *Social Psychiatry and Psychiatric Epidemiology*, *56*(3), 375–386. <https://doi.org/10.1007/s00127-020-01862-4>
- Chu, C., Buchman-Schmitt, J. M., Stanley, I. H., Hom, M. A., Tucker, R. P., Hagan, C. R.,

- Rogers, M. L., Podlogar, M. C., Chiurliza, B., Ringer, F. B., Michaels, M. S., Patros, C. H. G., & Joiner, T. E. (2017). The interpersonal theory of suicide: A systematic review and meta-analysis of a decade of cross-national research. *Psychological Bulletin*, *143*(12), 1313–1345. <https://doi.org/10.1037/bul0000123>
- Chung, T. H., Hanley, K., Le, Y. C., Merchant, A., Nascimento, F., De Figueiredo, J. M., ... & Selvaraj, S. (2023). A validation study of PHQ-9 suicide item with the Columbia Suicide Severity Rating Scale in outpatients with mood disorders at National Network of Depression Centers. *Journal of affective disorders*, *320*, 590-594.
- Chung, E., Turnbull, D., & Chur-Hansen, A. (2014). Who are non-traditional students? A systematic review of published definitions in research on mental health of tertiary students. *Educational Research and Reviews*, *9*(22), 1224-1238.
- Conner, K. R., McCarthy, M. D., Bajorska, A., Caine, E. D., Tu, X. M., & Knox, K. L. (2012). Mood, Anxiety, and Substance-Use Disorders and Suicide Risk in a Military Population Cohort. *Suicide and Life-Threatening Behavior*, *42*(6), 699–708. <https://doi.org/10.1111/j.1943-278X.2012.00125.x>
- Cooper, L., Caddick, N., Godier, L., Cooper, A., & Fossey, M. (2018). Transition From the Military Into Civilian Life: An Exploration of Cultural Competence. *Armed Forces & Society*, *44*(1), 156–177. <https://doi.org/10.1177/0095327X16675965>
- Council on Social Work Education. (2022). 2022 Educational Policy and Accreditation Standards. Retrieved April 24, 2023, from <https://www.cswe.org/accreditation/standards/2022-epas/>
- Cramer, R. J., & Kapusta, N. D. (2017). A social-ecological framework of theory, assessment, and prevention of suicide. *Frontiers in psychology*, 1756. <https://doi.org/10.3389/fpsyg.2017.01756>
- Culhane, D., Szymkowiak, D., & Schinka, J. A. (2019). Suicidality and the onset of homelessness: evidence for a temporal association from VHA treatment records. *Psychiatric services*, *70*(11), 1049-1052.
- Curtin, S. C., Hedegaard, H., & Ahmad, F. B. (2021). *Provisional Numbers and Rates of Suicide by Month and Demographic Characteristics: United States, 2020*. <https://archive.hshsl.umaryland.edu/handle/10713/17347>
- Cyrus, K. (2017). Multiple minorities as multiply marginalized: Applying the minority stress theory to LGBTQ people of color. *Journal of Gay & Lesbian Mental Health*, *21*(3), 194-202.
- DeBeer, B. B., Matthieu, M. M., Kittel, J. A., Degutis, L. C., Clafferty, S., Qualls, N., & Morissette, S. B. (2019). Quality Improvement Evaluation of the Feasibility and Acceptability of Adding a Concerned Significant Other to Safety Planning for Suicide

- Prevention With Veterans. *Journal of Mental Health Counseling*, 41(1), 4–20. <https://doi.org/10.17744/mehc.41.1.02>
- Decker, S. E., Ramsey, C. M., Ronzitti, S., Kerns, R. D., Driscoll, M. A., Dziura, J., Skanderson, M., Bathulapalli, H., Brandt, C. A., Haskell, S. G., & Goulet, J. L. (2021). Military sexual trauma and suicidal ideation in VHA-care-seeking OEF/OIF/OND veterans without mental health diagnosis or treatment. *Psychiatry Research*, 303, 114089. <https://doi.org/10.1016/j.psychres.2021.114089>
- Dempsey, C. L., Benedek, D. M., Nock, M. K., Zuromski, K. L., Brent, D. A., Ao, J., Aliaga, P. A., Heeringa, S. G., Kessler, R. C., Stein, M. B., & Ursano, R. J. (2021). Social closeness and support are associated with lower risk of suicide among U.S. Army soldiers. *Suicide and Life-Threatening Behavior*, 51(5), 940–954. <https://doi.org/10.1111/sltb.12778>
- Department of Veterans Affairs. 2022 National Veteran Suicide Prevention Annual Report. <https://www.mentalhealth.va.gov/docs/data-sheets/2022/2022-National-Veteran-Suicide-Prevention-Annual-Report-FINAL-508.pdf>
- Deutsch, A.-M., & Lande, R. G. (2017). The Reasons for Living Scale—Military Version: Assessing Protective Factors Against Suicide in a Military Sample. *Military Medicine*, 182(7), e1681–e1686. <https://doi.org/10.7205/MILMED-D-16-00382>
- Elbogen, E. B., Molloy, K., Wagner, H. R., Kimbrel, N. A., Beckham, J. C., Van Male, L., Leinbach, J., & Bradford, D. W. (2020). Psychosocial protective factors and suicidal ideation: Results from a national longitudinal study of veterans. *Journal of Affective Disorders*, 260, 703–709. <https://doi.org/10.1016/j.jad.2019.09.062>
- Etuk, R., Shirk, S. D., Grubbs, J., & Kraus, S. W. (2020). Gambling Problems in US Military Veterans. *Current Addiction Reports*, 7(2), 210–228. <https://doi.org/10.1007/s40429-020-00310-2>
- Forkmann, T., Glaesmer, H., Paashaus, L., Rath, D., Schönfelder, A., Stengler, K., Juckel, G., Assion, H.-J., & Teismann, T. (2020). Interpersonal theory of suicide: Prospective examination. *BJPsych Open*, 6(5), e113. <https://doi.org/10.1192/bjo.2020.93>
- Fox, K. R., Huang, X., Guzmán, E. M., Funsch, K. M., Cha, C. B., Ribeiro, J. D., & Franklin, J. C. (2020). Interventions for suicide and self-injury: A meta-analysis of randomized controlled trials across nearly 50 years of research. *Psychological Bulletin*, 146(12), 1117–1145. <https://doi.org/10.1037/bul0000305>
- 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>
- Frost, N. A., & Monteiro, C. E. (2020). The interaction of personal and occupational factors in

- the suicide deaths of correction officers. *Justice Quarterly*, 37(7), 1277-1302.
- Garamone, J. (2022, October 20). *Active duty suicide rate drops; Austin says more work needed*. U.S. Department of Defense. <https://www.defense.gov/News/News-Stories/Article/Article/3195429/active-duty-suicide-rate-drops-austin-says-more-work-needed/>
- Gujral K, Bahraini N, Brenner LA, Van Campen J, Zulman DM, Illarmo S, Wagner TH. VA's implementation of universal screening and evaluation for the suicide risk identification program in November 2020 -Implications for Veterans with prior mental health needs. *PLoS One*. 2023 Apr 11;18(4):e0283633. doi: 10.1371/journal.pone.0283633. PMID: 37040367; PMCID: PMC10089346.
- Harrell, M. C., & Berglass, N. (2011). *Losing the battle: The challenge of military suicide*. Washington, DC: Center for a New American Security.
- Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: implications for substance abuse prevention. *Psychological bulletin*, 112(1), 64. doi: 10.1037/0033-2909.112.1.64
- Heisler, E. J. (2018). The Mental Health Workforce: A Primer. 18. *Congressional Research Service*. 7-5700 R4325. Retrieved from https://ecommons.cornell.edu/bitstream/handle/1813/79415/CRS_The_mental_health_workforce_0418.pdf?sequence=1&isAllowed=y
- Hertler, Figueredo, A. J., Peñaherrera-Aguirre, M., Fernandes, H. B. F., & Woodley of Menie, M. A. (2018). Urie Bronfenbrenner: Toward an Evolutionary Ecological Systems Theory. In *Life History Evolution*. Springer International Publishing AG.
- Hightower, H., Almeida, J., & Anderson, J. (2023). Reimagining Suicide Prevention as a Social Justice Issue: Getting Back to Social Work's Roots. *Social Work*, 68(2), 167–169. <https://doi.org/10.1093/sw/swad005>
- Hill, M. L., Nichter, B., Loflin, M., Norman, S. B., & Pietrzak, R. H. (2021). Comparative associations of problematic alcohol and cannabis use with suicidal behavior in U.S. military veterans: A population-based study. *Journal of Psychiatric Research*, 135, 135–142. <https://doi.org/10.1016/j.jpsychires.2021.01.004>
- Hjelmeland, H. (2016). A critical look at current suicide research. *Critical suicidology: Transforming suicide research and prevention for the 21st century*, 31-55.
- Hjelmeland, H., & Loa Knizek, B. (2020). The emperor's new clothes? A critical look at the interpersonal theory of suicide. *Death Studies*, 44(3), 168–178. <https://doi.org/10.1080/07481187.2018.1527796>
- Hoffmire, C. A., Monteith, L. L., Forster, J. E., Bernhard, P. A., Blosnich, J. R., Vogt, D., ... &

- Schneiderman, A. I. (2021). Gender differences in lifetime prevalence and onset timing of suicidal ideation and suicide attempt among post-9/11 veterans and nonveterans. *Medical care*, 59, S84-S91.
- Holian, L., Adam, T., Llc, A., & Hunt-White, T. (2020). Veterans' education benefits: A profile of military students who received federal veterans' education benefits in 2015-16. *U.S. Department of Education*. <https://nces.ed.gov/pubs2020/2020488rev.pdf>
- 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://www.frontiersin.org/articles/10.3389/fpsyg.2020.01998>
- Hom, M. A., Stanley, I. H., Podlogar, M. C., & Joiner Jr, T. E. (2017). "Are you having thoughts of suicide?" Examining experiences with disclosing and denying suicidal ideation. *Journal of Clinical Psychology*, 73(10), 1382-1392.
- Johnson, D. (2022, February 2). 'A debt I can never repay' – How Reddit is filling the gaps in the military's failing mental health care system. *Task & Purpose*. <https://taskandpurpose.com/news/army-subreddit-resource/>
- Joiner, T.E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- Kalra, G., & Bhugra, D. (2013). Sexual violence against women: Understanding cross-cultural intersections. *Indian Journal of Psychiatry*, 55(3), 244. <https://doi.org/10.4103/0019-5545.117139>
- Kamdar, N. P., Horning, M. L., Geraci, J. C., Uzdavines, A. W., Helmer, D. A., & Hundt, N. E. (2021). Risk for depression and suicidal ideation among food insecure US veterans: Data from the National Health and Nutrition Examination Study. *Social psychiatry and psychiatric epidemiology*, 1-10.
- Kessler, R. C., Bossarte, R. M., Luedtke, A., Zaslavsky, A. M., & Zubizarreta, J. R. (2020). Suicide prediction models: A critical review of recent research with recommendations for the way forward. *Molecular Psychiatry*, 25(1), 168–179. <https://doi.org/10.1038/s41380-019-0531-0>
- Khan, A. J., Li, Y., Dinh, J. V., Donalson, R., Hebenstreit, C. L., & Maguen, S. (2019). Examining the impact of different types of military trauma on suicidality in women veterans. *Psychiatry Research*, 274, 7–11. <https://doi.org/10.1016/j.psychres.2019.02.025>
- Klonsky, E. D. (2020). The role of theory for understanding and preventing suicide (but not predicting it): A commentary on Hjelmeland and Knizek. *Death studies*, 44(7), 459-462. DOI: 10.1080/07481187.2019.1594005

- Klonsky, E. D., & May, A. M. (2015). The Three-Step Theory (3ST): A New Theory of Suicide Rooted in the “Ideation-to-Action” Framework. *International Journal of Cognitive Therapy, 8*(2), 114–129. <https://doi.org/10.1521/ijct.2015.8.2.114>
- Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine, 16*(9), 606-613.
- Lane, R., Robles, P., Brondolo, E., Jansson, A., & Diduk-Smith, R. M. (2021). Antecedents of Suicide Among Active Military, Veteran, and Nonmilitary Residents of the Commonwealth of Virginia: The Role of Intimate Partner Problems. *Archives of Suicide Research, 25*(4), 790–809. <https://doi.org/10.1080/13811118.2020.1765927>
- Langhinrichsen-Rohling, J., Snarr, J. D., Slep, A. M. S., & Heyman, R. E. (2019). Risk for suicide attempts among United States Air Force active duty members with suicide ideation: An ecological perspective. *Journal of Consulting and Clinical Psychology, 87*(12), 1124–1136. <https://doi.org/10.1037/ccp0000435>
- LeardMann CA, Powell TM, Smith TC, et al. Risk Factors Associated With Suicide in Current and Former US Military Personnel. *JAMA. 2013;310*(5):496–506. doi:10.1001/jama.2013.65164
- Leavitt, R. A., Ertl, A., Sheats, K., Petrosky, E., Ivey-Stephenson, A., & Fowler, K. A. (2018). Suicides among American Indian/Alaska Natives—National violent death reporting system, 18 states, 2003–2014. *Morbidity and Mortality Weekly Report, 67*(8), 237.
- Lee, S., & Lee, D. K. (2018). What is the proper way to apply the multiple comparison test? *Korean Journal of Anesthesiology, 71*(5), 353–360. <https://doi.org/10.4097/kja.d.18.00242>
- Lemaire, C. M., & Graham, D. P. (2011). Factors associated with suicidal ideation in OEF/OIF veterans. *Journal of Affective Disorders, 130*(1), 231–238. <https://doi.org/10.1016/j.jad.2010.10.021>
- Ma, J., Batterham, P. J., Callear, A. L., & Han, J. (2016). A systematic review of the predictions of the Interpersonal–Psychological Theory of Suicidal Behavior. *Clinical psychology review, 46*, 34-45.
- Maple, M., Pearce, T., Sanford, R. L., & Cerel, J. (2017). The role of social work in suicide prevention, intervention, and postvention: A scoping review. *Australian Social Work, 70*(3), 289-301. <https://doi.org/10.1080/0312407X.2016.1213871>
- Mariampolski, H. (1999). The Power of Ethnography. *Market Research Society. Journal., 41*(1), 1–12. <https://doi.org/10.1177/147078539904100105>
- Matarazzo, B. B., Barnes, S. M., Pease, J. L., Russell, L. M., Hanson, J. E., Soberay, K. A., &

- Gutierrez, P. M. (2014). Suicide Risk among Lesbian, Gay, Bisexual, and Transgender Military Personnel and Veterans: What Does the Literature Tell Us? *Suicide and Life-Threatening Behavior*, *44*(2), 200–217. <https://doi.org/10.1111/sltb.12073>
- Mavandadi, S., Ingram, E., Klaus, J., & Oslin, D. (2019). Social Ties and Suicidal Ideation Among Veterans Referred to a Primary Care–Mental Health Integration Program. *Psychiatric Services*, *70*(9), 824–832. <https://doi.org/10.1176/appi.ps.201800451>
- Maynard, D. W. (1984). Structuralism Revisited. *Contemporary Sociology*, *13*(4), 425–428. <https://doi.org/10.2307/2069043>
- McGurk, D., Cotting, D. I., Britt, T. W., & Adler, A. B. (2006). Joining the Ranks: The Role of Indoctrination in Transforming Civilians to Service Members. In A. B. Adler, C. A. Castro, & T. W. Britt (Eds.), *Military life: The psychology of serving in peace and combat: Operational stress* (pp. 13–31). Praeger Security International.
- McLean, J., Maxwell, M., Platt, S., Harris, F. M., & Jepson, R. (2008). *Risk and protective factors for suicide and suicidal behaviour: A literature review*. Scottish Government.
- Midway, S., Robertson, M., Flinn, S., & Kaller, M. (2020). Comparing multiple comparisons: Practical guidance for choosing the best multiple comparisons test. *PeerJ*, *8*, e10387. <https://doi.org/10.7717/peerj.10387>
- Moeck, E., & Takarangi, M. (2022). Assessing Student Veterans’ Academic Outcomes and Well-Being: A Scoping Review.
- Molina, D. (2015). By the numbers: Undergraduate student veterans. Washington, DC: American Council on Education. Retrieved from <https://www.acenet.edu/Documents/Higher-ed-spotlight-undergraduate-student-veterans.pdf>
- Monteith, L. L., Holliday, R., Schneider, A. L., Forster, J. E., & Bahraini, N. H. (2019). Identifying factors associated with suicidal ideation and suicide attempts following military sexual trauma. *Journal of Affective Disorders*, *252*, 300–309. <https://doi.org/10.1016/j.jad.2019.04.038>
- Mueller, A. S., Abrutyn, S., Pescosolido, B., & Diefendorf, S. (2021). The Social Roots of Suicide: Theorizing How the External Social World Matters to Suicide and Suicide Prevention. *Frontiers in Psychology*, *12*. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.621569>
- Naifeh, J. A., Ursano, R. J., Kessler, R. C., Aliaga, P. A., Mash, H. B. H., Fullerton, C. S., ... & Stein, M. B. (2020). Early First Deployment and Risk of Suicide Attempt Among First-term Enlisted Soldiers in the US Army. *Suicide and Life-Threatening Behavior*, *50*(2), 345-358.
- National Association of social workers. (2017). NASW code of ethics. Retrieved June 30, 2023.

from <https://www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English>

- Nichter, B., Hill, M. L., Na, P. J., Kline, A. C., Norman, S. B., Krystal, J. H., Southwick, S. M., & Pietrzak, R. H. (2021). Prevalence and Trends in Suicidal Behavior Among US Military Veterans During the COVID-19 Pandemic. *JAMA Psychiatry*, 78(11), 1218–1227. <https://doi.org/10.1001/jamapsychiatry.2021.2332>
- Nichter, B., Hill, M., Norman, S., Haller, M., & Pietrzak, R. H. (2020). Mental health treatment utilization among U.S. military veterans with suicidal ideation: Results from the National Health and Resilience in Veterans Study. *Journal of Psychiatric Research*, 130, 61–67. <https://doi.org/10.1016/j.jpsychires.2020.07.004>
- 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. *The Journal of Clinical Psychiatry*, 82(5), 35870. <https://doi.org/10.4088/JCP.20m13714>
- Nock, M. K., Deming, C. A., Fullerton, C. S., Gilman, S. E., Goldenberg, M., Kessler, R. C., McCarroll, J. E., McLaughlin, K. A., Peterson, C., Schoenbaum, M., Stanley, B., & Ursano, R. J. (2013). Suicide Among Soldiers: A Review of Psychosocial Risk and Protective Factors. *Psychiatry: Interpersonal and Biological Processes*, 76(2), 97–125. <https://doi.org/10.1521/psyc.2013.76.2.97>
- O'Connor, R. C., & Kirtley, O. J. (2018). The integrated motivational–volitional model of suicidal behaviour. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 373(1754), 20170268. <https://doi.org/10.1098/rstb.2017.0268>
- Pietrzak, R. H., Goldstein, M. B., Malley, J. C., Rivers, A. J., Johnson, D. C., & Southwick, S. M. (2010). Risk and protective factors associated with suicidal ideation in veterans of Operations Enduring Freedom and Iraqi Freedom. *Journal of Affective Disorders*, 123(1), 102–107. <https://doi.org/10.1016/j.jad.2009.08.001>
- Pruitt, L. D., Smolenski, D. J., Bush, N. E., Tucker, J., Issa, F., Hoyt, T. V., & Reger, M. A. (2019). Suicide in the military: understanding rates and risk factors across the United States' armed forces. *Military Medicine*, 184(Supplement_1), 432-437. <https://doi.org/10.1093/milmed/usy296>
- Ramchand, R. (2022). Suicide Among Veterans. *Rand Health Quarterly*, 9(3), 21
- Ramchand, R., Eberhart, N. K., Guo, C., Pedersen, E. R., Savitsky, T. D., Tanielian, T., & Voorhies, P. (2014). Developing a research strategy for suicide prevention in the Department of Defense: Status of current research, prioritizing areas of need, and recommendations for moving forward. *Rand Health Quarterly*, 4(3). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5396216/>

- Rogers, M. L., & Joiner, T. E. (2019). Exploring the temporal dynamics of the interpersonal theory of suicide constructs: A dynamic systems modeling approach. *Journal of Consulting and Clinical Psychology, 87*(1), 56–66. <https://doi.org/10.1037/ccp0000373>
- Ryan, A. T., Daruwala, S. E., Perera, K. U., Lee-Tauler, S. Y., Tucker, J., Grammer, G., Weaver, J., & Ghahramanlou-Holloway, M. (2020). The Relationship between Trauma Exposure and Psychiatric Hospitalization for Suicide Ideation or Suicide Attempt among Patients Admitted to a Military Treatment Setting. *International Journal of Environmental Research and Public Health, 17*(8), 2729. <https://doi.org/10.3390/ijerph17082729>
- Saldaña, J. (2013). *The coding manual for qualitative researchers* (2nd ed). SAGE.
- Sall, J., Brenner, L., Millikan Bell, A. M., & Colston, M. J. (2019). Assessment and management of patients at risk for suicide: synopsis of the 2019 US Department of Veterans Affairs and US Department of Defense clinical practice guidelines. *Annals of internal medicine, 171*(5), 343-353.
- Schuman, D. L., Highfill, C., Johnson, A., Henderson, S., & Ognyanova, P. (2021). Scoping Review: Ethical Considerations in Online Ethnographic Research With Military Populations. *Journal of Empirical Research on Human Research Ethics, 16*(4), 374–388. <https://doi.org/10.1177/15562646211038161>
- Shiner, B., Peltzman, T., Cornelius, S. L., Gui, J., Forehand, J., & Watts, B. V. (2021). Recent trends in the rural–urban suicide disparity among veterans using VA health care. *Journal of behavioral medicine, 44*, 492-506.
- Sher, L. (2019). Resilience as a focus of suicide research and prevention. *Acta Psychiatrica Scandinavica, 140*(2), 169–180. <https://doi.org/10.1111/acps.13059>
- Silver, E., Silver, J. R., & Sigfusdottir, I. D. (2021). Moral Intuitions and Suicide Risk.
- Simons, G. J., Drewniak, T. A., Jahn, A., Gillen, M. J., Larsen, S. E., & Kangas, G. M. (2019). Drop-in suicide prevention group decreases suicidal ideation among Veterans. *Military Psychology, 31*(1), 18–25. <https://doi.org/10.1080/08995605.2018.1524254>
- Simons, J. S., Simons, R. M., Walters, K. J., Keith, J. A., O'Brien, C., Andal, K., & Stoltenberg, S. F. (2020). Nexus of despair: A network analysis of suicidal ideation among veterans. *Archives of Suicide Research : Official Journal of the International Academy for Suicide Research, 24*(SUP1), 314–336. <https://doi.org/10.1080/13811118.2019.1574689>
- Skjott, L. M., & Korsgaard, S. (2019). Coding qualitative data: A synthesis guiding the novice. *Qualitative Research Journal, 19*(3), 259–270. <https://doi.org/10.1108/QRJ-12-2018-0012>
- Smith, P. N., Schuler, K., Fadoir, N., Marie, L., & Basu, N. (2020). Socio-ecological context and

- the interpersonal theory of suicide: A response to Hjelmeland & Knizek. *Death Studies*, 44(9), 547–551. <https://doi.org/10.1080/07481187.2019.1586799>
- Stefanovics, E. A., Potenza, M. N., Tsai, J., Nichter, B., & Pietrzak, R. H. (2023). Sex-specific risk and resilience correlates of suicidal ideation in U.S. military veterans. *Journal of Affective Disorders*, 328, 303–311. <https://doi.org/10.1016/j.jad.2023.02.025>
- Stewart, D., & Klein, S. (2016). The use of theory in research. (2016): 615-619.
- Stone, D. M., Mack, K. A., & Qualters, J. (2023). *Recent Changes in Suicide Rates, by Race and Ethnicity and Age Group—United States, 202*. 72(6).
- Taylor, C. T., Campbell-Sills, L., Kessler, R. C., Sun, X., Nock, M. K., Ursano, R. J., Jain, S., & Stein, M. B. (2022). Social network size and personality traits independently and prospectively predict distress disorders and suicidal behavior in U.S. Army soldiers. *Psychological Medicine*, 1–10. <https://doi.org/10.1017/S0033291722002082>
- Theis, J., MD, MPH, Hoops, K., MD, MPH, Booty, M., MHS, Nestadt, P., MD, & Crifasi, C., PhD, MPH. (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>
- Trachik, B., Tucker, R. P., Ganulin, M. L., Merrill, J. C., LoPresti, M. L., Cabrera, O. A., & Dretsch, M. N. (2020). Leader provided purpose: Military leadership behavior and its association with suicidal ideation. *Psychiatry Research*, 285, 112722. <https://doi.org/10.1016/j.psychres.2019.112722>
- Trovato, F. (2021). Unemployment, religious disintegration and suicide fluctuations in Alberta. *Canadian Review of Sociology/Revue Canadienne de Sociologie*, 58(4), 476–491. <https://doi.org/10.1111/cars.12361>
- Tucker, R. P., Pardue-Bourgeois, S., Snow, A., Bradstreet, M., & Cerel, J. (2019). The Relationship Between Suicide-Related Exposure and Personal History of Suicidal Behavior in Transgender and Gender-Diverse Veterans. *LGBT Health*, 6(7), 335–341. <https://doi.org/10.1089/lgbt.2019.0120>
- Tucker, R. P., Testa, R. J., Reger, M. A., Simpson, T. L., Shipherd, J. C., & Lehavot, K. (2019). Current and Military-Specific Gender Minority Stress Factors and Their Relationship with Suicide Ideation in Transgender Veterans. *Suicide and Life-Threatening Behavior*, 49(1), 155–166. <https://doi.org/10.1111/sltb.12432>
- Ullman, K., Landsteiner, A., Linskens, E., MacDonald, R., McKenzie, L., Murdoch, M., ... & Wilt, T. J. (2021). Risk and protective factors across socioecological levels of risk for suicide: An evidence map.
- U.S. Census Bureau. (2023, May 20). *Armed Forces Day: May 20, 2023* [Press release].

<https://www.census.gov/newsroom/stories/armed-forces-day.html>

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S., Selby, E. A., & Joiner, T. E. (2010). The Interpersonal Theory of Suicide. *Psychological Review*, *117*(2), 575–600. <https://doi.org/10.1037/a0018697>

Waliski, A., Matthieu, M. M., Townsend, J. C., McGaugh, J., Adkins, D. A., Skaggs, E. M., Allison, M. K., & Kirchner, J. (2021). Characteristics and Context of Veterans Experiencing Serious Suicidal Ideation or Suicide Attempt by Firearm which led to Hospitalization. *Archives of Suicide Research*, *0*(0), 1–11. <https://doi.org/10.1080/13811118.2021.1974625>

Walker, B. 2020. Resilience: what it is and is not. *Ecology and Society* *25*(2):11. <https://doi.org/10.5751/ES-11647-250211>

White, J. (2017). What can critical suicidology do?. *Death Studies*, *41*(8), 472-480.

White, J., Marsh, I., Kral, M. J., & Morris, J. (Eds.). (2015). *Critical suicidology: Transforming suicide research and prevention for the 21st century*. UBC Press.

Wolfe-Clark, A. L., & Bryan, C. J. (2017). Integrating Two Theoretical Models to Understand and Prevent Military and Veteran Suicide. *Armed Forces & Society*, *43*(3), 478–499. <https://doi.org/10.1177/0095327X16646645>

CHAPTER 2

STUDY 1 – A TRANS-CONCEPTUAL MODEL FOR SUICIDE PREVENTION IN SOCIAL WORK PRACTICE: MILITARY AND VETERAN POPULATIONS AS AN EXAMPLE¹

Death by suicide remains a public health concern that critically impacts the nation, veteran populations, and military service members. In 2019, 6,621 veterans died by suicide, at a rate near twice that of non-veteran peers (Department of Veterans Affairs, 2021). Among active-component service members, suicide rates remain problematic, yet comparable to the generable population (Department of Defense, 2020). In addition to death by suicide, lifetime experience of thoughts of suicide remains a common phenomenon among veterans and military personnel, with a recent study of veterans finding an estimated prevalence of 20% among men and 28.8% among women (Hoffmire et al., 2021). Despite a widespread increase in efforts directed toward ending death by suicide for all population sectors, interventions have historically failed to decrease related deaths, with the overall rate from 2000 to 2018 increasing by 35% among the general population (Martínez-Alés, Jiang, Keyes, & Gradus, 2022). The persistence of suicidality and ideation may suggest that modern prevention has insufficiently reflected the complexity of suicidality. In response to this growing crisis, the White House released a national public health strategy to reduce suicide among United States military personnel. Among these national priorities is a call for “increased research coordination, data sharing, and evaluation efforts” (White House, 2021, p. 9).

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The social work profession is particularly suited to contribute to these objectives, beginning first with the generation of increasingly nuanced theory that engages the person-in-environment perspective signature to social work. Clinical social workers comprise the single largest portion of the mental health workforce (Heisler, 2018). Yet, social work's foundational values are not proportionally reflected within suicide scholarship (Maple, Pearce, Sanford, & Cerel, 2016). The role of social workers in suicide prevention must shift from the passive implementation of the perspectives and methods of peer professions to the active development of theory and modalities that reflect core social work values. To truly advance prevention science, we must move beyond a focus on the symptoms of suicidality and approach these contemporary problems with a social work lens. This approach should be inclusive of the dominant theoretical foundation of interpersonal theory of suicide (LeFeber & Solorzano, 2019; Van Orden et al., 2010), yet also incorporate broader structural and sociocultural factors influencing suicide rates. More specifically, these should sufficiently reflect the diverse and contextual nature of human experience, exemplified by the highly regulated structural norms of veterans and military service members (Abrutyn & Mueller, 2021).

The purpose of this article is to explore prevailing contemporary theoretical perspectives in the study of suicide (i.e., as originating within the individual), identify social challenges that may contribute to rising suicide rates, and propose an alternative conceptual model of suicide that balances intrapersonal and social forces to guide future prevention activity. Military and veteran populations are highlighted to illustrate this goal. Modern perspectives of suicide are considered through both the lens of the interpersonal theory of suicide and the cultural-structural theory, a competing critical perspective. Both the merits and challenges of these theories are considered for goodness of fit when applied to military personnel and veterans, particularly

within the context of the social work profession. Finally, an argument is made for the application of a trans-conceptual framework which reflects the nuanced internal processes that drive human behavior as well as the external systemic pressures from which suicidality may emerge. This framework casts suicidality as a reflection of disordered social and structural pressures, rather than the product of individual pathology. Broad conceptualization of this public health crisis and attendant planned interventions guided by an understanding of these intersecting forces, may contribute to more effectively meeting the needs of persons experiencing suicidal thoughts and behaviors.

The dominant approach to contemporary suicide prevention

Current national public health goals to reduce veteran and military suicide reflect the varying perspectives as to why and how this phenomenon occurs. Among these approaches, theories addressing biological perspectives (Oquendo et al., 2014), cognitive behaviorism (Beck, 1986), and systemic/structural views (Durkheim, 1897/1951) have undergone various iterations to create an increasingly granular lens for understanding the causal framework of suicide. Epistemologies central to suicidology have become entrenched, moving away from perspectives which frame suicide as a dynamic construction of unique individual experience; approaches now more closely align with a post-positivist paradigm which holds that suicide can be predicted through the measurement of set variables (Hjelmeland & Loa Knizek, 2020). These approaches that dominate the suicidological landscape are grounded in realist ontology, which tacitly views suicidality as a fixed, predictable, and measurable phenomenon. This is not surprising given that, across the behavioral sciences, post-positivism is the dominant inquiry paradigm, characterizing 95% of psychological research and 78% of all studies across disciplines (Alise & Teddlie, 2010).

Interpersonal theory of suicide

Several models have emerged to offer insight into the ideation to action process by which suicide occurs (Klonsky & May, 2015; O'Connor, 2011; Van Orden et al., 2010). The most widely applied example is the interpersonal theory of suicide (IPTS; Joiner, 2005; Van Orden et al., 2010). Joiner's IPTS is among the most frequently cited and researched etiological frameworks for understanding why individuals die by suicide (Chu et al., 2017). Given its hegemony within suicidology, IPTS is utilized in the context of this article to further exemplify the modern conceptual approach discussed above.

IPTS highlights three essential components that, when present, lead to death by suicide. IPTS asserts that the intersection of thwarted belongingness and perceived burdensomeness are sufficient to generate suicidal ideation (Joiner, 2005; Van Orden et al., 2010). When these factors intersect with an acquired capacity for suicide, lethal or near lethal action occurs (Van Orden et al., 2010). These central assertions can trace their genesis to the foundational works of the French sociologist Emile Durkheim (Durkheim, 1897/1951; Zhang, Lester, Zhao, & Zhou, 2013), in which a struggle to become embedded within community systems may lead to egoistic suicide (Dohrenwend, 1959). Individuals who perceive themselves as isolated or socially alienated develop the desire to die by suicide. The parsimony of the IPTS – in which suicide is framed as the essential intersection of three criterion – has been quite seductive for researchers, leading to numerous and exhaustive attempts to quantify individual experiences from this lens (Chu et al., 2017). IPTS has been widely framed through a post-positivist lens in which the purported fundamental constructs of belongingness and burdensomeness are treated as objective, measurable aspects of individual experience (Joiner, 2005; Van Orden et al., 2010).

However, attempts to measure and validate IPTS have yielded mixed results. Meta-analyses and systematic reviews indicate some utility in the association between these variables and suicidal outcomes, but with overall effects “modest” in size (Chu et al., 2016; Ma, Batterham, Calear, & Han, 2016). Despite indications that IPTS may be somewhat instructive for understanding suicide risk factors, this has not translated into an overall ability to reliably predict and prevent suicidal behavior. A 2016 meta-analysis of 50 years of suicide risk factor research found that the predictive ability of these variables to successfully identify suicidal thoughts and behaviors has remained unchanged (Franklin et al.). That is, increasingly granular theories and sophisticated methods of research focused on suicide risk factors have not and will not produce a panacea. This does not necessarily indicate that research into risk factors – particularly those indicated in IPTS – lacks utility. Rather, contemporary frameworks for studying how and why suicide occurs, fails to capture the complexity of the situation in such a way that death by suicide can be effectively predicted and prevented.

Critical responses to the insufficiencies of suicide research

While fundamental characteristics within the IPTS have been established as valid indicators for identifying and assessing suicide risk, critical scholarship has pointed out that rather than describing truly interpersonal processes, the phenomena are largely reflective of intrapersonal experience (Hjelmeland & Loa Knizek, 2020). Thwarted belongingness and perceived burdensomeness indeed may be features among persons experiencing suicidal ideation; yet these are internalized experiences of the exterior world, which at present are largely studied absent the context of structural and cultural forces that comprise the experience of the population generally, and veterans more specifically. In other words, burdensomeness and belongingness should not be viewed as causal factors themselves, but as egoistic outcomes of

more fundamental causal triggers (Hjelmeland & Loa Knizek, 2020). What social, cultural, and/or structural factors lead individuals to feel they are a burden and do not belong? Focusing exclusively on the central elements of IPTS is akin to taking one's temperature, labeling the fever the cause of illness, and attempting to treat the fever versus the underlying illness. To focus on the elevated temperature – a manifestation, not a cause of illness – stops short of understanding true causes for effective treatment.

The IPTS presents a strategy to reliably diagnose symptoms of the individual experiencing suicidal ideation. However, it renders insufficient insight into true precipitating factors for the purpose of prevention. For these potential answers, one must broaden the conceptual scope of investigation and examine the systemic and complex antecedents deeply embedded within the human experience. In pursuit of better informing suicide prevention, the micro and meso must receive balanced attention with both the person and their environmental milieu considered – notions critical to the social work profession. To date, social work contributions in suicidology have largely failed to guide the theoretical foundations of research and practice (Maple, Pearce, Sanford, & Cerel, 2016). Between 1980 and 2006, only 0.2% of social work journal articles covered suicide research (Joe & Niedermeier, 2008). The social work profession must contribute its unique perspective to suicide research and assert the value of its contributions within the field of suicidology. Failure to do so to date has resulted in clinical practitioners widely implementing approaches that do not center social work priorities and values. To illustrate the role played by meso and macro-level factors, we turn to Abrutyn and Mueller's (2018) cultural structural theory of suicide (CSTS) and additional critical considerations of culture and structures as they relate to military and veteran suicide. CSTS may serve as an initial guide for social workers within suicide prevention practice and a launch point

for theory development focusing on environmental etiologies of suicide. Systemic perspectives such as CSTS incorporate an inherently constructivist perspective, in which individual experience is distinct from an externally derived truth (Herting & Stein, 2007). Thus, acknowledging how external factors influence the individual facilitates understanding of where to target prevention efforts.

Cultural-structural theory of suicide

CSTS is rooted within critical suicidology scholarship. Critical suicidology “brings together academics, community activists, service users ... and persons with lived experience, to rethink what it means to study suicide and enact practices of suicide prevention” (White, p. 472, White, 2017). Abrutyn and Mueller’s (2018) CSTS presents a formalized exploration of how excessive regulation, exemplified by legal and social processes, become internalized and contribute to the pressures that generate suicidality. Like IPTS, CSTS is indebted to the theoretical foundations of Durkheim’s structural theory, which posits that suicidality can be attributed to individuals’ lack of integration into larger structural systems (Mueller, Abrutyn, Pescosolido, & Diefendorf, 2021). Consequently, unsuccessful attempts at connection contribute to the development of thwarted belongingness. CSTS builds upon these foundations. CSTS asserts that cultural-structural systems with highly regulated modes of operation, such as secondary school environments or the phenomena of masculinity, more readily foster the development of suicidal ideation (Abrutyn & Mueller, 2018; Hinojosa, 2010). Whereas IPTS locates the origins of suicidal ideation within the individual – that is, as the result of internal psychological processes – CSTS posits that the systems themselves foster the development of suicidal thoughts and behavior (Abrutyn & Mueller, 2018). CSTS holds that the pathology is not within the individual, but within cultural and structural forces at work.

The process of cultural and regulatory development is bidirectional. Individuals internalize the structural expectations and pressures of the group. In turn, these patterns of thinking and being reinforce the social structure (Abrutyn & Mueller, 2018; Maynard & Rossi, 1984). This process magnifies the embedded expectations of highly regulated systems. The concept of masculinity, for example, delivers culturally embedded messages that are received by male identifying individuals. When these beliefs become internalized, the individual then impresses these beliefs upon others. Thus, creating a feedback loop of cultural norms. Within these highly regulated systems, failure to meet cultural/structural expectations provides a mechanism through which suicidality may develop. This article attempts to unpack and highlight some of the central cultural factors relevant to military and veteran suicide.

Cultural experience as a variable is difficult to quantify and lacks the same intensive study given to suicide risk factors (Bantjes & Swartz, 2017). Given this dearth of data within academic research, the more abstract features of human experience demand more thorough exploration, as the modern acontextual pathologizing of suicidality remains insufficient on its own. Social work is well equipped to support this endeavor. In this context CSTS' applicability to the unique systemic factors influencing the lives and thought processes of military members provides utility for considering macro and meso level variables in understanding suicidal behavior and is useful in framing how social workers might interpret this challenge.

Application of CSTS to military populations and implications for practice

Consideration of the cultural characteristics of an individual, in this case someone who is a veteran or military member, is a critical first step in applying CSTS to suicide prevention. It is central to Abrutyn and Mueller's (2018) introduction of the theory, and the focus of the present section. This population represents a distinct sub-culture with a unique language, communication

style, value system, mission, and training experiences (Strom et al., 2012). Military basic training has been shown to facilitate changes in personality, with the intention of building characteristics that support unit effectiveness, cohesion, and dedication to a shared mission (Vickers, Hervig, Paxton, Kanfer, & Ackerman, 1996). Considering the need for lethal combat and military engagement, adherence to structural and cultural norms is necessary for the operational success of military units: uniformity supports predictability, efficiency, and reliability. According to Abrutyn and Mueller (2018), in the lives of veterans and military members, the ability to successfully navigate and incorporate oneself into the demands of these meso and macro level systems would contribute to feelings of connection and belonging. The converse also holds within this context; difficulty comports with the cultural demands of the military may lead to an internalized sense of lacking connection and belonging.

Despite the importance of uniformity, the individual experiences of every military service member are unique (Burek, 2018). A survey of recruits following basic training, found that reasons for military service are highly varied and far more complex than value tropes such as duty or honor (Barlas, Higgins, Pfeiger, & Diecker, 2013). Furthermore, following training, researchers found that service members still maintain their unique lived experiences, culture, and values that must be subsequently synthesized with their military experience. Differences in experiences based upon branch, rank structure, and occupational specialty further complicate the degree of variation that occurs within this sub-group.

Accordingly, this precludes the effectiveness of blanket prevention approaches. Herein lies a central challenge within the spectrum of suicide prevention among military members and veterans: the complexity of prevention demands an individual and nuanced approach. Yet, this variability is fundamentally at odds with military and bureaucratic structural demands for

uniformity. Cultural characteristics that bolster military effectiveness simultaneously perpetuate stigma and reinforce perceived barriers to prevention resources (Sharp et al., 2015). The presence of a warrior culture fosters reluctance to engage in help-seeking (Braswell & Kushner, 2012), and systems of hegemonic masculinity maintain rigid perceptions of desirable intrapersonal characteristics which impacts both male and female identifying people (Abrutyn & Mueller, 2018; Hinojosa, 2010).

Although a comprehensive analysis of military and veteran cultural dynamics is beyond the scope of this writing, the complex nature of both veteran experiences and military culture highlights the challenges faced in developing effective prevention (Pease, Billera, & Gerard, 2016). The combination of cultural forces and system structure that places value on uniformity and belief internalization, provides fertile ground for mental health challenges and a cultivation of risk factors among individuals who perceive themselves as failing to meet the expectations of the social structure (Abrutyn & Mueller, 2018). What is experienced as protective for some, becomes a risk factor and catalyst to lethal behavior for others. For clinical social workers serving this population, recognizing nuance in the cultural demands experienced by veterans means understanding the dual nature of these forces. Among meso level practitioners and administrators, deliberate action to make leadership decisions that allows and acknowledges complexity is critical. For macro-level social workers, advocacy and education for policy makers and military commanders is fundamental to facilitating a more inclusive perspective of suicide. At all levels, social workers guided by fundamental professional values, recognizing the centrality of social relationships, justice, and dignity of the person (NASW, 2021) are needed to make meaningful change.

This has several implications for clinical social work practice. Externalizing the contributing factors of suicidality and moving beyond a pathologizing perspective necessarily means that intervention occurring solely at the individual level is tantamount to triage. It is a response limited to the alleviation of immediate, acute symptoms. Increasing prevention effectiveness for the individual, demands incorporation of meso and macro perspectives (Lee, Hong, & Espelage, 2010). For the clinical social worker, incorporating a CSTS lens provides context for assessing individuals with greater specificity regarding the systemic pressures that cause acute suicidality and chronicity. Furthermore, CSTS is inclusive of critical perspectives that recognize the role by which oppressive or unjust processes may impact the individual (Abrutyn & Mueller, 2018). As treatment modalities targeting specific populations continue to develop, attributing etiology to external systemic pressures relieves the individual of a stigmatizing pathology. Failure to adapt, and perpetuating status quo prevention using coercive interventions inadvertently drives stigma and fosters perceived barriers of care (Blocker & Miller, 2013). That is, broadening the theoretical lens to be inclusive of these multi-systemic factors can support a shift from risk averse treatment decisions to the support of a harm reduction approach.

Toward a trans-conceptual model of suicide

A more comprehensive theoretical framework that reflects the complexity of suicide phenomena is needed. Indeed, calls for more nuanced theories have been made across professional disciplines (Cramer & Kapusta, 2017; Mastroianni & Scott, 2011; Van Der Feltz-Cornelis et al., 2011; Zhang, 2019). Given the complexity and diversity of cultural structures, models for understanding individual responses will necessarily be varied or require adjustment to reflect the needs of the population they serve. This article implores the clinical social work

profession to leverage its significant presence within the mental health community, particularly that of military personnel and veterans to: (a) advance stagnant prevention efforts by refocusing on person in environment constructs, (b) implement clinical treatment that prioritizes harm reduction over risk mitigation, and (c) advocate for structural change when highly regulated cultural-structural systems perpetuate psychological harm. The contribution of the profession's multi-disciplinary peers can offer insight as social work contributes to the conversation. Both the IPTS and CSTS capture critical aspects of suicidality yet independently represent only pieces of the whole challenge, rendering them insufficient in isolation. Transitioning to a framework that supports an improved understanding of suicidality, the trans-conceptual model of suicide offers a synthesis of modern approaches with the additional inclusion of individual refraction as a critical aspect in the genesis of suicidality.

The IPTS contains degrees of flexibility and contextuality (Smith et al., 2020). Yet, this contextuality is lost by the parsimony of the model. Just as burdensomeness and belongingness are treated as tangible and measurable psychological processes to assess risk, meso and macro level processes should be treated as equally real and alterable (Abrutyn & Mueller, 2021). Reliance on frameworks that define suicidality solely through the experience of the individual inadvertently fosters shame and stigma. Shifts in language regarding suicide reflect this acknowledgment: "committing suicide" is no longer common parlance as it connotes fault, guilt, and moral wrongfulness (Harrell & Berglass, 2011). Despite explicit recognition of the need to de-pathologize suicide, suicidology continues to persist with narrow approaches to measure and conceptualize this phenomenon. Changing the words used is easy; changing the frames by which we think about suicide is much more difficult. Social workers who incorporate paradigms that

explicitly acknowledge the full scope of these factors can better inform future research and support more robust prevention measures.

Some attempt has been made to synthesize grand and mid-range theories that reflect the spectrum of micro to macro level influences on suicidality (Cramer & Kapusta, 2017; Zhang, 2019). However, these efforts generally have failed to gain significant traction thus far. The present writing seeks to further clarify the role that clinical social work can and should play when considering suicide among military and veteran populations. More specifically, the explicit and intentional use of social work perspectives in both theory development and clinical practice are needed to provide a holistic perspective of the suicide phenomena and reduce the perpetuation of stigma by modern clinical practice. This article introduces a trans-conceptual model to broadly illustrate the phenomena of suicidality visualized in Figure 1. This trans-conceptual model builds on advances of peer disciplines yet includes a social work lens to further support filling gaps in modern suicidological approaches.

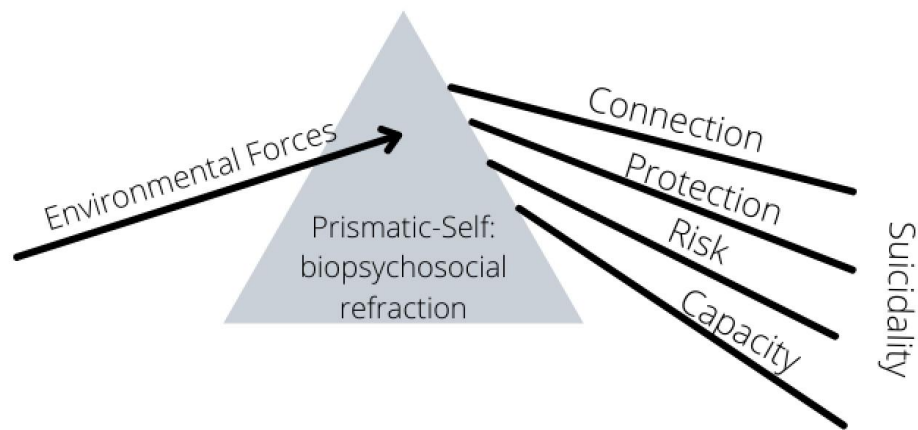


Figure 2.1
Trans-conceptual model of suicide

Within the trans-conceptual model of suicide, environmental forces represent the sum of external factors that impress themselves upon the individual. Structural and cultural pressures exist as real and tangible forces in the lives of military members and veterans (Abrutyn & Mueller, 2021). The specific response to these forces is unique to the individual and comprises the totality of environmental exposures across a lifetime. This prismatic-self is constantly changing as external forces work upon it. Consequently, the individual responds in an equally diverse range of ways dependent upon both external forces and the prismatic-self, the facets of which have been formed according to the intersection of individual predispositions and external factors. The result is a refraction of thought and behavior. Elements of belonging, connection, protection, and capacity are all expressions of this formative relationship between the environment and self.

The degree to which military cultural factors contribute to an individual's experiences will vary. It is the joint role of the individual and the clinical social worker to identify and understand how these processes impact experience. For some, the regulatory demands and changes necessitated within military culture may be protective, fostering feelings of purpose or connection (Bryan & Hernandez, 2013). For others, these same processes will generate stress, isolation, and disconnection (Abrutyn & Mueller, 2018). For example, the experiences of LGBTQ identifying military members and veterans necessitate consideration of historical or ongoing cultural-structural characteristics. From a history of "don't ask, don't tell" (Borch, 2010) to the uncertainty of service eligibility experienced by trans persons (Dunlap et al., 2021), individual frames cannot be separated from the context of environmental forces. The trans-conceptual model of suicide may support clinical social workers in identifying contextual factors

that contribute to suicidal ideation. In turn, this nuance may be further implemented into both upstream prevention efforts as well as clinical treatment plans.

The term “prismatic-self” is not unique and has been used in various informal contexts to describe the ways in which individual lenses refract personal experience (Hewett, 2013; Rayner, 2013). To the author’s knowledge, this is the first application in a scholarly context and in relation to the development of suicidality. The analogy of the self as a prism is particularly useful when describing suicidality. Biological pre-determinants are constantly worked upon by external pressures. Socioeconomic status, parenting, cultural background, and systems of oppression are only a brief number of the countless variables which shape individual facets (Stallings & Nepl, 2021). Filtered through the prismatic-self, a refraction occurs that may manifest as, to name a few examples, adaptive coping, sublimation, or cognitive distortions. These refracting attributes of the self are not stagnant. Rather, they constantly shift in response to moment-to-moment stimuli that are both external and internal. As a result, the frequency, intensity, and duration of suicidality can be dynamic, with ebbs and flows not necessarily progressing with temporal linearity (Kleiman et al., 2017).

The prismatic-self is only a piece of the prevention puzzle. The expression of suicidality and lethal behavior occurs through processes foundational to the person in environment model (Scheyett, 2020). Our structural and cultural environments impact the ways in which we perceive the world. These phenomena are subsequently expressed through the process of individual refraction. The trans-conceptual model of suicide is applicable across all levels of prevention. As clinical social workers, we must attend to the cultural-structural forces that affect the individual to the same degree that we consider intrapersonal psychological processes. This should occur across the entirety of the prevention spectrum and include upstream prevention practices that

reflect an awareness of the unique cultural and structural forces that impact any given population (Wyman et al., 2020). Necessarily, this will look distinct for different populations, and rote application from one group to another should not expect parallel results. Prevention application and mechanisms of change are further illustrated within Figure 2. Among social work administrators and leaders, implementation of a trans-conceptual framework should include policy changes that challenge stigma-reinforcing practice and encourage clinicians to engage in harm reduction by creating a work environment that is safe for clinicians to implement non-coercive, truly patient-centered practice (Borecky, Thomsen, & Dubov, 2019). For clinicians, awareness of evidence-supported treatment should be paired with diagnostic practices that acknowledge instances of individual expression that may be normative, adaptive responses to abnormal and maladaptive systemic processes. Clinical practice that prioritizes harm reduction and individual autonomy over risk aversion is paramount.

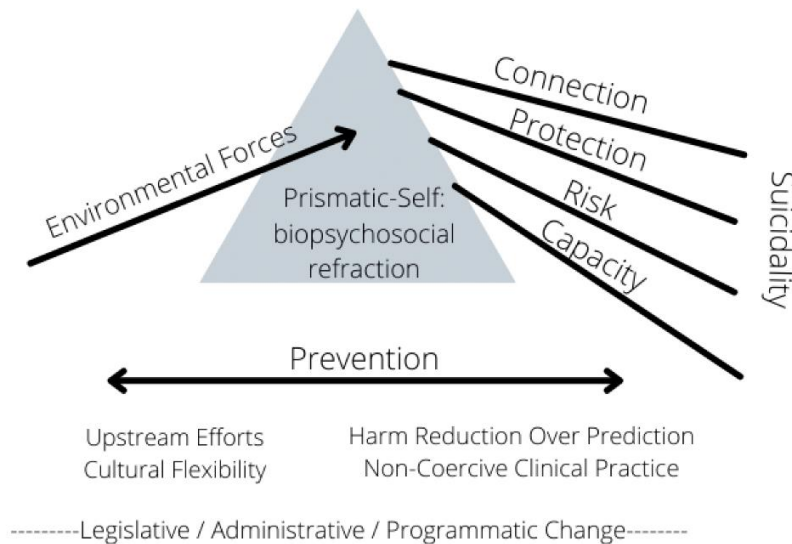


Figure 2.2
Prevention and the trans-conceptual model of suicide

In practice, the notion of harm reduction over prediction operates on multiple levels. In individual clinical practice, this is exemplified by a validation of individual experience and an engagement of the wider community in which a person exists. To this end, a growing number of peer-to-peer support programs and The Living Room model, which provides an intermediate alternative to hospitalization, are instructive in how harm reduction approaches may be implemented (Shattell et al., 2014; The Yarrow Collective, n.d.). However, these prevention tools require systemic support. Programs must reflect on how operations may inadvertently incentivize risk-averse practices that devalue patient perspectives. Policies that encourage individualized care and allow clinicians sufficient time to deliver that same support are essential to the implementation of a trans-conceptual model of suicide.

Social workers are critical in contributing to the advancement of suicide prevention. However, harm reduction is well-established within the public health profession and has demonstrated utility across several health promotion interventions (Gallagher, Keehner, Hervé-Claude, & Stephen, 2021). Collaboration with peer professions and incorporation of multidisciplinary approaches ranging from upstream policy development to downstream clinical intervention is fundamental to a trans-conceptual approach to suicidality and central to the model presented here. In addition to previously noted practices like The Living Room model, there are multiple emergent interventions being explored. Community-based alternatives have begun to move beyond treatment as usual approaches. Crisis resolution teams and acute day facilities have shown positive early results (Lloyd-Evans & Johnson, 2019). Yet, existing research on these alternative treatment options remains limited.

Limitations and future directions

The trans-conceptual model of suicide is intentionally parsimonious. As presented in this writing, it will not capture the unique needs of everyone. The refractive elements of connection, protection, risk, and capacity are limited examples of the many ways in which experience is manifested through the filter of the self. As such, these factors are interchangeable with variables as diverse as the human experience. The intent of this model is to provide a guiding conceptual framework through which suicide prevention may be carried out. The social work profession stands poised to make a significant impact among veteran and military populations. However, progress is contingent on breaking past the boundaries of the status quo and embracing a future of suicide prevention that incorporates contributions across disciplines. This requires challenging the current limits in which this phenomenon is framed. Refinement and introduction of future theory and practice should endeavor to incorporate this core conceptualization both intentionally and explicitly. In a research context, the trans-conceptual model of suicide may be applied to both qualitative and quantitative methodologies. The diversity of experience and flexibility incorporated into this model readily lends itself to qualitative research – a critically underrepresented methodology in suicide research (Kral, Links, & Bergmans, 2012). In this case, it may serve as a lens through which data is interpreted. Within quantitative analysis, a trans-conceptual approach may be applied to highlight the contextual nature of suicidality and temper the use of broad population characteristics to predict individual behavior and action.

Conclusion

This article has surveyed the current theoretical frameworks that guide modern suicide prevention efforts and target military and veteran populations, particularly the ubiquitous interpersonal theory of suicide. Barriers and challenges that come with overly narrow or

predictive theoretical frameworks were discussed. Contemporary challenges were also explored, highlighting the distinction between an, arguably, intrapersonal etiology of suicide contrasted with cultural and structural forces that contribute to lethal or near lethal behavior. The trans-conceptual model of suicide was introduced to advocate for a hybrid approach that reflects the complexity of human experiences and the social environment. Finally, social workers are highlighted as poised to serve a central role in advancing the field of suicidology. However, this requires a recommitment to implement person in environment concepts across all levels of prevention and through micro to macro levels of scope. The incorporation of structural and cultural forces within suicide prevention is a critical next step in advancing contemporary prevention efforts. These factors should be treated as equally real, tangible, and impactful (Abrutyn & Mueller, 2021) – even if difficult to assess for empirical study.

Social workers must maintain a focus on the fundamental role of systemic processes as experienced by military personnel and veterans considering suicide. In pursuit of academic and scientific credibility, social work's rigid adherence to the ontologies of peer professions will continue to stymie predictive capacity (Franklin et al., 2017). That is, moving beyond the theoretical foundations of peer professions is needed to continue pushing suicidology forward. Structures and cultures are inherently difficult to quantify; however, this does not change their real and critical impact upon individual and collective experience (Abrutyn & Mueller, 2021). Recognition of the cultural-structural impacts on suicidality has the potential to further advance prevention research. Attaining the priorities outlined by the White House's public health strategy will necessitate theory-driven practice and research, and the limitations of modern prevention frameworks must be recognized and modified. The trans-conceptual model of suicide – which is grounded in a person in environment perspective and reflective of the social work values of

individual dignity and autonomy (NASW, 2021) – provides a starting point. A trans-conceptual approach to suicide necessitates non-coercive, harm reduction practices at the individual level as well as supportive legislative, administrative, and programmatic policy at the macro and meso levels. Social workers are needed at every stage of prevention to develop and implement strategies that sufficiently reflect the profession and advance the science of suicidology.

REFERENCES

- Abrutyn, S., & Mueller, A. S. (2018). Toward a cultural-structural theory of suicide: Examining excessive regulation and its discontents. *Sociological Theory*, 36(1), 48–66. <https://doi.org/10.1177/0735275118759150>
- Abrutyn, S., & Mueller, A. S. (2021). Toward a robust science of suicide: Epistemological, theoretical, and methodological considerations in advancing suicidology. *Death Studies*, 45(7), 522–527. <https://doi.org/10.1080/07481187.2019.1660081>
- Alise, M. A., & Teddlie, C. (2010). A continuation of the paradigm wars? Prevalence rates of methodological approaches across the social/behavioral sciences. *Journal of Mixed Methods Research*, 4(2), 103–126. <https://doi.org/10.1177/1558689809360805>
- Bantjes, J., & Swartz, L. (2017). The cultural turn in critical suicidology: What can we claim and what do we know? *Death Studies*, 41(8), 512–520. <https://doi.org/10.1080/07481187.2017.1333355>
- Barlas, F. M., Higgins, W. B., Pfieger, J. C., & Diecker, K. (2013). 2011 health related behaviors survey of active-duty personnel. Washington, DC: U.S. Department of Defense.
- Beck, A. T. (1986). Hopelessness as a predictor of eventual suicide. *Annals of the New York Academy of Sciences*, 487(1 Psychobiology), 90–96. <https://doi.org/10.1111/j.1749-6632.1986.tb27888.x>
- Blocker, G. M., & Miller, J. A. (2013). Unintended consequences: Stigma and suicide prevention efforts. *Military Medicine*, 178(5), 473–473.
- Borch, F. L. I. (2010). The history of don't ask, don't tell in the army: How we got to it and why it is what it is. *Military Law Review*, 203, 189. <https://doi.org/10.7205/MILMED-D-13-00056>
- Borecky, A., Thomsen, C., & Dubov, A. (2019). Reweighing the ethical tradeoffs in the involuntary hospitalization of suicidal patients. *The American Journal of Bioethics*, 19(10), 71–83. <https://doi.org/10.1080/15265161.2019.1654557>
- Braswell, H., & Kushner, H. I. (2012). Suicide, social integration, and masculinity in the U.S. military. *Social Science & Medicine*, 74(4), 530–536. <https://doi.org/10.1016/j.socscimed.2010.07.031>
- Bryan, C. J., & Hernandez, A. M. (2013). The functions of social support as protective factors for suicidal ideation in a sample of air force personnel. *Suicide and Life-Threatening Behavior*, 43(5), 562–573. <https://doi.org/10.1111/sltb.12039>

- Burek, G. (2018). Military culture: Working with veterans. *The American Journal of Psychiatry Residents' Journal*, 13(9), 3–5. <https://doi.org/10.1176/appi.ajp-rj.2018.130902>
- Chu, C., Buchman-Schmitt, J. M., Stanley, I. H., Hom, M. A., Tucker, R. P. ... Joiner, T. E. (2017). The interpersonal theory of suicide: A systematic review and meta-analysis of a decade of cross-national research. *Psychological Bulletin*, 143(12), 1313–1345. <https://doi.org/10.1037/bul0000123>
- Cramer, R. J., & Kapusta, N. D. (2017). A Social-Ecological Framework of Theory, Assessment, and Prevention of Suicide. *Frontiers in Psychology*, 8, 8. <https://www.frontiersin.org/article/10.3389/fpsyg.2017.01756>
- Dohrenwend, B. P. (1959). Egoism, altruism, anomie, and fatalism: A conceptual analysis of durkheim's types. *American Sociological Review*, 24(4), 466–473. <https://doi.org/10.2307/2089533>
- Dunlap, S. L., Holloway, I. W., Pickering, C. E., Tzen, M., Goldbach, J. T., & Castro, C. A. (2021). Support for transgender military service from active duty United States military personnel. *Sexuality Research & Social Policy*, 18(1), 137–143. DOI: 10.1007/s13178-020-00437-x
- Durkheim, É. (1897/1951). *Suicide: A study in sociology*. New York, NY: The Free Press.
- Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M. ... 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>
- Gallagher, C. A., Keehner, J. R., Hervé-Claude, L. P., & Stephen, C. (2021). Health promotion and harm reduction attributes in one health literature: A scoping review. *One Health*, 13, 100284. DOI: 10.1016/j.onehlt.2021.100284
- Harrell, M. C., & Berglass, N. (2011). *Losing the battle: The challenge of military suicide*. Washington, DC: Center for a New American Security. <https://www.jstor.org/stable/pdf/resrep06113.pdf>
- Heisler, E. J. (2018). *The mental health workforce: A primer*. 18. Congressional Research Service. CRS Report No. 43255. <https://crsreports.congress.gov/product/pdf/R/R43255>
- Herting, S., & Stein, L. (2007). The evolution of Luhmann's systems theory with focus on the constructivist influence. *International Journal of General Systems*, 36(1), 1–17.
- Hewett, C. (2013, July 15). *An Emerging Map of the Prismatic Self*. Medium. <https://medium.com/o-0-prismatically/an-emerging-map-of-the-prismatic-self-5eab613cc18d>
- Hinojosa, R. (2010). *Doing hegemony: Military, men, and constructing a hegemonic*

- masculinity. *The Journal of Men's Studies*, 18(2), 179–194.
<https://doi.org/10.3149/jms.1802.179>
- Hjelmeland, H., & Loa Knizek, B. (2020). The emperor's new clothes? A critical look at the interpersonal theory of suicide. *Death Studies*, 44(3), 168–178.
<https://doi.org/10.1080/07481187.2018.1527796>
- Hoffmire, C. A., Monteith, L. L., Forster, J. E., Bernhard, P. A., Blosnich, J. R. ... Schneiderman, A. I. (2021). Gender differences in lifetime prevalence and onset timing of suicidal ideation and suicide attempt among post-9/11 veterans and nonveterans. *Medical Care*, 59, S84. <https://doi.org/10.1097/MLR.0000000000001431>
- Joe, S., & Niedermeier, D. (2008). Preventing suicide: a neglected social work research agenda. *The British Journal of Social Work*, 38(3), 507–530. <https://doi.org/10.1093/bjsw/bcl353>
- Joiner, T. E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- Kleiman, E. M., Turner, B. J., Fedor, S., Beale, E. E., Huffman, J. C., & Nock, M. K. (2017). Examination of real-time fluctuations in suicidal ideation and its risk factors: Results from two ecological momentary assessment studies. *Journal of Abnormal Psychology*, 126(6), 726–738. <https://doi.org/10.1037/abn0000273>
- Klonsky, E. D., & May, A. M. (2015). The Three-Step Theory (3ST): A new theory of suicide rooted in the “Ideation-to-Action” framework. *International Journal of Cognitive Therapy*, 8(2), 114–129. <https://doi.org/10.1521/ijct.2015.8.2.114>
- Kral, M. J., Links, P. S., & Bergmans, Y. (2012). Suicide studies and the need for mixed methods research. *Journal of Mixed Methods Research*, 6(3), 236–249. DOI: 10.1177/1558689811423914
- Lee, S., Hong, J. S., & Espelage, D. L. (2010). An ecological understanding of youth suicide in South Korea. *School Psychology International*, 31(5), 531–546.
<https://doi.org/10.1177/0143034310382724>
- LeFeber, T. P., & Solorzano, B. (2019). Putting suicide policy through the wringer: Perspectives of military members who attempted to kill themselves. *International Journal of Environmental Research and Public Health*, 16(21), 4274.
<http://dx.doi.org/10.3390/ijerph16214274>
- Lloyd-Evans, B., & Johnson, S. (2019). Community alternatives to inpatient admissions in psychiatry. *World Psychiatry*, 18(1), 31–32. DOI: 10.1002/wps.20587
- Ma, J., Batterham, P. J., Calear, A. L., & Han, J. (2016). A systematic review of the predictions of the interpersonal–psychological theory of suicidal behavior. *Clinical Psychology Review*, 46, 34–45. <https://doi.org/10.1016/j.cpr.2016.04.008>

- Maple, M., Pearce, T., Sanford, R., & Cerel, J. (2016). The role of social work in suicide prevention, intervention, and postvention: A scoping review. *Australian Social Work*, 70(3), 289–301. <https://doi.org/10.1080/0312407X.2016.1213871>
- Martínez-Alés, G., Jiang, T., Keyes, K. M., & Gradus, J. L. (2022). The recent rise of suicide mortality in the United States. *Annual Review of Public Health*, 43(1), 99–116. <https://doi.org/10.1146/annurev-publhealth-051920-123206>
- Mastroianni, G. R., & Scott, W. J. (2011). Reframing suicide in the military. Air force academy. Colorado Springs: CO. Dept of Behavioral Sciences and Leadership.
- Maynard, D. W., & Rossi, I. (1984). Structuralism Revisited. *Contemporary Sociology*, 13(4), 425–428. <https://doi.org/10.2307/2069043>
- Mueller, A. S., Abrutyn, S., Pescosolido, B., & Diefendorf, S. (2021). The Social Roots of Suicide: Theorizing How the External Social World Matters to Suicide and Suicide Prevention. *Frontiers in Psychology*, 12, 12. <https://www.frontiersin.org/article/10.3389/fpsyg.2021.621569>
- National Association of Social Workers. (2021). Preamble to the code of ethics. Retrieved May 4, 2022, from <http://www.socialworkers.org/pubs/>
- O'Connor, R. (2011). The integrated motivational-volitional model of suicidal behavior. *The Crisis*, 32(6), 295–298. <https://doi.org/10.1027/0227-5910/a000120>
- Oquendo, M. A., Sullivan, G. M., Sudol, K., Baca-Garcia, E., Stanley, B. H., Sublette, M. E., & Mann, J. J. (2014). Toward a biosignature for suicide. *American Journal of Psychiatry*, 171(12), 1259–1277.
- Pease, J. L., Billera, M., & Gerard, G. (2016). Military culture and the transition to civilian life: suicide risk and other considerations. *Social Work*, 61(1), 83–86. <https://doi.org/10.1093/sw/swv050>
- Rayner, T. (2013, May 21). Social Media as Gift Culture: The Prismatic Self. *Philosophy For Change*. <https://philosophyforchange.wordpress.com/2013/05/21/social-media-as-gift-culture-the-prismatic-self/>
- Scheyett, A. (2020). Suicide Prevention: Clinic, community, classroom. *Social Work*, 65(2), 101–103. <https://doi.org/10.1093/sw/swaa003>
- Sharp, M.-L., Fear, N. T., Rona, R. J., Wessely, S., Greenberg, N., Jones, N., & Goodwin, L. (2015). Stigma as a barrier to seeking health care among military personnel with mental health problems. *Epidemiologic Reviews*, 37(1), 144–162. <https://doi.org/10.1093/epirev/mxu012>
- Shattell, M. M., Harris, B., Beavers, J., Tomlinson, S. K., Prasek, L. ... Heyland, M. (2014). A

- recovery-oriented alternative to hospital emergency departments for persons in emotional distress: “The Living Room”. *Issues in Mental Health Nursing*, 35(1), 4–12. DOI: 10.3109/01612840.2013.835012
- Smith, P. N., Schuler, K., Fadoir, N., Marie, L., & Basu, N. (2020). Socio-ecological context and the interpersonal theory of suicide: A response to hjelmeland & knizek. *Death Studies*, 44(9), 547–551. DOI: 10.1080/07481187.2019.1586799
- Stallings, M. C., & Neppl, T. (2021). An examination of genetic and environmental factors related to negative personality traits, educational attainment and economic success. *Developmental Psychology*, 57(2), 191–199. <https://doi.org/10.1037/dev0001131>
- Strom, T. Q., Gavian, M. E., Possis, E., Loughlin, J., Bui, T. ... Siegel, W. (2012). Cultural and ethical considerations when working with military personnel and veterans: A primer for VA training programs. *Training and Education in Professional Psychology*, 6(2), 67–75. <https://doi.org/10.1037/a0028275>
- U.S. Department of Defense. (2020, August 20). Annual suicide report calendar year 2019 (ReFID: 4-CFF293C). <https://www.dsps.mil/Portals/113/Documents>
- U.S. Department of Veterans Affairs. (September 2021). 2021 National veteran suicide prevention annual report. <https://www.mentalhealth.va.gov/docs/data-sheets/2021/2021-National-Veteran-Suicide-Prevention-Annual-Report-FINAL-9-8-21.pdf>
- Van Der Feltz-Cornelis, C. M., Sarchiapone, M., Postuvan, V., Volker, D., Roskar, S. ... Hegerl, U. (2011). Best practice elements of multilevel suicide prevention strategies. *The Crisis*, 32(6), 319–333. <https://doi.org/10.1027/0227-5910/a000109>
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E., Jr. (2010). The interpersonal theory of suicide. *Psychological Review*, 117(2), 575–600. <https://doi.org/10.1037/a0018697>
- Vickers, R. R., Hervig, L. K., Paxton, E., Kanfer, R., & Ackerman, P. L. (1996). Personality change during military basic training. Defense Technical Information Center. <https://doi.org/10.21236/ADA381297>
- White, J. (2017). What can critical suicidology do? *Death Studies*, 41(8), 472–480. <https://doi.org/10.1080/07481187.2017.1332901>
- White House. (2021). Reducing military and veteran suicide: Advancing a comprehensive, cross-sector, evidence informed public health strategy. <https://www.whitehouse.gov/wp-content/uploads/2021/11/Military-and-Veteran-Suicide-Prevention-Strategy.pdf>
- Wyman, P. A., Pisani, A. R., Brown, C. H., Yates, B., Morgan-DeVelder, L. ... Pflanz, S. E.

(2020). Effect of the wingman-connect upstream suicide prevention program for air force personnel in training: A cluster randomized clinical trial. *JAMA Network Open*, 3(10), e2022532.

The Yarrow Collective (n.d.). Peer Support Groups. Retrieved July 20, 2023, from <https://www.yarrowcollective.org/peer-support-groups>

Zhang, J. (2019). The strain theory of suicide. *Journal of Pacific Rim Psychology*, 13, e27. <https://doi.org/10.1017/prp.2019.19>

Zhang, J., Lester, D., Zhao, S., & Zhou, C. (2013). Suicidal ideation and its correlates: Testing the interpersonal theory of suicide in Chinese students. *Archives of Suicide Research*, 17(3), 236–241. <https://doi.org/10.1080/13811118.2013.805643>

CHAPTER 3

STUDY 2 – SUICIDE RISK AND PROTECTIVE FACTORS IN SOCIAL MEDIA: THEMATIC ANALYSIS OF A FORUM TARGETING MILITARY MEMBERS AND VETERANS

Suicide remains a leading cause of death among veterans and military personnel, with veteran fatalities post-military service occurring at disproportionately higher rates than civilian counterparts (Dept. of Veterans Affairs, 2021). Suicide rates among Active-Duty military personnel trend more closely with civilian peers. Cumulatively, U.S. suicide rates have risen among young adults over 57% from 2007 to 2018 (Curtin, 2020). In addition to the alarming growth of annual suicide deaths, suicidal ideation is an increasingly common part of contemporary experience among military personnel. In a study of lifetime suicidal ideation prevalence among male and female veterans, 20% of men and 28% of women reported experiencing serious thoughts of suicide within their lifetimes (Hoffmire et al., 2021).

Despite substantial research and the implementation of numerous prevention strategies, this national public health crisis persists. The cause of escalating suicidality has been similarly difficult to identify. One potential contributor to this uncertainty may be that suicide deaths occur at a low-base rate compared to the general population, which frustrates attempts at developing accurate prediction models (McHugh & Large, 2020). Suicidality is a highly complex phenomena, inclusive of countless biopsychosocial characteristics that contribute to risk models and vary from person to person (De Beurs et al., 2021). Among this contextuality, stigma and barriers to help seeking remain salient risk factors (McGuffin et al., 2021). These contributing challenges preclude a linear approach or the emergence of a uniform solution to suicide

prevention. There are also several broad gaps within suicidological research: a ‘psychocentric’ understanding of suicide has perpetuated a narrow epistemology (Marsh, 2020) and quantitative approaches have been preferentially selected by researchers to the exclusion of diverse methodologies and qualitative designs (Abrutyn & Mueller, 2021). This study attempts to address these limitations on a number of fronts through the incorporation of diverse epistemological lenses, a person-in-environment interpretive approach, and a qualitative methodology. Such an approach is undertaken with the intent of gaining insight into how veterans and military service members construct meaning from their unique position as service-connected individuals in online settings. As such, the purpose of this thematic analysis was to derive meaning from a military community’s online communication about suicidality, suicide risk factors, and suicide protective factors.

Theoretical Approach

This study implements a trans-conceptual (Bylotas, 2023) lens of suicidality, which encourages a highly contextualized understanding of suicide risk and protective factors. Accordingly, a diverse theoretical framework is applied here. In this regard, the interpersonal psychological theory of suicide (IPTS) and the cultural structural theory (CSTS) of suicide are implemented to provide a sufficiently nuanced interpretation of study results. IPTS is arguably among the most well documented and researched frameworks for understanding suicidality (Joiner, 2005; Van Orden et al., 2010). IPTS operates under the premise that death by suicide is actualized through the intersection of a desire to die and the capacity to end one’s own life. The desire to die by suicide develops through a combination of perceived burdensomeness and thwarted belongingness (Van Orden et al., 2010). Burdensomeness refers to the notion that one is a liability upon others, while belongingness applies to concepts of social connection,

loneliness, and isolation (Rogers & Joiner, 2019). Meta-analyses have found mixed results supporting the IPTS' efficacy with effect sizes ranging from slight to moderate (Chu et al., 2017; Ma et al., 2016). These findings suggest that, although the IPTS is a useful tool in understanding the ideation to action framework, its parsimony necessitates supplemental conceptual frameworks to capture a more comprehensive understanding of suicide among groups (Smith et al., 2020). In short, the IPTS insufficiently captures the complexity of the suicide phenomenon (Hjelmeland & Knizek, 2020), yet individual concepts of belongingness and burdensomeness remain important aspects of suicidality (Forkmann et al., 2020).

In response to predominant approaches to understanding the phenomena of suicide, critical perspectives have emerged which challenge the conceptualization of an internally driven pathology of suicidality (Hjelmeland & Knizek, 2020). Initially posited by Abrutyn and Mueller in 2018, CSTS addresses the impact of excessive regulation on the etiology of suicidality. The authors argue that structures and culture affect suicidality to the extent that these processes are tangible within sociocultural processes; there are specific “directives” (p. 48) regarding suicide. These directives are subsequently internalized, and there is a constriction of the social space by cultural expectation. In other words, the degree to which a specific structural and cultural system contributes to internalized expectations regarding suicide, when paired with an inability to meet those expectations within the social space, may lead to the generation of thoughts of suicide and suicidal behavior. A bi-directional process occurs, in which the social group generates, maintains, and monitors a collective set of norms and expectations. These in turn diffuse to the individual through a process of internalization. This drives regulation and reflection of these expectations outward to the group (Abrutyn & Mueller, 2018; Maynard, 1984). Expectations to adhere to standards of ethical values, work productivity, and community engagement are driven

simultaneously by systemic structures as well as the individual who has internalized these regulated expectations. In the context of online social spaces, the generation and discussion of suicidality may be distinct from the day-to-day experiences of military members or veterans (Alvarez, 2019).

Both theoretical frameworks present utility in understanding why military members die by suicide and are incorporated into this study. Understanding the critical role played by systemic, person-in-environment forces articulated by the CSTS, bolsters the insights that can be gained through psychological study of intrapersonal perceptions of connectedness and belongingness. This allows for increasingly nuanced interpretations of data, that may more closely reflect the experience of impacted individuals – particularly those engaged in military service.

Military and Veteran Populations

Military culture is in many ways distinct from that of the greater population. Broadly, these differences are centered in three characteristics central to military culture: the presence of a chain of command, norms, and a military identity (Atuel & Castro, 2018). The chain of command represents a clear hierarchy and social network in which decision making, responsibility, and power are delineated. Norms reflect the values and cultural nuance of military life. Importantly, these norms are not homogeneous and may vary based on service branch, profession, and mission. Finally, a clearly defined hierarchy and set norms serve to foster the development of a shared military identity (Atuel & Castro, 2018). Self-identification and internalization of military culture does not end at the closure of Active-Duty military service. Rather it persists throughout a veteran's life.

Demographic differences, cultural expectations, and the unique characteristics of military culture itself, all present opportunities for the emergence of risk and protective factors. Consequently, the development of prevention resources should endeavor to reflect these distinctions (Bryan et al., 2012). Although the goals of basic training programs may include the inducement of behavior and personality change to meet the needs of military mission requirements more efficiently (Vickers et al., 1996), individuals maintain their own unique perspectives, cultures, and experiences (Barlas et al., 2013). These factors contribute to the complexity involved when attempting to meet the needs of this population. In essence, there exists an intricate web of individual experience and response to the military environment. This necessarily impacts the expression of risk and protective factors.

Help seeking behavior as a risk or protective factor presents a particularly salient example, with meta-analysis estimating that less than 30% of military service members experiencing “mental illness” seek out formal preventive services (Hom et al., 2017). Fears of alienation, letting down peers, or disqualification from military service complicate perceived barriers to seeking help (Hom et al., 2017). These multi-systemic pressures perpetuate reluctance to seek out formal support, which can lead to the exacerbation or chronicity of mental health symptoms and suicidality. Assessing veteran beliefs about mental health care, Stecker et al. (2007) identified common elements that drive perceived barriers to help seeking. Both public and personal stigma emerge, to include fear of negative labels or that there would be an impact to military career. Structural challenges additionally are present for military members, as scheduling delays, difficulty leaving the workplace, and unfamiliarity with available resources all increase the barriers to engaging with prevention services (Hom et al., 2017). Viewed through

the lens of the CSTS, these stigma and barriers represent internalized perceptions of wider cultural and structural demands.

Online Qualitative Analysis of Military Personnel and Veterans

The use of social media by military personnel and veterans for the purposes of seeking community, expressing frustration, or sharing experiences, continues to gain traction as a viable prevention resource (Salzmann-Erikson & Hiçdurmaz, 2017). Schuman et al. (2019) succinctly articulate the communicative process within online social media compared to traditional therapy or similar rhetorical processes: through the latter, individual meaning and interpretation are synthesized to reach an agreed upon narrative. Whereas in the context of social media, communication involves a process of “inviting and collecting commentary through which the self is further evaluated against the dominant narrative” of others (p. 358). Online posting and commentary involve the bidirectional transaction of values and beliefs that are characteristic of a cultural-structural framework, yet also demonstrate the critical importance of belongingness and connectedness in online communities.

Although academic research on service members in digital spaces has been relatively limited, existing findings suggest that deciding when and how to respond to ‘concerning’ posts involves a complex process, in which peers must consider relationship, proximity, and prior responses in their decision making (Teo et al., 2020). Within the same study, desire for suicide prevention training and formalized support also emerged as a salient theme. Similar analysis has been conducted on veterans’ YouTube vlogs to understand mental health experiences (Schuman et al., 2019). In this example, vloggers used online social media tools to strengthen interpersonal connectedness and connect with others embedded in similar cultural ecologies. Another qualitative analysis of veterans using online support groups for PTSD identified several

categories of support, including emotional, informational, network and community supports, to name a few (Stana et al., 2017). In other words, online communities play a broad range of supportive roles for participating veterans.

The role of social media as a suicide prevention resource has also been highlighted in editorial reporting. Journalist Daniel Johnson (2022) explored the unique role played by social media sites in providing a resource to service members experiencing thoughts of suicide. The r/Army subreddit, an online social media site for Army personnel and veterans, receives over 700,000 visits each month (Johnson, 2022). Volunteer moderators and peers respond to individuals in distress through online chats and telephone calls. This informal and entirely voluntary process has resulted in a collection of best practices among moderators. Despite the role of social media as a potential prevention resource, there has been limited engagement through formalized efforts to support these informal networks. Academic research has been similarly limited and has yet to examine the impact and role of social media, risk factors, and protective factors as a resource in suicide prevention efforts with this population group. Thus, there remains a need for ongoing research into the increasingly present role of digital landscapes in the lives of veterans and military personnel.

Present Study

The purpose of this thematic analysis was to derive meaning from a military community's online communication about suicidality, suicide risk factors, and suicide protective factors. Informed by a trans-conceptual model of suicidality (Bylotas, 2023), this qualitative study incorporates theoretical lenses of IPTS and CSTS. This pragmatic framework is used to identify themes emerging from an anonymous, digital environment that lacks the highly

regulated norms present within uniformed military service. To this end, the study asks the following questions:

Research Question 1 (RQ1): What is communicated in this online forum about suicide? If present, how are risk and protective factors characterized?

Research Question 2 (RQ2): Using the lenses of IPTS and CSTS, what attitudes around suicide or features of the online community's culture emerge in its discussion of suicidality?

Understanding the process by which individuals make meaning out of risk, protection, and prevention efforts, as displayed through anonymous commentary and help-seeking can support future prevention activities. It also may enhance future utilization of social media as a life-saving resource. To the knowledge of the author, this study is the first to examine thematic characteristics in the perception of suicide prevention, risk factors, and protective factors among veterans and military members, as viewed through the lens of social media.

Methods

Thematic analysis was selected as the operative methodological approach for its utility in drawing meaning from observation and flexibility in coding procedures (Clarke & Braun, 2017). In the context of this study, thematic analysis is particularly useful for exploring text and the conveyance of trustworthy interpretations that range from individual experiences to broader cultural phenomena (Guest et al., 2011). The framework for conducting analysis was guided by steps for collection and analysis compiled by Peel (2020). This approach involved six non-linear steps iterating upon existing best practices for thematic analysis (Braun & Clarke, 2014; Creswell, 2013; Merriam, 2009; Miles et al., 2014). These steps include 1) collecting the data; 2) engaging with the data; 3) coding the extracts from the data; 4) generating code categories from

the codes; 5) conceptualizing themes from the categorized and coded extracts; and 6) contextualizing and representing the findings. Coding procedures as outlined by Saldaña (2013) were implemented. Specifically, this included first cycle open coding utilizing descriptive and values methods, followed by second cycle pattern coding. These interpretive data tools have been implemented successfully across a broad range of qualitative online studies (Gagnon et al., 2022; Kendal et al., 2017; Salzman-Erikson & Hiçdurmaz, 2017). Both the thematic analysis framework method and first and second cycle coding strategies give special consideration for online settings, at-risk populations, ethics, data-collection, and analysis, making them particularly useful for the present research study. Regarding positionality, the author of this study is an Active-Duty clinical social worker currently serving in the U.S. Air Force.

Data Collection

This qualitative study conducted analysis of publicly available archival data ranging from December 2020 to November 2021, located on a social media forum for self-identified veterans and military personnel. The website name has been redacted to protect member anonymity. Membership or login credentials were not needed to access the information. Although issues of suicidality and psychological well-being are frequently discussed, the selected forum hosts a range of topics not exclusive to issues of mental health. Rather, all discussion centers around issues relevant to military service. Posting content ranges from text to images and video. Common to social media, posts express a variety of sentiments which require layered interpretation and analysis from sarcasm and humor to serious discussion of prevention resources. Multiple comments by the same user typically occurred in the context of a single post, rather than across posts. Among individuals communicating across multiple posts, group moderators were the most common contributors. The diversity of post content and format

provided a rich forum for the observation of discussion as it relates to the central research questions.

Bounding of the data collection within a twelve-month timeframe was completed to ensure a sample of sufficient size and saturation to answer the proposed research questions yet limited enough to allow for a robust analytic and coding approach. Additionally, all archival data was required to occur six months prior to the date of collection. This prevented the potential need to deliver immediate triage or support to an individual in crisis. This step was necessary to ensure that the study remained a non-human subject design, which precluded direct intervention or interaction by this researcher. Data were collected using the following search terms: “Suicide” and “Suicidal”. All results were incorporated into the data corpus for analysis. The diversity of contexts in which suicide emerges in online discussion served to contribute to a more complete exploration of the research questions.

Data Analysis

Data collection yielded a total of 100 posts, 657 commenters, and 3,211 comments which occurred in response to the posts. Following the initial data collection phase, posts were transcribed to include both the original post as well as the comment history. Posts and comments were then reviewed to eliminate superfluous content such as internet ads and ensure standardized formatting. Based on the nature of the search and search terms, all threads that mention suicidality were included. The corpus was then imported to NVivo to begin the coding process. Although 100% of threads were included for the potentiality that they reflect perspectives relevant to the research questions, not all comments received a code. Additionally, usernames were matched to posts using Microsoft Excel to provide an understanding of unique users, multiple postings, and the thematic content that may emerge based on individual commenters.

Username were then matched with a number to further anonymize quoted comments. Thematic and meaning saturation were meaningfully achieved with the present data corpus. This was determined both through the prevalence of codes and the generation of insights at the “tails” of the data set (Hennink et al., 2017).

Prior to first cycle coding, the data were read in its entirety. Data analysis began inductively without the use of a priori themes or codes. Although the application of IPTS and CSTS allowed for specific categorization and codes at the outset, this process supported broad interpretation which may have otherwise been constrained by an a priori framework. Open coding allowed the data to be approached through the lens of cultural-structural and intrapersonal considerations, without being restricted by preconceived notions of what the data may contain. This first cycle analysis included descriptive and values coding techniques (Saldaña, 2013). Descriptive coding is a broad method of data interpretation well suited for thematic analysis, which titles codes based upon a summary of the data it applies to (Skjott & Korsgaard, 2019). Values coding is particularly useful for capturing individual beliefs and attitudes (Saldaña, 2013), which in the context of this study, supported the identification of individual perceptions on suicide risk and protective factors.

After the generation of an initial codebook, pattern coding was used to interpret emergent elements using an increasingly deductive lens (Skjott & Korsgaard, 2019). This second cycle coding was guided by the theoretical frameworks of the IPTS and CSTS to explore the research questions. The pattern coding process supported the generation of larger themes and characteristics shared between initial findings (Saldaña, 2013). Additionally, pattern coding supported placing codes into categories and subcategories through which larger themes might be identified. This was completed through a process of grouping individual codes for similarity and

elicitation of common elements. Based upon these commonalities, specific themes and patterns were constructed. Particularly illustrative quotes were selected for inclusion in the manuscript.

Trustworthiness

Throughout data analysis memos were utilized to track impressions and emerging observations about the data (Birks et al., 2008). Memos were hand-written using a notepad, which included general impressions of the data and observations regarding potential thematic connections. Although coding was conducted by a single researcher, mentors, subject matter experts, qualitative research faculty, and a student research assistant provided support to discuss thematic connections, methodological approach, and coding. Given the nature of this research as a non-human subject study, member checking was not possible.

Ethical Considerations

Military service members represent a potentially vulnerable population, for whom the possibility of identification may present substantial risk. This research study has implemented best practices established by Schuman et al. (2021), with the intention of ensuring appropriate ethical safeguards for the population studied. Foremost, this research has been conducted with the review of a university Institutional Review Board (#3245) and was determined to not involve human subjects. Data collection solely consisted of archival posts made under online pseudonyms and no direct contact or engagement was made with forum members. Cloaking procedures have been taken to prevent potential reidentification where necessary. This has included refraining from use of the specific website name and URL through which data were gathered. Where necessary, paraphrasing using composite quotes in place of verbatim quotes has been applied.

Results

This thematic analysis sought to derive meaning from a military community's online communication about suicidality, suicide risk factors, and suicide protective factors by asking the following questions:

RQ1: What is communicated in this online forum about suicide? If present, what risk and protective factors are characterized?

RQ2: What attitudes around suicide or features of the online community's culture emerge in its discussion of suicidality?

Four themes were derived from analysis: *discussing suicidality and solution seeking*, *encouragement and support*, *impacts of ideation and stigma*, and *perceived causes of suicide*.

Supported by the established theoretical framework, each theme is presented here. The relevance of each theme to the central research questions is further explored within the discussion section.

Discussing Suicidality and Solution Seeking

Suicidality frequently emerged as the central topic of an original post. However, the issue would also appear in the midst of a comment thread. Among help seeking posts, infrequent posters, often using 'throwaway accounts' to further afford anonymity (Leavitt, 2015), were the prime drivers of conversation: "I've been struggling with depression and legitimate suicidal thoughts...I'm hesitant to tell my boss about how I'm feeling as I don't know what the repercussions will be. Not sure what to do" (User 393). At times, posts from individuals seeking advice evoked an absence of suicidality to clarify their help seeking: "I'm at my first base and some personal stuff is taking a toll on my mental health...I'm not suicidal, I just want to know the best route to get help" (User 114). Such comments highlight the central role of advice seeking in a depersonalized context. In other words, they demonstrate the preferencing of online

help-seeking due to a breadth of perceived reasons: lack of informational resources, internalization of stigma, or potential occupational impacts, as examples.

However, not all discussion of suicidality emerged in the context of help-seeking. Others sought to reflect on the problem of suicide more generally. Among postings seeking to contribute to solving the crisis of suicide, posters highlighted disproportionate veteran deaths, disclosed personal losses as the surviving friends and family of suicide decedents, and sought to engage the community in a solution-focused discussion.

I'm working on developing an approach to help address the mental health crisis in the military. My question to you is, in your opinion, what can be done to slow the rise of suicide? What is not being done? I feel everyone has ideas...and I want to hear yours (User 284).

Examples such as this frequently yielded rich conversations that reflected the depth of complexity inherent to suicidality. One individual quoted Baudrillard when considering the root cause of suicidality: "Through suicide, the individual tries and condemns society in accordance with its own norms, by inverting the authorities and reinstating reversibility where it had completely disappeared" (User 168). To be certain, this informal collection of individuals with shared experience of military service possesses a deep well of knowledge and thought on the subject of suicide. Such conversations reveal an earnest attempt to get to the core of this problem.

Notably, not all contributions were positively oriented and reflected individual interactions with the structural characteristics of the military, societal difficulties, cultural challenges, and personal conflict with individual supervisors. One commenter noted: "resiliency training can be a joke, in that it focuses on not improving, instead swallowing and ignoring, and

getting over it. Resiliency...is basically ‘suck it up, get over it, but don’t forget your obligations’” (User 532). Another poster noted that, “if they admit they’re struggling so bad that they are considering suicide, instead of getting help they need, the military kicks them out of the service with a general discharge and they lose their benefits” (User 485). Whether these statements are generated by personal experience, or the internalization of stigma is unclear. Nonetheless, the potential impact could be to perpetuate the perception of stigma and dissuade help-seeking.

Encouragement and Support

Despite periodic postings expressing stigmatized perspectives or frustration, both posters and commenters overwhelmingly expressed positivity in the form of both social and informational support while interacting on issues of suicidal ideation or requests for help. There were several mental health options frequently discussed: use of a chaplain, Military Family Life Counselor (MFLC), the installation or Veterans Affairs mental health-clinic, Military One Source, off-base providers, or the Behavioral Health Optimization Program. Just as there was a breadth of available resources, different posters favored the various options based upon personal experiences.

Supportive utterances comprised the highest density among coding categories. This is a notable shift in general forum attitudes which frequently presented as jocular or sarcastic when not speaking about suicide. Individual commenters offered direct support beyond the forum: “Let me know if you want to talk” (User 236); “Message me if you want to chat” (User 240); and “I’m here for you if you want to vent” (User 353). These direct offers for social support were typical among posts identifying distress or seeking support for suicidal ideation. Beyond offers of direct support, these expressions of positivity also included empathy; for example, one

comment noted: “I’m so sorry, we recently had a similar loss as well” (User 408). These expressions of shared experience and understanding provided a space to indicate connection across the digital space. One person stated: “you’re not alone” (User 621), while another person noted: “My wife recently committed suicide... There are people in your life who will always love you” (User 106). Commenters frequently offered informational support as well, often in the form of available resources: “Please seek help. Chaplains are 100% confidential. If you need help immediately, you can call the suicide hotline” (User 522). A list of available resources was a common refrain among these appeals for individuals to seek out help.

Similarly, the perceived value of life over any potential systemic repercussions emerged. One commenter noted: “Do it [seek services] for yourself...don't worry about your career. Despite lip service, the military still has a huge stigma surrounding getting help. Ignore it. Get the help you need” (User 42). Commenters sought to contextualize the choices that an individual may have, by placing concerns in the frame of an entire lifetime. “Don’t allow your pride to prevent you from reaching out” (User 200). In short, time spent as an active-duty military member represents only a fraction of the life span. One commenter demonstrated this sentiment by writing: “Devoting all your energy to work and leaving nothing for yourself is not sustainable. You come first...sacrificing yourself for your service is not worth it” (User 95). Such statements convey the implicit complexity within the decision to seek help. To name a few contributing factors, there may be uncertainty over which mental health resource to use first, help-seekers may fear displacing workload onto coworkers, or worry that seeking help may have adverse career impacts. Posters consistently placed value upon individual health and safety over any potential perceptions of stigma or barriers to treatment. These utterances serve to bridge the gap between help-seeking anxiety and mental health resources.

Impacts of Ideation and Stigma

Posters and commenters were frequently concerned about the professional impacts of suicidal ideation. This resulted in discussion on the availability and quality of formal resources. Negative experiences included interpersonal challenges: “the only therapist I ever spoke to creeped me out and convinced me that none of them are to be trusted” (User 204). This perspective in particular highlights the impact of individual experience, in which a single negative interaction becomes perceived as representative of all prevention resources. Long wait times for appointments was an additional topic of concern: “It was woefully impossible to get appointments on a regular basis” (User 282); while another user noted “Have fun waiting 30 days for an appointment with mental health” (User 15); while another wrote: “Why does mental health keep canceling my appointments” (User 55). Negative reports elicited appeals to avoid the programs made available by the military, with one person noting: “Use off base resources” (User 152). Importantly, these comments are highly individualized and reflect personal experience rather than any specific quality of service available. Nonetheless, for an individual in crisis seeking out advice and resources in an online setting, such reports may be sufficient to delay or deter help seeking.

Positive perceptions of mental health resources included strong relationships with individual therapists, “the meds helped, but the real help I found was with my social worker” (User 436). The ability to casually use resources as needed, rather than only in a crisis additionally emerged as a relevant factor in individual perspectives. One individual stated: “I go back every few years to sharpen or gain new coping mechanisms” (User 612); Another commented “you might call me a frequent flyer” (User 385). Positive experiences yielded recommendations to engage with available resources. A commenter wrote: “I honestly think it's

worth it. I have gone in the past and they have helped me. Please get the help you deserve” (User 117). Just as stigmatized comments may dissuade help seeking, comments indicating the utility of help seeking and absence of adverse career impacts, encourage the use of resources.

Despite the variation in reports and occasionally negative encounters, there were frequent attempts to contextualize statements that potentially reinforced stigma and acknowledged the variability of the health care experience. “Therapists are just like anything else; some are good some bad...a new base can make a huge difference” (User 658). This comment acknowledges the differences in approach and personality which could impact treatment outcomes. Another individual contextualized a negative experience noting: “It might be as simple as some medication, someone to listen to you, and getting hooked up with some local groups. They’ll try their best to help you” (User 494). Despite these variations in reported experience, commenters frequently encouraged individuals to continue making efforts to access resources, whether they were off-base, through the VA, or through other formal channels.

Stigma also appeared in varied ways throughout the comments. For example, it was noted that there is a general cultural shift that is occurring. “The stigma that you’ll get the boot for seeing mental health is quite outdated. In the past that might have been a thing, but that’s long gone” (User 342). This attempt to reduce stigma through educating commenters and personal anecdotes about a shifting culture provides a strong representation of comments reporting improving stigma and perception of the current social climate. Such exchanges between online help seekers and commenters shed light on the importance of how suicidality is perceived. In other words, beyond the availability of robust prevention resources, the impacts of help seeking across multiple ecological levels (individual, family, workplace) all play a critical role in how community members communicate about suicide, risk factors, and protective factors.

Perceived Causes of Suicide

Individual experiences of suicidality were regularly related back to larger systemic and structural forces. A belief that overall priorities and prevention efforts have been misplaced by the military and VA was particularly consistent throughout the data. Posters frequently indicated a perception that minor administrative demands are conflated with national security or mission requirements. As a result, individuals are asked to sacrifice mental health and well-being to meet what are perceived as unimportant or bureaucratic needs.

The biggest issue is that even if you don't have the manning or materials to do your job, the expectation is that everything gets done on time, which pressures leadership in treating people as expendable, to be used up and tossed away (User 297).

Similarly, this perspective emerged in the belief that individuals are encouraged to endure systemic failings rather than change structural processes. “The military would rather teach people how to take a punch to the face rather than make the effort to stop the punches from happening in the first place” (User 273). Comments of this nature addressed resilience of the individual, rather than addressing broader causal factors.

Commenters also highlighted systemic risk factors related to suicidality that are deeply embedded in societal patterns, extending beyond the boundaries of military service or veteran status. One commenter noted that: “the issue is that there’s a broad social trend here that suggests it’s not just a military problem, even if it’s worse here” (User 273). Another commenter noted “social pressures, digital isolation, stress from being in a new environment away from home are all going to play a role” (User 162). In effect, there was a broad recognition of suicide as a fundamentally complex problem that varies from person to person. As one commenter stated, “to determine a root cause would be very difficult. There is just too wide a range of

reasons. I'm tired of it too! But like someone else said on here I think it's more of a societal problem than specific to the military" (User 596).

The diversity of career fields, differing security clearances, and varied job requirements across the spectrum of military service yielded a breadth of responses in which risk and protective factors in a cultural context were highly variable. In short, responses to individual concerns about help-seeking and impact of experiencing suicidality, were often "it depends". Nonetheless, central within this theme was the substantial role played by immediate supervisors and mid-level leaders. Individuals that have direct contact with their employees contribute considerably to the perception of interpersonal safety, feelings of connection, and a sense of belonging – all notable protective factors. Negatively perceived leaders affect the opposite reaction: "I've worked my hardest to be a good NCO [Non-Commissioned Officer]. I've never needed or asked for anything. Yet as soon as I feel like I need help. I'm pushed out the back door because I've become an inconvenience" (User 144). Contributions of IPTS as a driving theoretical epistemology remain particularly relevant in this instance. Other commenters noted, "I think most people have experienced working for overbearing or narcissistic leaders, and we shouldn't gloss over the impact that has" (User 658). The degree to which an individual feels a sense of belonging and connection to a unit's mission plays an important protective (or detrimental) role in a personal sense of well-being.

The role of the digital space and perceived anonymity of posting to an online forum additionally presented as a method to avoid perceived cultural barriers to help seeking and stigma: "Some people don't want to share personal information and would rather have an 'unbiased' opinion" (User 241). Another commenter added: "For starters we could make the military treat mental health in a way that people don't feel the need to anonymously post to see

what going to a therapist will do their clearance or career” (User 295). This commenter acknowledges the importance of the digital community in supporting individuals who are navigating stigma and curious about accessing resources. In effect, social media serves as an alternative space that circumvents the highly regulated norms intrinsic to traditional military environments. How and why military service members and veterans experience suicidality is a central part of communication about suicidality within the forum. The diversity of factors discussed, ranging from workplace support to broader societal causes, reflects an acknowledgment of contextuality within the forum. Such discussions mirror the challenge in developing nuanced prevention that addresses the individual yet is also applicable to a broader group structure.

Discussion

To the authors’ knowledge this is the first research study to apply the intersection of CSTS and the IPTS to explore suicide-related social media communication, risk factors, and protective factors among a military and veteran population. These findings reiterate that for some, the presence of a digital space is crucial for navigating and understanding issues related to mental health broadly and suicide more specifically. The available data additionally supports the utility of incorporating CSTS into a theoretical framework for understanding suicidality and its prevention and intervention. Individuals reported experiences of thwarted belongingness or perceived burdensomeness (characteristic of IPTS) as well as external precipitating factors relating to cultural and structural systems. Independently these theoretical frameworks would insufficiently reflect the complexity of the data. Further exploration as to how incorporating diverse theoretical approaches can support future research is indicated.

In light of the presented research questions, a rich and highly contextualized framework of suicidality emerges in the forum's online communication. Consistent with existing findings on the importance of social media as a place for various forms of social support (Stana et al., 2017), the online forum was frequently used to seek out guidance and information regarding issues of suicide. Forum members frequently report a sense of compassion and empathy toward individuals experiencing suicidality and to the surviving friends and family of those who have died by suicide. The benefit of which has been previously identified as a positive effect of online engagement (Fu et al., 2013). Risk and protective factors coexist in the online forum and present unique opportunities for intervention and the development of prevention strategies.

Belongingness and burdensomeness were commonly conveyed as contributors to the development of suicidality, as well as present within the intonation of members seeking advice. Additionally, risk factors in the form of stigma and perceived barriers to help seeking were notable within the forum. Encouragement and positivity were present throughout most individual interactions when discussing issues of suicide. Despite clear indications of structural and culturally derived stigma, members were encouraged to seek help over any potential career-related ramifications. Yet contrarily, affirmative stigma reducing efforts were at times offset by statements that could be perceived as confirming or perpetuating stigma and reifying barriers to care. Nonetheless, the online forum served as a clear resource and platform to engage with a community of culturally connected individuals through anonymous relationships absent the cultural expectations that may come with military rank or career field.

These results indicate that environmental and systemic factors, particularly within a highly regulated environment, play an important role in how individuals experience risk and protection. They impact decisions to seek advice in an online context rather than through in-

person routes. Consequently, social media plays an important role in a veteran's access to various forms of support (Salzmann-Erikson & Hiçdurmaz, 2017; Stana et al., 2017). The role of an anonymous forum is particularly salient for posters experiencing a crisis and considering seeking help absent the highly structured context of the military environment. A protective structure was clearly visible in this regard. Offers of direct connection, sharing of resources, personal experiences of suicidality, and interactions with mental health resources have been found to encourage treatment-hesitant individuals to seek out help (Niederkrötenhaler et al., 2014). These findings are reinforced by the data presented here.

Nonetheless, it is critical to consider that, just as the archival nature of these postings allowed for the collection of research data, the cultural impressions left behind in the forum may influence decisions made by advice-seekers or suicidal persons in the future (Best et al., 2016). These individuals who act as forum observers rather than contributors represent an important yet unquantified contingent. Thus, although positivity toward the suicidal person and specific resources that are available were consistently present within the data, there was also information that may be interpreted as reinforcing stigma or suggesting that one's military career may be harmed by seeking help. Positive experiences intermingle with negative. While some posts espouse the benefits, ease, and confidentiality received using prevention resources, there are others reporting career impacts, frustration, and struggle. Posts such as "the real help I found was with my social worker" (User 436) may appear right next to another that claims: "Use off base resources" (User 152). Navigating what information is trustworthy could present a significant challenge for a person in crisis. For everyone that posts information within the forum publicly, there are an unknown number of silent observers seeking to glean information from the experiences of others (Gong et al., 2015). One might imagine the confusion or uncertainty an

individual may experience when seeking answers online, just as the results of this study acknowledge the diversity of opinion, experience, and advice. Perceived stigma and barriers to care persist.

The characteristics that affect help seeking can facilitate protection or may exacerbate risk factors. Within existing literature, factors such as available treatment, therapists or providers, knowledge of resources, access to care, and values all may impact an individual's decision to seek out mental health support (Smith et al., 2020). These considerations were acutely visible in the digital setting explored in this study, exemplified by User 522 who noted: "Please seek help. Chaplains are 100% confidential. If you need help immediately, you can call the suicide hotline". While multiple forms of support are present within the results to support how individual perceptions of belongingness and burdensomeness might lead to protection from suicidality, there is clear indication that considering external cultural and structural factors relating to how suicide is talked about is needed. Arguably, these findings indicate that structural and cultural processes have a direct and substantial impact on how individuals perceive their own mental health and make help-seeking decisions. Online, anonymous forums in which individuals with shared experience may build connections, seek advice, offer support, and vent frustration appear to be a critical resource for veterans and military service members that may be experiencing suicidal ideation. Identifying methods by which formal prevention strategies may be incorporated into these digital social environments for veterans and military members represents a potential untapped resource. Incorporating robust and comprehensive theoretical frameworks will further support and guide effective implementation.

Among military members, the diversity in individual career fields and corresponding administrative requirements led to varied responses from posters and commenters. There is not a

single or straightforward answer in demystifying uncertainty or perceived barriers to care when everyone's positionality, veteran status, or active-duty readiness requirements may impact a response differently. That is, despite the potential benefits of the digital space as a tool to support individuals in accessing prevention resources, the breadth and diversity of information, stigma, and experiences may limit one's ability to find concrete answers and thus serve as both a risk and protective factor. Nonetheless, the forum serves as an important resource for individuals seeking advice about suicidality, made clear by one poster who noted: "I just want to know the best route to get help" (User 114). One potential solution to mitigate risk characteristics and amplify protection would be to further iterate upon the Department of Defense's growing embedded mental health model (Pierce et al., 2020). Incorporating a 'digitally' embedded mental health professional into these online spaces, who is known as a subject matter expert, could provide opportunities to directly build relationships, address stigma, and eliminate perceived barriers to care. The digital space already plays an important (and growing) role for military recruiting (Karwowski et al., 2020). Similarly, strategies could be implemented to promote mental health and engage in suicide prevention. The ability to anonymously gather data, ask questions, and engage with a community reflects fundamental concepts of IPTS and CSTS. The presence of formalized support to answer questions, provide fact checking, and offer direction could provide accurate and professional guidance in a forum that is actively being used by military personnel and veterans. Such an intervention would additionally address the larger social context in which this population exists by mitigating stigma about suicidality.

Limitations

There are several limitations within this research study that are relevant to note. Although efforts have been made to ensure the study's trustworthiness and rigor, due to the non-human

subject design of this thematic analysis, it is not possible to verify the veteran or military status of online posters. Reported experiences were anecdotal and could not be verified and self-selection bias is an important consideration. The results cannot be interpreted as reflecting the experience of military members in a generalized sense and are thus limited to the sample presented here. Additionally, alternative forms of social media communication through private chats and closed/private groups were not considered. Finally, this study did not explore the impact of posted information and comments on forum observers who consume the information; however, do not directly participate in the communicative process. The impact of diverse, often conflicting perspectives, on individuals who observe but do not participate within these digital contexts remains unknown. Additionally, given the anonymity of forum members, the background and diversity of the population sample is unknown. This limits conclusions that can be drawn regarding the social location and identity of posters and commenters.

Conclusion

The intersection of suicide prevention and digital community spaces is an emerging topic in which both risk and protective factors commingle in highly contextualized ways. Veterans experiencing suicidal ideation utilize online spaces to receive support, seek advice, and gather information. This research study explored the intersection between systemic forces and individual perceptions of prevention resources. The collected data may provide insights into the development of improved suicide prevention strategies and supports the inclusion of broad theoretical perspectives in suicidological research. Digital communities serve a critical function for veterans and military members experiencing thoughts of suicide. This research study reinforces the need for a broad theoretical scope, and inclusion of digital spaces in the implementation of prevention strategy. It contributes to the existing body of research by

highlighting the role of online communication as a prevention resource for military members and veterans. The results presented here reinforce the highly contextual nature of suicidality and identify gaps in which formalized prevention resources may be beneficial. Potential strategies to utilize these digital environments for suicide prevention could be implemented through direct intervention by trained professionals who can build relationships, respond to questions, address stigma, and eliminate perceptions of barriers to care.

REFERENCES

- Abrutyn, S., & Mueller, A. S. (2018). Toward a Cultural-Structural Theory of Suicide Examining Excessive Regulation and Its Discontents. *Sociological Theory*, *36*(1), 48–66. <https://doi.org/10.1177/0735275118759150>
- Abrutyn, S., & Mueller, A. S. (2021). Toward a robust science of suicide: Epistemological, theoretical, and methodological considerations in advancing suicidology. *Death Studies*, *45*(7), 522–527. <https://doi.org/10.1080/07481187.2019.1660081>
- Alvarez, M. (2019). *THE SUICIDAL SELF IN CYBERSPACE: CO-CREATING MEANING AND COMMUNITY THROUGH ONLINE DISCOURSE* (Doctoral dissertation, University of Massachusetts Amherst).
- Atuel, H. R., & Castro, C. A. (2018). Military cultural competence. *Clinical Social Work Journal*, *46*(2), 74-82. <https://doi.org/10.1007/s10615-018-0651-z>
- Barlas, F.M., Higgins, W.B., Pfieger, J.C., Diecker, K. (2013). 2011 health related behaviors survey of active-duty personnel. Washington, DC: U.S. Department of Defense
- Best, P., Manktelow, R., & Taylor, B. J. (2016). Social Work and Social Media: Online Help-Seeking and the Mental Well-Being of Adolescent Males. *The British Journal of Social Work.*, *46*(1), 257–276. <https://doi.org/10.1093/bjsw/bcu130>
- Birks, M., Chapman, Y., & Francis, K. (2008). Memoing in qualitative research: Probing data and processes. *Journal of Research in Nursing*, *13*(1), 68–75. <https://doi.org/10.1177/1744987107081254>
- Braun, V., & Clarke, V. (2014). What can thematic analysis offer health and wellbeing researchers?. *International Journal of Qualitative Studies on Health and Well-being*, *9*(1). doi:10.3402/qhw.v9.26152
- Bryan, C. J., Jennings, K. W., Jobes, D. A., & Bradley, J. C. (2012). Understanding and Preventing Military Suicide. *Archives of Suicide Research*, *16*(2), 95–110. <https://doi.org/10.1080/13811118.2012.667321>
- Bylotas, J. (2023). A trans-conceptual model for suicide prevention in social work practice: military and veteran populations as an example. *Social work in mental health*, 1-17. doi: 10.1080/15332985.2023.2244624
- Chu, C., Buchman-Schmitt, J. M., Stanley, I. H., Hom, M. A., Tucker, R. P., Hagan, C. R., Rogers, M. L., Podlogar, M. C., Chiurliza, B., Ringer-Moberg, F. B., Michaels, M. S., Patros, C., & Joiner, T. E. (2017). The Interpersonal Theory of Suicide: A Systematic

- Review and Meta-Analysis of a Decade of Cross-National Research. *Psychological Bulletin*, 143(12), 1313–1345. <https://doi.org/10.1037/bul0000123>
- Clarke, V., & Braun, V. (2017). Thematic analysis. *The Journal of Positive Psychology*, 12(3), 297–298. <https://doi.org/10.1080/17439760.2016.1262613>
- Creswell, J. W. (2013). *Qualitative inquiry and research design* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Curtin S.C. (2020). State suicide rates among adolescents and young adults aged 10–24: United States, 2000–2018. *National Vital Statistics Reports*; vol 69 no 11. Hyattsville, MD: National Center for Health Statistics. 2020.
- De Beurs, D., Bockting, C., Kerkhof, A., Scheepers, F., O'Connor, R., Penninx, B., & van de Leemput, I. (2021). A network perspective on suicidal behavior: Understanding suicidality as a complex system. *Suicide and Life-Threatening Behavior*, 51(1), 115–126. <https://doi.org/10.1111/sltb.12676>
- Fu, K. W., Cheng, Q., Wong, P. W., & Yip, P. S. (2013). Responses to a self-presented suicide attempt in social media: a social network analysis. *Crisis*, 34(6), 406–412. <https://doi.org/10.1027/0227-5910/a000221>
- Forkmann, T., Glaesmer, H., Paashaus, L., Rath, D., Schönfelder, A., Stengler, K., Juckel, G., Assion, H.-J., & Teismann, T. (2020). Interpersonal theory of suicide: Prospective examination. *BJPsych Open*, 6(5), e113. <https://doi.org/10.1192/bjo.2020.93>
- Gagnon, K. W., Bifulco, L., Robinson, S., Furness, B., Lentine, D., & Anderson, D. (2022). Qualitative inquiry into barriers and facilitators to transforming primary care for lesbian, gay, bisexual and transgender people in US federally qualified health centres. *BMJ Open*, 12(2), e055884. <https://doi.org/10.1136/bmjopen-2021-055884>
- Gong, W., Lim, E. P., & Zhu, F. (2015). Characterizing silent users in social media communities. In *Proceedings of the International AAAI Conference on Web and Social Media* (Vol. 9, No. 1, pp. 140-149).
- Guest, G., MacQueen, K. M., & Namey, E. E. (2011). *Applied thematic analysis*. sage publications.
- Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code Saturation Versus Meaning Saturation. *Qualitative Health Research*, 27(4), 591–608. <https://doi.org/10.1177/1049732316665344>
- Hjelmeland, H., & Loa Knizek, B. (2020). The emperor's new clothes? A critical look at the interpersonal theory of suicide. *Death Studies*, 44(3), 168–178. <https://doi.org/10.1080/07481187.2018.1527796>

- Hoffmire, C. A., Monteith, L. L., Forster, J. E., Bernhard, P. A., Blosnich, J. R., Vogt, D., Maguen, S., Smith, A. A., & Schneiderman, A. I. (2021). Gender Differences in Lifetime Prevalence and Onset Timing of Suicidal Ideation and Suicide Attempt Among Post-9/11 Veterans and Nonveterans. *Medical Care.*, *59*, S84–S91. <https://doi.org/10.1097/MLR.0000000000001431>
- Hom, M. A., Stanley, I. H., Schneider, M. E., & Joiner, T. E. (2017). A systematic review of help-seeking and mental health service utilization among military service members. *Clinical Psychology Review*, *53*, 59–78. <https://doi.org/10.1016/j.cpr.2017.01.008>
- Joiner, T.E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- Johnson, D. (2022, February 2). 'A debt I can never repay' – How Reddit is filling the gaps in the military's failing mental health care system. Task & Purpose. <https://taskandpurpose.com/news/army-subreddit-resource/>
- Karwowski, W., Goonetilleke, R. S., Xiong, S., Goossens, R. H. M., & Murata, A. (2020). The Impact of Social Media in Military Recruiting. In *Advances in Physical, Social & Occupational Ergonomics Proceedings of the AHFE 2020 Virtual Conferences on Physical Ergonomics and Human Factors, Social & Occupational Ergonomics and Cross-Cultural Decision Making, July 16-20, 2020, USA / (Vol. 1215, pp. 415–420)*. Springer International Publishing : https://doi.org/10.1007/978-3-030-51549-2_55
- Kendal, S., Kirk, S., Elvey, R., Catchpole, R., & Pryjmachuk, S. (2017). How a moderated online discussion forum facilitates support for young people with eating disorders. *Health Expectations*, *20*(1), 98–111. <https://doi.org/10.1111/hex.12439>
- Leavitt, A. (2015, February). " This is a Throwaway Account" Temporary Technical Identities and Perceptions of Anonymity in a Massive Online Community. In *Proceedings of the 18th ACM conference on computer supported cooperative work & social computing* (pp. 317-327). <http://dx.doi.org/10.1145/2675133.2675175>
- Ma, J., Batterham, P. J., Calear, A. L., & Han, J. (2016). A systematic review of the predictions of the Interpersonal–Psychological Theory of Suicidal Behavior. *Clinical Psychology Review*, *46*, 34–45. <https://doi.org/10.1016/j.cpr.2016.04.008>
- Marsh, I. (2020). The social production of psychocentric knowledge in suicidology. *Social epistemology*, *34*(6), 544-554. <https://doi.org/10.1080/02691728.2020.1725920>
- Maynard, D. W. (1984). Structuralism Revisited. *Contemporary Sociology*, *13*(4), 425–428. <https://doi.org/10.2307/2069043>
- McGuffin, J. J., Riggs, S. A., Raiche, E. M., & Romero, D. H. (2021). Military and Veteran help-seeking behaviors: Role of mental health stigma and leadership. *Military Psychology*, *33*(5), 332-340. Doi: 10.1080/08995605.2021.1962181

- McHugh, C. M., & Large, M. M. (2020). Can machine-learning methods really help predict suicide?. *Current opinion in psychiatry*, 33(4), 369-374.
DOI: 10.1097/YCO.0000000000000609
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. Revised and expanded from qualitative research and case study applications in education. San Francisco, CA: Jossey-Bass.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Niederkröthaler, T., Reidenberg, D. J., Till, B., & Gould, M. S. (2014). Increasing Help-Seeking and Referrals for Individuals at Risk for Suicide by Decreasing Stigma. *American Journal of Preventive Medicine.*, 47(3), S235–S243.
<https://doi.org/10.1016/j.amepre.2014.06.010>
- Peel. (2020). A beginner's guide to applied educational research using thematic analysis. *Practical Assessment, Research & Evaluation* :, 25(1). <https://doi.org/10.7275/ryr5-k983>
- Pierce, K. E., Broderick, D., Johnston, S., & Holloway, K. J. (2020). Embedded Mental Health in the United States Marine Corps. *Military Medicine*, 185(9–10), e1499–e1505.
<https://doi.org/10.1093/milmed/usaa076>
- Rogers, M. L., & Joiner, T. E. (2019). Exploring the temporal dynamics of the interpersonal theory of suicide constructs: A dynamic systems modeling approach. *Journal of Consulting and Clinical Psychology*, 87(1), 56–66. <https://doi.org/10.1037/ccp0000373>
- Saldaña, J. (2013). *The coding manual for qualitative researchers* (2nd ed). SAGE.
- Salzmann-Erikson, M., & Hiçdurmaz, D. (2017). Use of Social Media Among Individuals Who Suffer From Post-Traumatic Stress: A Qualitative Analysis of Narratives. *Qualitative Health Research*, 27(2), 285–294. <https://doi.org/10.1177/1049732315627364>
- Schuman, D. L., Highfill, C., Johnson, A., Henderson, S., & Ognyanova, P. (2021). Scoping Review: Ethical Considerations in Online Ethnographic Research With Military Populations. *Journal of Empirical Research on Human Research Ethics*, 16(4), 374–388.
<https://doi.org/10.1177/15562646211038161>
- Schuman, D. L., Lawrence, K. A., & Pope, N. (2019). Broadcasting War Trauma: An Exploratory Netnography of Veterans' YouTube Vlogs. *Qualitative Health Research*, 29(3), 357–370. <https://doi.org/10.1177/1049732318797623>
- Skjott, L. M., & Korsgaard, S. (2019). Coding qualitative data: A synthesis guiding the novice. *Qualitative Research Journal*, 19(3), 259–270. <https://doi.org/10.1108/QRJ-12-2018-0012>

- Smith, P. N., Schuler, K., Fadoir, N., Marie, L., & Basu, N. (2020). Socio-ecological context and the interpersonal theory of suicide: A response to Hjelmeland & Knizek. *Death Studies, 44*(9), 547–551. <https://doi.org/10.1080/07481187.2019.1586799>
- Smith, J. R., Workneh, A., & Yaya, S. (2020). Barriers and Facilitators to Help-Seeking for Individuals With Posttraumatic Stress Disorder: A Systematic Review. *Journal of Traumatic Stress, 33*(2), 137–150. <https://doi.org/10.1002/jts.22456>
- Stana, A., Flynn, M. A., & Almeida, E. (2017). Battling the Stigma: Combat Veterans' Use of Social Support in an Online PTSD Forum. *International Journal of Men's Health, 16*(1). DOI: 10.3149/jmh.1601.20
- Stecker, T., Fortney, J. C., Hamilton, F., & Ajzen, I. (2007). An Assessment of Beliefs About Mental Health Care Among Veterans Who Served in Iraq. *Psychiatric Services, 58*(10), 1358–1361. <https://doi.org/10.1176/ps.2007.58.10.1358>
- Teo, A. R., Strange, W., Bui, R., Dobscha, S. K., & Ono, S. S. (2020). Responses to Concerning Posts on Social Media and Their Implications for Suicide Prevention Training for Military Veterans: Qualitative Study. *Journal of Medical Internet Research, 22*(10), e22076. <https://doi.org/10.2196/22076>
- U.S. Department of Veterans Affairs. (September 2021). 2021 National veteran suicide prevention annual report. <https://www.mentalhealth.va.gov/docs/data-sheets/2021/2021-National-Veteran-Suicide-Prevention-Annual-Report-FINAL-9-8-21.pdf>
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E., Jr. (2010). The interpersonal theory of suicide. *Psychological Review, 117*(2), 575–600. <https://doi.org/10.1037/a0018697>
- Vickers, R. R., Jr., Hervig, L. K., Paxton, E., Kanfer, R., & Ackerman, P. L. (1996). *Personality Change During Military Basic Training*: Defense Technical Information Center. <https://doi.org/10.21236/ADA381297>

CHAPTER 4

STUDY 3 – UNRAVELING COLLEGIATE RESILIENCY: RISK AND PROTECTIVE FACTORS AMONG NON-TRADITIONAL STUDENTS AND VETERANS

Veteran populations are frequently portrayed as marginalized (Zhou et al., 2022), with increased mental health needs (Derefinko et al., 2019) and disproportionately poor health outcomes (Hoerster et al., 2012). The veteran student is a subgroup that has similarly been described through this lens (Fortney et al., 2016; Sambrano, 2021). Despite this frequent portrayal, there are mixed findings in this regard. As an example, some studies indicate that students with veteran status may be at increased risk in psychological symptoms (e.g., Rudd et al., 2011), while others report adverse mental health outcomes occurring at a rate that match student-civilian counterparts (e.g., Cleveland et al., 2015). Given the variability in available results, further study is necessary to understand how salient risk and protective factors may affect veteran students and inform strategies to support veteran success in university settings.

Among the available literature on veteran students, there has been a disproportionate focus on measures of risk, with comparatively little insight into which indicators of strength may support well-being. Consequently, key gaps exist in understanding how veterans reintegrate into civilian life and a collegiate setting. A recent scoping review examining veteran student outcomes found that relatively few academic studies explore positive indicators of success, including measures of perceived well-being, belongingness, and connectedness (Moeck et al., 2022). Additionally, veteran students are frequently identified as non-traditional, yet little is known about factors that may distinguish veteran students from their non-traditional peers. This study attempts to build an improved understanding of these positive indicators of success and

explores distinctions between veterans and other non-traditional student populations on measures of both risk and protection.

Understanding the Non-Traditional, Veteran Student Population

Non-traditional student status is a broadly defined term within existing literature, ranging from age, relationship status, commuter-status, employment, or the presence of children in the home (Chung et al., 2014). In a research context, non-traditional students are most commonly defined as individuals aged twenty-four and above (IES-NCES, 2022). Non-traditional students often face challenges that distinguish them from their peers, impact attrition, and affect the completion of degree programs. Potential barriers include economic constraints, demands of family and children, and career obligations (Evitts, 2022). Collegiate programs designed for students traditionally entering after secondary school may present challenges for the non-traditional student, whose needs, schedule, and life-experience are not reflected within the design of such program. To this end, veteran services and non-traditional student programs have increasingly become a part of the services provided within the collegiate landscape. However, a dearth of literature regarding the implementation of these services remains (Iloh, 2018).

Over 700,000 veterans utilized education benefits in 2019 (Ghosh et al., 2020). Veterans represent 4% of undergraduate students within the United States, are an average age of 25 years, and represent a variety of diverse backgrounds (Molina, 2015). Beyond having served in the Armed Forces, veteran students vary in their reported race and ethnicity, frequently have dependents, are married, or partnered, or may possess foreign-born citizenship status (Molina, 2015). The diversity of individuals represented within the veteran student group reinforces its inclusion within the non-traditional student category (Cate & Davis 2016). On measures of academic success, there is some evidence to suggest a positive correlation between age and

performance, where older veterans appear to perform better than younger peers (Morrill & Somers, 2020). However, success may not be experienced universally, and important gaps remain within the current literature.

The present study examines distinctions between veteran students and their non-veteran, non-traditional student peers. Further differences in veteran status are examined based on exposure to hazardous duty. When exploring hazardous duty exposure among veterans, existing data indicate differences in some respects and, surprisingly, a lack thereof in others. In a study of mental health outcomes, nondeployed status was associated with lower mental health outcomes for cisgender women, but not cisgender men, when compared to civilian counterparts; among deployed individuals, negative mental health outcomes were heightened for cisgender men in comparison to their civilian counterparts (Hoglund & Schwartz, 2014). Interestingly, deployment status and hazardous duty have not been associated with increased suicidality, when compared with non-deployed individuals (Reger et al., 2018). In light of the ongoing pursuit to better understand the impacts of warfare and hazardous duty exposure on veteran populations, understanding what risk and protective factors may impact these individuals in academic settings is an area of needed attention.

Veteran Student Suicidality, Risk, and Protection

Compared to civilian counterparts, veterans experience disproportionately high rates of suicide, physical disability, and adverse mental health outcomes (Campbell et al., 2020). Unsurprisingly, substantial attention has been paid to the mental health outcomes of veterans generally and veteran students more specifically. Yet, study findings targeting veteran students vary regarding risk and protective factors relating to these adverse public health and academic outcomes. A 2015 study of veteran student suicidality found no significant differences in suicidal

ideation or suicidal behavior, stress, prevalence of alcohol use, or engagement in mental health services between veteran and nonveteran student groups (Blosnich et al., 2015). This differs from previous research indicating high rates of suicidality and adverse mental health outcomes among veterans (Rudd et al., 2011). Despite mixed results in the analysis of these group samples, veteran suicide deaths occur at a rate unequivocally higher than non-veteran peers (Ramchand, 2022). Such data reveal the profound complexity in unraveling risk and protection and translating population-based data to individually focused prevention efforts.

Student veterans with hazardous duty experience have reported an increased history of psychiatric diagnoses, but equal symptom scores and decreased suicidality when compared to non-veteran peers (Blosnich et al., 2015). Further complicating the ability to draw concrete conclusions about the experiences of veteran student populations, recent research utilizing the 2011 Integrated Postsecondary Education Data System found that veterans with positive screenings for mental health disorders were more likely to seek care compared to non-veteran peers yet were also more likely to report higher rates of depression, anxiety, and PTSD symptoms (Valenstein et al., 2022). Thus, while veteran students may be more likely to seek care, they also may be more likely to report more severe symptomology. This contrasts with Cleveland et al. (2015) who found that veteran students with hazardous duty experience report feeling overwhelmed significantly less than their peers and that veteran status was not a significant predictor of poor psychological functioning.

The highly contextualized nature of risk and protection results in varied outcomes across different samples. Within the available research base, inconsistency across studies in terms of the data used, studies' sampling techniques, and overall findings has complicated the ability to characterize veteran students as a group. This diversity of results within available data may

frustrate efforts to translate knowledge into effective prevention strategies. Determining how campus services can best support veterans using available information on veteran risk and protective factors remains an ongoing challenge. Consequently, important questions remain about veteran student mental health and what protective factors may mitigate any increased risk experienced by student veterans. It is unclear if these outcomes are directly the result of veteran status, or if similar results may be experienced by other non-traditional students. Further exploration is needed to understand how veteran students may compare to other non-traditional student groups given that veterans students often have comparable demographic profiles in other ways (e.g., age, marital status, dependent status, and employment status). Such knowledge may inform the use of prevention services that are targeted to meet the needs of these interrelated groups of veterans and non-traditional students.

A historically disproportionate focus on risk represents a significant limitation (Ghosh et al., 2020), which obscures the complex interaction of both risk and protection in the context of one's social ecology. Such a deficit focus may be driven by the assumption that military service automatically confers greater risk. Yet, the degree to which this is universal across veteran student groups is poorly understood at present. Within prevention science there appears to be a preoccupation with mental health pathology (Moeck et al., 2022). Nonetheless, when interpreting measures of risk, an absence of impaired functioning does not necessarily signal mental health and positive well-being (Cooke et al., 2016). Intentional consideration of positive indicators of well-being can serve to better capture the breadth of veteran experiences within university settings. In acknowledgment of the complex nature of risk and protection, a theoretically diverse lens is applied here.

Theoretical Framework

This quantitative analysis applies a trans-conceptual lens of suicidality (Bylotas, 2023), interpreting results through constructs of the interpersonal psychological theory of suicide (IPTS) (Van Orden et al., 2010) and the cultural structural theory of suicide (CSTS) (Abrutyn & Mueller, 2018). IPTS presents a framework for understanding suicide death through concepts of individual desire and capacity, in which the intersection of perceived burdensomeness and thwarted belongingness is sufficient to cultivate a desire to die by suicide (Van Orden et al., 2010). Capacity refers to desensitization to death, pain, and self-injury (Bayliss et al., 2021). For military service members, the nature of a Profession of Arms may increase a baseline capacity for suicide. IPTS is perhaps the most widely accepted theory of suicidality in contemporary research. Yet, despite its popularity, IPTS lacks a robust reflection of societal and ecological factors that may contribute to suicide death (Hjelmeland & Loa Knizek, 2020). CSTS reflects a critical counterpoint and posits that highly regulated cultures and structures present a contributing pathway to the development of suicidality (Abrutyn & Mueller, 2018). In other words, highly regulated systems (such as military service) may contribute to the development of suicidality through an individual's failure to conform to culturally prescribed expectations. Taken together, IPTS and CSTS reflect a more complete framework for understanding suicidality.

This study's theoretical approach facilitates analysis and interpretation grounded in the ecological contextuality of risk and protection. It is inclusive of the unique cultural experience of military veterans and informs exploration of resilience and flourishing among non-traditional student groups. Conversely, when suicide and mental health literature on veteran students is disproportionately preoccupied with risk, it reinforces the notion that veterans, simply because of

their military service, are at risk. However, a trans-conceptual framework would suggest that the experiences of veterans generally and veteran students, more specifically, are nuanced. Thus, in the present study, an intentionally adopted risk *and* protective factor framework is used to explore how certain factors may protect against suicidality.

Purpose and Research Questions

The purpose of the present study is to examine whether differences exist among non-traditional students, veteran students with hazardous duty experience, and veteran students without hazardous duty experience with regard to suicide, resilience, loneliness, flourishing, and psychological distress. Additionally, this study seeks to understand how these measures of risk and protection predict group membership. Limited evidence currently exists on these student populations, particularly when examining whether veteran students differ from their non-traditional student peers. The measures in question (suicidality, flourishing, loneliness, resilience, and psychological distress) reflect the complex interaction between the individual student and the cultural-structural systems around them. To the author's knowledge, this is the first research study of this type to explore variations between veteran and non-traditional students when considering these risk factors, and positive indicators of success. This study asks the following research questions: Research Question 1 (RQ1) – Are there differences in suicidality, flourishing, loneliness, resilience, and psychological distress between non-traditional students and veteran students? Research Question 2 (RQ2) – How do risk factors (i.e., suicidality, loneliness, and psychological distress) predict group membership among veterans with hazardous duty and veterans without hazardous duty relative to non-veteran students? RQ 2a: How does the addition of protective factors (i.e., flourishing and resilience) predict group

membership among veterans with hazardous duty and veterans without hazardous duty relative to non-veteran students?

In anticipation of potential study results, this study hypothesizes the following: higher levels of resilience (measured by the CD-RISC2) are expected among veterans, both exposed to hazardous duty and not, compared to non-veteran status non-traditional student peers. This is based upon existing research of veteran resilience indicating that although many veterans experience psychological distress and mental health challenges, they also demonstrate high levels of psychological resilience (Fogle et al., 2020). However, veterans typically report lower peer support and social connection than non-veteran peers (Barry et al., 2012). Thus, generally, lower scores on the Diener Flourishing Scale are anticipated among veteran students compared to other non-traditional student peers. Given the adaptation to the individualized nature of university education required of veterans (Hinkson et al., 2021), it is anticipated that veteran loneliness scores may exceed those of non-traditional student peers. Based on prior empirical evidence, it is hypothesized that veteran students of both categories will experience an increased occurrence of suicidal ideation and behaviors (Valenstein et al., 2022). Finally, students exposed to hazardous duty are expected to report higher levels of generalized psychological distress (measured by the K6) as compared to other non-traditional students and veterans without hazardous duty experience.

Methods

Dataset and Sample

This research study utilized survey data collected from administration of the American College Health Association (ACHA) National College Health Assessment (NCHA), occurring in Spring 2021. The NCHA covers a broad range of topics, including physical health, mental

health, suicidality, engagement in campus activities, as well as alcohol and substance use. It is the “largest known comprehensive data set on the health of college students” (ACHA, 2021, P.1). The most current survey instrument, The NCHA-III, is administered via the web twice a year in the spring and fall to self-selecting universities in the United States and Canada who have paid for the ACHA service. Each administration of the survey is distinct, dependent upon the universities that have requested the survey. Universities and colleges may determine the specific sampling strategy, which can be random, administered to specific groups, or offered to the entire student body. Comparison to previous survey iterations and other national survey instruments has been conducted by ACHA, with findings generally indicating consistency (Blackdeer et al., 2021). Further information regarding the NCHA, generalizability, reliability, and validity analysis may be found directly through ACHA (ACHA, 2021).

The present study used the Spring 2021 data set, which comprised survey data from 137 schools and 96,489 students. This dataset was selected for recency, inclusion of measures that capture positive indicators of success, and sample size. As previously noted, there is a gap in the literature when considering both protective factors and differences that exist between veterans and other non-traditional students. This dataset included sufficiently large samples of veteran students to include exposure to hazardous duty as a dependent variable. This inclusion reinforces the study purpose and supports a more precise understanding of diverse veteran experiences.

The sample consisted of individuals attending a college or university located in the United States who were age 24 or older. International students, individuals attending graduate or certificate programs, and part-time students were all included for the purpose of capturing a broad sample reflective of the diversity within the non-traditional student category. Although

broad inclusion criteria were maintained, age 24 was set as the inclusion threshold given its wide recognition as a delineator for non-traditional student status (IES-NCES, 2022).

Human Subjects

The research conducted was determined by the overseeing university IRB as being exempt. This study comprised analysis of secondary, aggregated, and deidentified data initially collected by ACHA. Prior to the administration of the NCHA, ACHA mandates IRB approval from universities. Informed consent is provided by research participants through two separate methods and participant information is considered confidential. For students who may experience distress while taking the survey, NCHA provides readily available national resources including the National Suicide Prevention Lifeline (ACHA, 2021).

Dependent Variables

Veteran Student Status

The independent variable within this study is defined by veteran student status. This variable contains three possible responses: 1) Not a current or former member of the Armed Services 2) yes and I have served in a geographic area of hazardous duty, 3) yes and I have not served in a geographic area of hazardous duty. Non-veteran, non-traditional students will serve as the reference group. Distinguishing between veterans who have and have not served in hazardous duty areas is necessary given variations in experiences and potentially diverse protective and risk factors conferred through deployment. Non-traditional student status is not identified as a distinct independent variable in this case, as all students within the sample are considered non-traditional by meeting the threshold age of twenty-four and above.

Independent Variables

Risk and protective factors were quantified using the following scales: the Connor-Davidson Resilience Scale 2 (CD-RISC2), the Diener Flourishing Scale, the Suicide Behavior Questionnaire-Revised (SBQ-R), the UCLA Loneliness Scale, and the Kessler 6 (K6) Non-Specific Psychological Distress Score. Mean scores for each measure were included in the data set analyzed and were used in the analyses.

Connor-Davidson Resilience Scale 2 (CD-RISC2)

The CD-RISC2 is a twenty-five item Likert-style measure of one's ability to cope with stress developed by Connor & Davidson (2003). The scale has demonstrated reliability and validity across a wide variety of treatments settings, populations, and cultural groups. CD-RISC2 is viewed as a useful measure in quantifying and targeting interventions related to depression, anxiety, and PTSD. The CD-RISC2 is scored on a scale of 0-8, with higher scores indicating higher resilience and a score of zero indicating a low level of resilience.

Diener Flourishing Scale

The Diener Flourishing Scale is a measure of well-being. This assessment "is a brief 8-item measure of...self-perceived success...in areas such as relationships, self-esteem, purpose, and optimism" (Diener et al., 2010, p. 143). Prior application of the Diener Flourishing Scale to veteran students has been conducted with findings indicating that the measure is reliable and valid when applied to this population (Umucu et al., 2019). The Diener Flourishing Scale ranges from a total score of 8 to 56. Responses to eight statements (for example, 'I lead a purposeful and meaningful life') are scored on a 1-7 Likert-type scale. 1 indicates strongly disagree and 7 indicates strongly agree. Increased scores indicate higher levels of personal well-being.

Suicide Behavior Questionnaire-Revised (SBQ-R)

The SBQ-R is a 4-item questionnaire which iterates on the original SBQ (Osman et al., 2001). The instrument is both brief and straightforward, covering lifetime history of suicidal ideation and attempts, frequency, disclosure to other individuals, and self-perceived likelihood of suicidal behavior. The SBQ-R is designed for both clinical and non-clinical populations and review of the instrument has demonstrated both consistency and reliability in measuring suicidality. SBQ-R scores range from 3 to 18, with increasing scores indicating an increased acuity of suicidality. In the data set, a score of 3-6 indicates an absence of suicidal ideation, while 7-18 is interpreted as a positive screen for suicidality.

UCLA Loneliness Scale

The UCLA Loneliness scale measures the degree to which individuals feel connected to those around them (Russell, 1996). The measure consists of three items scored on a 4-point Likert-style scale. Questions range from “how often do you feel alone?” to “how often do you feel isolated from others?” (Russell, 1996). The scale scores range from 3 to 9, with a score between 2 and 5 rated as negative for loneliness.

Kessler 6 (K6) Non-Specific Psychological Distress Score

The six item Kessler Non-Specific Psychological Distress Score (K6) is a brief screening for mental illness useful due to its brevity and efficacy (Kessler et al., 2006). The measure has demonstrated precision in identifying psychological distress as well as distinguishing between the presence or absence of mental health disorders (Kessler et al., 2006). Application of the K6 is particularly useful in epidemiological contexts for understanding prevalence rates of serious mental illness (Kang et al., 2015). K6 scores range from 0 to 24; 0 to 8 indicates no or low

psychological distress, 9 to 12 indicates moderate psychological distress, and 13 to 24 suggests serious psychological distress.

Analysis Plan

Data were explored using SPSS version 28. Bivariate analysis was conducted using chi-square tests and one-way ANOVA to determine whether any differences existed among the dependent variables across demographic characteristics and the five measures of risk and protection (resilience, flourishing, distress, suicidality, and loneliness). ANOVA has demonstrated robustness when analyzing groups of unequal size (Blanca et al., 2018) and was determined to be an appropriate initial approach for this study. Tukey HSD was used as a test of multiple comparisons given its wide utility within ANOVA and efficacy with unequal sample sizes (Lee & Lee, 2018; Midway et al., 2020).

Following the completion of ANOVA, multinomial logistic regression was used to examine associations between risk and protective factors across the non-traditional student groups, with non-traditional students without veteran status selected as the reference group. Multinomial logistic regression is considered particularly appropriate in this case given the unordered categories of the dependent variable and advantages in providing odds ratios for the predictor variables (Petrucci, 2009). Measures of both risk and protection were placed within a single model. To explore the mitigating characteristics of protective factors, a risks-only model was additionally conducted for comparison. Given considerations of multicollinearity between variables, both tolerance and variance inflation statistics were also conducted.

Results

Sample Characteristics

The final sample comprised 35,685 non-traditional students. Nearly two thirds of the student sample identified as female ($n = 22,486$), whereas 33.1% ($n = 11,815$) identified as male, and 3.3% ($n = 1,180$) identified as non-binary. Approximately 58% of the sample identified as White ($n = 20,704$), 18.7% identified as Asian/Asian American ($n = 6,685$), 16.7% identified as Latino/a/x ($n = 5,956$), and 5.8% identified as Black or African American ($n = 2,084$), 2.3% identified as Middle Eastern/North African ($n = 821$), and 0.7% of respondents identified as Native Hawaiian or Pacific Islander ($n = 260$). The remaining 2.4% of individuals self-identified as other or biracial ($n = 821$). See Table 4.1 for further sample demographics by non-traditional and veteran student status.

Bivariate analysis revealed statistically significant differences between non-veteran, nontraditional students, veteran students with exposure to hazardous duty, and veteran students without exposure to hazardous duty on descriptive characteristics including gender ($\chi^2 = 1025.97, p <.001$), relationship status ($\chi^2 = 336.28, p <.001$), and race/ethnicity, which included students identifying as American Indian/Native Alaskan ($\chi^2 = 29.87, p <.001$), Asian/Asian American ($\chi^2 = 53.77, p <.001$), Latino/a/x ($\chi^2 = 13.32, p <.01$), Native Hawaiian/Pacific Islander ($\chi^2 = 37.23, p <.001$), and White ($\chi^2 = 37.51, p <.001$). Results indicated that American Indian/Native Alaskan, Asian/Asian American, Native Hawaiian/Pacific Islander, and White identifying individuals had a higher proportional representation within the veteran category (both with and without hazardous duty exposure), as compared to their non-veteran peers. Latino/a/x individuals were underrepresented among veteran students as compared to non-veterans, non-traditional students.

Table 4.1*Sample Characteristics and Differences between Non-Veteran and Veteran Non-Traditional Students (N = 35,685)*

	Total		Non-Veteran		Veteran Haz. Duty		Veteran No Haz. Duty		χ^2 or <i>F</i>
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Veteran Status									
No	33,855	94.9							
Yes and No Hazardous Duty	795	2.6							
Yes and Hazardous Duty	917	2.2							
Gender									
Female	22,486	63	21,927	64.8	201	21.9	288	36.2	$\chi^2 =$ 1025.97***
Male	11,815	33.1	10,627	31.4	674	73.5	481	60.5	
Non-Binary	1,180	3.3	1,125	3.3	31	3.4	19	2.4	
Relationship Status									
Not in a relationship	12,032	33.8	11,532	34.1	213	23.2	241	30.3	$\chi^2 =$ 336.28***
Married/partnered	11,137	31.2	10,252	30.3	503	54.9	361	45.6	
In a relationship, not married/partnered	12,441	34.9	12,015	35.5	199	21.7	189	23.8	
Race/Ethnicity									
American Indian/Native Alaskan	839	2.4	765	2.3	44	4.8	28	3.5	$\chi^2 = 29.87$ ***
Asian/Asian American	6,685	18.7	6,448	19	92	10	122	15.3	$\chi^2 = 53.77$ ***
Black/African American	2,084	5.8	1,954	5.8	62	6.8	59	7.4	$\chi^2 = 5.32$
Latino/a/x	5,956	16.7	5,705	16.9	130	14.2	102	12.8	$\chi^2 = 13.32$ **
Middle Eastern/North African	821	2.3	783	2.3	22	2.4	13	1.6	$\chi^2 = 1.63$
Native Hawaiian/Pacific Islander	260	0.7	227	0.7	20	2.2	13	1.6	$\chi^2 = 37.23$ ***
White	20,704	58	19,538	57.7	601	65.5	515	64.8	$\chi^2 = 37.51$ ***
Other	843	2.4	767	2.3	49	5.3	25	3.1	$\chi^2 = 1.18$

Table 4.1*Sample Characteristics and Differences between Non-Veteran and Veteran Non-Traditional Students (N = 35,685)*

	Non-Veteran		Veteran Hazardous Duty		Veteran No Hazardous Duty		χ^2 or <i>F</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	
Kessler 6 (K6) Non-Specific Psychological Distress	7.92	5.22	6.78	5.7	6.3	5.18	<i>F</i> = 56.42***
UCLA Loneliness Scale	5.32	1.87	5.12	1.94	5.14	1.98	<i>F</i> = 7.74***
Suicide Behavior Questionnaire- Revised (SBQ-R)	4.95	2.8	5.08	2.93	4.99	2.8	<i>F</i> = 0.98
Diener-Flourishing Scale	45.59	8.52	44.97	9.78	45.73	8.73	<i>F</i> = 2.45
Connor-Davidson Resilience Scale 2 (CD-RISC2)	6.21	1.52	6.68	1.5	6.52	1.52	<i>F</i> = 57.41***

p* <.05 *p* <.01 ****p* <.001

ANOVA Findings

Psychological Distress

As reported in Table 4.1, a one-way ANOVA revealed that there was a statistically significant difference in psychological distress as measured by the K6 between at least two groups ($F_{2, 35164} = 56.42, p < .001$). Tukey's HSD Test for multiple comparisons found that the mean value of psychological distress was significantly different between non-traditional students and veterans who had served in a geographic area of hazardous duty ($p < .001, 95\% \text{ C.I.} = .73, 1.55$) and between non-traditional students and veterans who had not served in a geographic area of hazardous duty ($p < .001, 95\% \text{ C.I.} = 1.18, 2.06$). The mean score for veterans serving in geographic areas of hazardous duty ($M = 6.78, SD = 5.71$) was significantly lower than non-traditional students ($M = 7.92, SD = 5.22$). The mean score for veterans who had not served in geographic areas of hazardous duty ($M = 6.30, SD = 5.18$) was significantly lower than non-traditional student peers.

Loneliness

A statistically significant difference was found among the three levels of non-traditional student status on loneliness as measured by the UCLA Loneliness Scale between at least two groups ($F_{2, 35441} = 7.74, p < .001$). Tukey's HSD Test for multiple comparisons demonstrated that the mean value of psychological distress was significantly different between non-traditional students and veterans who had served in a geographic area of hazardous duty ($p < .001, 95\% \text{ C.I.} = 0.04, 0.34$) and between non-traditional students and veterans who had not served in a geographic area of hazardous duty ($p = 0.03, 95\% \text{ C.I.} = 0.01, 0.33$). A similar pattern was found where the mean score for veterans serving in geographic areas of hazardous duty ($M = 5.12, SD = 1.94$) was significantly lower than non-traditional students ($M = 5.32, SD = 1.87$). The mean

score for veterans who had not served in geographic areas of hazardous duty ($M = 5.14$, $SD = 1.98$) was significantly lower than non-traditional student peers.

Suicide

Among reports of suicidality, one-way ANOVA demonstrated that there was not a statistically significant difference in suicidality between the three groups ($F_{2, 35375} = 0.98$, $p = 0.38$). Mean scores were generally similar between non-traditional students ($M = 4.95$, $SD = 2.80$), veterans serving in geographic areas of hazardous duty ($M = 5.08$, $SD = 2.93$), and veterans who had not served in geographic areas of hazardous duty ($M = 4.99$, $SD = 2.91$). Although the mean scores for all groups fell within the negative screening for suicidality category, 22.4% of all respondents did screen positively for present suicidality, scoring 7 or greater on the SBQ-R.

Resilience

One-way ANOVA indicated a statistically significant difference in resilience between at least two groups ($F_{2, 35386} = 57.41$, $p < .001$). Tukey's HSD Test for multiple comparisons found that the mean value of resilience was significantly different between non-traditional students and veterans who had served in a geographic area of hazardous duty ($p < .001$, 95% C.I. = -0.059, -0.35) and between non-traditional students and veterans who had not served in a geographic area of hazardous duty ($p < .001$, 95% C.I. = -0.44, -0.18). The mean score for veterans serving in geographic areas of hazardous duty ($M = 6.68$, $SD = 1.50$) was significantly higher than non-traditional students ($M = 6.21$, $SD = 1.52$). This was also indicated among veterans who had not served in geographic areas of hazardous duty ($M = 6.52$, $SD = 1.52$) whose reports were significantly higher than non-traditional student peers.

Flourishing

For flourishing, one-way ANOVA suggested that there was not a statistically significant difference between the three groups ($F_{2, 35254} = 2.45, p = .09$). Like suicide, mean scores were similar between all groups: non-traditional students ($M = 45.59, SD = 8.52$), veterans serving in geographic areas of hazardous duty ($M = 44.97, SD = 9.78$) and veterans who had not served in geographic areas of hazardous duty ($M = 45.73, SD = 8.73$).

Multinomial Logistic Regression

To account for multicollinearity and prior to the completion of multinomial logistic regression, correlations between independent variables were examined with results presented in Table 4.2. Strong correlations above 0.7 were not present, and thus all variables were maintained within the model (Shi & Conrad, 2009). Additionally, to further explore collinearity, both tolerance and Variance Inflation Factor (VIF) were examined. All outcomes exhibited both tolerance and VIF to be within generally accepted standards (O'Brien, 2007). Having reasonably accounted for collinearity, multinomial logistic regression was applied to the data.

Table 4.2
Correlations of Measures

Measure	1	2	3	4	5
1. Kessler 6 (K6) Non-Specific Psychological Distress	–				
2. UCLA Loneliness Scale	.54	–			
3. Suicide Behavior Questionnaire-Revised (SBQ-R)	.48	.36	–		
4. Diener Flourishing Score	-.58	-.47	-.41	–	
5. Connor-Davidson Resilience Scale 2 (CD-RISC2)	-.42	-.3	-.25	.52	–

Multinomial logistic regression was conducted using a risk-only model. Results are presented in Table 4.3. The overall model found that veteran status, with and without exposure to geographic areas of hazardous duty, were significantly predicted by the independent variables ($\chi^2(2) = 2172.83, p < .001$). Compared to non-traditional, non-veteran students, veterans with exposure to geographic areas of hazardous duty had statistically significant odds of reporting higher suicidality (OR = 1.07, $p < .001$) and lower psychological distress (OR = .94, $p < .001$). No statistically significant differences were found with regard to loneliness. Compared to non-traditional, non-veteran students, veterans *without* exposure to geographic areas of hazardous duty had statistically significant odds of reporting higher suicidality (OR = 1.08, $p < .001$) and lower psychological distress (OR = .91, $p < .001$). No statistically significant differences were found with regard to loneliness. When both veteran groups were compared side-by-side, those without service experience in a hazardous duty area had lower odds of reporting distress, yet higher odds of experiencing suicidality and loneliness.

Table 4.3
Multinomial Logistic Regression, Risk-Only Model

Factors	Veteran Serving in Hazardous Duty Area		Veteran and No Service in Hazardous Duty Area	
	OR	95% CI	OR	95% CI
Kessler 6 (K6) Non-Specific Psychological Distress	.94***	.92 - .95	.91***	.89 - .92
UCLA Loneliness Scale	1.0	.95 - 1.04	1.05	1.0 - 1.09
Suicide Behavior Questionnaire-Revised (SBQ-R)	1.07***	1.04 - 1.10	1.08***	1.05 - 1.11

Note. Reference Category = Non-Veteran, Non-Traditional Students

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

Next, multinomial logistic regression inclusive of both risk and protective factors was conducted. Results for the risk and protective factors regression model are presented in Table 4.4. The overall model found that veteran status, with and without exposure to geographic areas of hazardous duty, were significantly predicted by the independent variables ($\chi^2(2) = 186.37, p < .001$). Compared to non-traditional, non-veteran students, veterans with exposure to geographic areas of hazardous duty had statistically significant odds of reporting higher resilience (OR = 1.33, $p < .001$), higher suicidality (OR = 1.06, $p < .001$), lower psychological distress (OR = .93, $p < .001$), and lower flourishing (OR = .96, $p < .001$). No statistically significant differences were found with regard to loneliness. When accounting for protective factors, both veteran groups had lower odds of reporting suicidality when compared to the risk only model. Odds were similarly decreased for reports of both distress and loneliness, suggesting a notable change resulting from the consideration of protective factors across all measures of risk. While discussed further in the discussion section, it is worth highlighting this apparent contradiction, in which high resilience and low distress co-occur with higher reported suicidality and lower flourishing when compared to non-veteran peers.

Table 4.4*Multinomial Logistic Regression of Risk and Protective Factors*

Factors	Veteran Serving in Hazardous Duty Area		Veteran and No Service in Hazardous Duty Area	
	OR	95% CI	OR	95% CI
Kessler 6 (K6) Non-Specific Psychological Distress	.93***	.91 - .95	.90***	.89 - .92
UCLA Loneliness Scale	.98	1.03 - 1.09	1.03	.98 - 1.08
Suicide Behavior Questionnaire-Revised (SBQ-R)	1.06***	1.03 - 1.09	1.07***	1.04 - 1.10
Diener-Flourishing Score	.96***	.95 - .96	.97***	.96 - .98
Connor-Davidson Resilience Scale 2 (CD-RISC2)	1.33***	1.26 - 1.40	1.14***	1.08 - 1.21

Note. Reference Category = Non-Veteran, Non-Traditional Students

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

Similarly, compared to non-traditional, non-veteran students, veterans *without* exposure to geographic areas of hazardous duty had statistically significant odds of reporting higher resilience (OR = 1.14, $p < .001$), higher suicidality (OR = 1.07, $p < .001$), lower psychological distress (OR = .90, $p < .001$), and lower flourishing (OR = .97, $p < .001$). No statistically significant differences were found with regard to loneliness. Although the results for veteran students with and without exposure to hazardous duty are similar when compared to non-veteran peers, there are also interesting differences (as seen in Table 4.3) which occur between the two veteran groups. Compared to veterans without service in a hazardous duty area, veterans with hazardous duty reported increased odds of experiencing higher distress and resilience, but lower flourishing and suicidality. This further reinforces the notion that even within veteran student groups, important distinctions may exist based on experiences during military service.

Discussion

The present study sought to examine whether differences exist among non-traditional students, veteran students with hazardous duty experience, and veteran students without hazardous duty experience with regard to suicide, resilience, loneliness, flourishing, and psychological distress. Additionally, this study sought to understand how these measures of risk and protection predicted group membership. The data bears out the complexity of risk and protective factors as they relate to suicidality, in which veteran students with and without exposure to geographic areas of hazardous duty had higher odds of reporting increased suicidality, yet lower distress, and higher levels of resilience.

Examining ANOVA results, veteran students of both categories on average reported generally lower psychological distress and loneliness, as well as increased resilience. Such findings are not surprising; resilience is a well-documented buffer against psychological distress and is negatively correlated with loneliness (Jakobsen et al., 2020; Li & Hasson, 2020). This suggests that veteran status may experience a degree of resilience beyond that experienced by non-veteran peers. However, no significant differences in means were found across the three groups for flourishing. The role of resilience as a bulwark against negative outcomes, yet not an amplifier of positive indicators of well-being suggests the need for a closer consideration of the data. No significant differences were found between groups on measures of suicidality, when testing for differences in mean scores. Although this may initially suggest veterans are not at an increased risk for suicidality in this sample, application of multinomial logistic regression reveals a deeper and more nuanced story.

Perhaps the most notable result when interpreting the regression models was that higher reports of resilience and lower psychological distress were predictive of membership within both

veteran student categories. Yet, increased suicidality and lower flourishing were also predictive of the same veteran student groups. To some extent, these results are consistent with this study's hypotheses. Fostering psychological resilience has been a long-standing goal within the U.S. military (Meredith et al., 2011), with several iterations of training programs being implemented with mixed degrees of success (Forbes & Fikretoglu, 2018). Thus, understanding of resiliency in the military remains incomplete. Nonetheless, resilience's role in mitigating distress is additionally well documented (Fogle et al., 2020). However, this does not translate to a concurrent increase in flourishing, nor does it reflect lower experiences of suicidality. In other words, a veteran student's increased level of resilience may mitigate (or mask) the generalized experience of distress but may not confer a sense of meaning and flourishing. Neither might it negate a veteran student's comparatively higher risk for experiencing suicidality. These results are magnified when comparing veteran groups. Veteran students who served in a geographic area of hazardous duty felt more resilient than their veteran peers who did not serve in a hazardous duty area. Yet, they experience more distress. Deployed military members (to name only a few of the hazards) must navigate isolation from family, exposure to environmental health risk, and physiological and psychological challenges (Nindl et al., 2013; Paley et al., 2013). While the extent of hazardous duty's impact on service members needs ongoing study, clear distinctions emerge on the risk and protective factors discussed here.

This study demonstrates the importance of continuing to deepen our understanding of protective factors and strengths in the mitigation of risk. When comparing the risks model to the risk *and* protective factors model, the protective effect of flourishing and resilience has a measurable impact on a non-traditional student's odds of experiencing distress, loneliness, and suicidal behavior. The current study reinforces the highly complex nature of risk and protection

when identifying who may be most vulnerable to experiencing suicidal ideation or behaviors.

Applying a lens that considers the ecological context of one's experience is essential.

Incorporating CSTS as an interpretive framework supports an understanding of the internalized cultural characteristics of military service. Yet, detached from the structural supports and network of Active-Duty military service, risk factors may become exacerbated. This study advances existing research on non-traditional and veteran students by adding to a limited body of research concerning suicidality and the nuanced relationship between risk and protective factors.

Limitations

There are several limitations worth reporting. Notably, the measures reported within this study are cross-sectional. The data are self-reported and consequently vulnerable to self-report and social desirability bias. Thus, the minimization or inflation of self-perceived risk and protective factors may be present. Given that the study design was not experimental, causation cannot be inferred. The selection of non-traditional student status was limited to age based upon common definition defined by the U.S. Department of Education (IES-NCES, 2022). There are other characteristics, such as enrollment patterns or financial and family status which were not considered. These various distinctions could offer additional insight into why non-traditional students may or may not experience distress or specific protective factors. This study used five measures of risk and protection, yet there are other social-ecological characteristics that may impact a student's experience of suicidality, risk, and protection. Thus, the results reported here should be considered within the greater context of a non-traditional or veteran students' life.

Alpha statistics were not available for this data set, limiting a precise understanding of internal consistency and reliability. However, previous iterations of ACHA-NCHA surveys have

demonstrated robust reliability (ACHA, 2013), and were thus determined to be acceptable for the purpose of this study.

Conclusion

The present study has several implications for research and practice. Veteran students share much in common with non-traditional student peers. However, they differ in many notable areas discussed here. Given that a veteran student may report higher resilience and less distress, student support organizations, clinicians, and university services may need to look beyond initial self-reports of functioning. From a prevention perspective, deeper questioning, relationship building, and trust will be essential to identify veteran students who may be the most at risk. As research on the veteran student experience continues to grow, this study reinforces the ongoing need for deep, contextualized research examining the relationship between resilience, suicidality, risk factors, and protective factors.

Veterans are among a growing number of non-traditional students attending universities and colleges across the United States. Despite this increased presence, research has been historically limited on positive indicators of well-being and how veteran risk and suicidality may be distinct from non-traditional students who are not veterans. This study explored characteristics that may differentiate veteran students from their non-veteran, non-traditional student peers and highlights the ongoing need for nuanced application of theory and an explicit recognition of the highly contextual nature of individual's social ecologies and the subsequent impact this has on suicidality. Students with veteran status may report a degree of resilience which protects them from experiencing psychological distress when compared to non-traditional student peers. However, the benefits of resilience do not translate to perceptions of positive well-being, nor do they negate a veteran student's increased odds for experiencing suicidality.

REFERENCES

- Abrutyn, S., & Mueller, A. S. (2018). Toward a cultural-structural theory of suicide: Examining excessive regulation and its discontents. *Sociological Theory*, *36*(1), 48-66. DOI: 10.1177/0735275118759150
- American College Health Association. American College Health Association-National College Health Assessment, Fall 2020 & Spring 2021 [data file]. Silver Spring, MD: American College Health Association [producer and distributor]; (2022-02-28).
- American College Health Association. American College Health Association-National College Health Assessment, Spring 2021 Reference Group Executive Summary. Silver Spring, MD: American College Health Association [producer and distributor].
https://www.acha.org/documents/ncha/NCHA-III_SPRING-2021_REFERENCE_GROUP_EXECUTIVE_SUMMARY_updated.pdf
- American College Health Association. American College Health Association-National College Health Assessment II: Reliability and Validity Analyses 2011. Hanover, MD: American College Health Association; 2013.
- Barry, A. E., Whiteman, S. D., & MacDermid Wadsworth, S. M. (2012). Implications of Posttraumatic Stress Among Military-Affiliated and Civilian Students. *Journal of American College Health*, *60*(8), 562–573.
<https://doi.org/10.1080/07448481.2012.721427>
- Barry, A. E., Whiteman, S. D., & MacDermid Wadsworth, S. (2014). Student Service Members/Veterans in Higher Education: A Systematic Review. *Journal of Student Affairs Research and Practice*, *51*(1), 30–42. <https://doi.org/10.1515/jsarp-2014-0003>
- Bayliss, L. T., Lamont-Mills, A., Plessis, C. du, & Morgan, T. (2021). Suicide capacity within the ideation-to-action framework: A scoping review protocol. *BMJ Open*, *11*(2), e043649. <https://doi.org/10.1136/bmjopen-2020-043649>
- BlackDeer, A., Silver Wolf, D. A., Maguin, E., & Beeler-Stinn, S. (2021). Depression and anxiety among college students: Understanding the impact on grade average and differences in gender and ethnicity. *Journal of American College Health*, 1–12.
<https://doi.org/10.1080/07448481.2021.1920954>
- Blanca, M. J., Alarcón, R., Arnau, J., Bono, R., & Bendayan, R. (2018). Effect of variance ratio on ANOVA robustness: Might 1.5 be the limit? *Behavior Research Methods*, *50*(3), 937–962. <https://doi.org/10.3758/s13428-017-0918-2>
- Blosnich, J. R., Kopacz, M. S., McCarten, J., & Bossarte, R. M. (2015). *Mental Health and Self-*

- directed Violence Among Student Service Members/Veterans in Postsecondary Edu.* 63, 10. Cate, C. & Davis, T. (2016). Student Veteran demographics: Select results from student Veterans of America spotlight 2016. *SVA Spotlight*, 2(1), 1-7.
- Bylotas, J. (2023). A trans-conceptual model for suicide prevention in social work practice: military and veteran populations as an example. *Social work in mental health*, 1-17. DOI: 10.1080/15332985.2023.2244624
- Campbell, S. B., Gray, K. E., Hoerster, K. D., Fortney, J. C., & Simpson, T. L. (2021). Differences in functional and structural social support among female and male veterans and civilians. *Social Psychiatry and Psychiatric Epidemiology*, 56(3), 375–386. <https://doi.org/10.1007/s00127-020-01862-4>
- Cate, C., & Davis, T. (2016). Student veteran demographics: Select results from Student Veterans of America spotlight 2016. *SVA Spotlight*, 2(1), 1-7.
- Chung, E., Turnbull, D., & Chur-Hansen, A. (2014). Who are non-traditional students? A systematic review of published definitions in research on mental health of tertiary students. *Educational Research and Reviews*, 9(22), 1224-1238. DOI: 10.5897/ERR2014.1944
- Cleveland, S. D., Branscum, A. J., Bovbjerg, V. E., & Thorburn, S. (2015). Mental Health Symptoms Among Student Service Members/Veterans and Civilian College Students. *Journal of American College Health*, 63(7), 459–472. <https://doi.org/10.1080/07448481.2014.983925>
- Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 18(2), 76–82. <https://doi.org/10.1002/da.10113>
- Cooke, P. J., Melchert, T. P., & Connor, K. (2016). Measuring Well-Being: A Review of Instruments. *The Counseling Psychologist*, 44(5), 730–757. <https://doi.org/10.1177/0011000016633507>
- Derefinko, K. J., Hallsell, T. A., Isaacs, M. B., Colvin, L. W., Salgado Garcia, F. I., & Bursac, Z. (2019). Perceived Needs of Veterans Transitioning from the Military to Civilian Life. *The Journal of Behavioral Health Services & Research*, 46(3), 384–398. <https://doi.org/10.1007/s11414-018-9633-8>
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New Well-being Measures: Short Scales to Assess Flourishing and Positive and Negative Feelings. *Social Indicators Research*, 97(2), 143–156. <https://doi.org/10.1007/s11205-009-9493-y>
- Evitts, R. (2022). The Barriers of Non-Traditional Students in Higher Education. *Integrated Studies*. 387. Retrieved from <https://digitalcommons.murraystate.edu/bis437/387>

- Fogle, B. M., Tsai, J., Mota, N., Harpaz-Rotem, I., Krystal, J. H., Southwick, S. M., & Pietrzak, R. H. (2020). The National Health and Resilience in Veterans Study: A Narrative Review and Future Directions. *Frontiers in Psychiatry, 11*.
<https://www.frontiersin.org/articles/10.3389/fpsy.2020.538218>
- Forbes, S., & Fikretoglu, D. (2018). Building resilience: The conceptual basis and research evidence for resilience training programs. *Review of General Psychology, 22*(4), 452-468.
<http://dx.doi.org/10.1037/gpr0000152>
- Fortney, J. C., Curran, G. M., Hunt, J. B., Cheney, A. M., Lu, L., Valenstein, M., & Eisenberg, D. (2016). Prevalence of probable mental disorders and help-seeking behaviors among veteran and non-veteran community college students. *General Hospital Psychiatry, 38*, 99–104. <https://doi.org/10.1016/j.genhosppsy.2015.09.007>
- Ghosh, A., Santana, M. C., & Opelt, B. (2020). Veterans’ Reintegration into Higher Education: A Scoping Review and Recommendations. *Journal of Student Affairs Research and Practice, 57*(4), 386–402. <https://doi.org/10.1080/19496591.2019.1662796>
- Hinkson, K. D., Drake-Brooks, M. M., Christensen, K. L., Chatterley, M. D., Robinson, A. K., Crowell, S. E., Williams, P. G., & Bryan, C. J. (2021). An examination of the mental health and academic performance of student veterans. *Journal of American College Health, 1*–8. <https://doi.org/10.1080/07448481.2020.1858837>
- Hjelmeland, H., & Loa Knizek, B. (2020). The emperor’s new clothes? A critical look at the interpersonal theory of suicide. *Death Studies, 44*(3), 168–178.
<https://doi.org/10.1080/07481187.2018.1527796>
- Hoerster, K. D., Lehavot, K., Simpson, T., McFall, M., Reiber, G., & Nelson, K. M. (2012). Health and Health Behavior Differences: U.S. Military, Veteran, and Civilian Men. *American Journal of Preventive Medicine, 43*(5), 483–489.
<https://doi.org/10.1016/j.amepre.2012.07.029>
- Hoglund, M. W., & Schwartz, R. M. (2014). Mental Health in Deployed and Nondeployed Veteran Men and Women in Comparison With Their Civilian Counterparts. *Military Medicine, 179*(1), 19–25. <https://doi.org/10.7205/MILMED-D-13-00235>
- Iloh, C. (2018). Not non-traditional, the new normal: Adult learners and the role of student affairs in supporting older college students. *Journal of Student Affairs, 27*(2017–2018), 25-30.
- Jakobsen, I. S., Madsen, L. M. R., Mau, M., Hjemdal, O., & Friborg, O. (2020). The relationship between resilience and loneliness elucidated by a Danish version of the resilience scale for adults. *BMC Psychology, 8*(1), 131. <https://doi.org/10.1186/s40359-020-00493-3>
- Kang, Y., Guo, W., Xu, H., Chen, Y., Li, X., Tan, Z., Li, N., Gesang, Z., Wang, Y., Liu, C., Luo,

- Y., Feng, J., Xu, Q., Lee, S., & Li, T. (2015). The 6-item Kessler psychological distress scale to survey serious mental illness among Chinese undergraduates: Psychometric properties and prevalence estimate. *Comprehensive Psychiatry*, *63*, 105–112. <https://doi.org/10.1016/j.comppsy.2015.08.011>
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S.-L. T., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, *32*(6), 959–976. <https://doi.org/10.1017/S0033291702006074>
- Lee, S., & Lee, D. K. (2018). What is the proper way to apply the multiple comparison test? *Korean Journal of Anesthesiology*, *71*(5), 353–360. <https://doi.org/10.4097/kja.d.18.00242>
- Li, Z.S., & Hasson, F. (2020). Resilience, stress, and psychological well-being in nursing students: A systematic review. *Nurse Education Today*, *90*, 104440. <https://doi.org/10.1016/j.nedt.2020.104440>
- Meredith, L. S., Sherbourne, C. D., Gailliot, S. J., Hansell, L., Ritschard, H. V., Parker, A. M., & Wrenn, G. (2011). Promoting Psychological Resilience in the U.S. Military. *Rand Health Quarterly*, *1*(2), 2. PMID: 28083176
- Midway, S., Robertson, M., Flinn, S., & Kaller, M. (2020). Comparing multiple comparisons: Practical guidance for choosing the best multiple comparisons test. *PeerJ*, *8*, e10387. <https://doi.org/10.7717/peerj.10387>
- Moeck, E., Takarangi, M., & Wadham, B. (2022). Assessing student veterans' academic outcomes and well-being: A scoping review. *Journal of Veteran Studies*, *8*(3), 104-119. DOI: <https://doi.org/10.21061/jvs.v8i3.327>
- Molina, D. (2015). By the numbers: Undergraduate student veterans. Washington, DC: American Council on Education. Retrieved from <https://www.acenet.edu/Documents/Higher-ed-spotlight-undergraduate-student-veterans.pdf>
- Morrill, S., & Somers, P. A. (2020). From benefits to success: Veterans' educational outcomes in the post-9/11 era. *Community College Journal of Research and Practice*, *44*(9), 629-643. DOI: 10.1080/10668926.2019.1629127
- Institute of Educational Services - National Center for Education Statistics. (2022, June 9). *Nontraditional undergraduates definitions and data*. Retrieved from <https://nces.ed.gov/pubs/web/97578e.asp>
- Nindl, B. C., Castellani, J. W., Warr, B. J., Sharp, M. A., Henning, P. C., Spiering, B. A., & Scofield, D. E. (2013). Physiological Employment Standards III: Physiological challenges and consequences encountered during international military deployments.

- European Journal of Applied Physiology*, 113(11), 2655–2672.
<https://doi.org/10.1007/s00421-013-2591-1>
- O'brien, R. M. (2007). A Caution Regarding Rules of Thumb for Variance Inflation Factors. *Quality & Quantity*, 41(5), 673–690. <https://doi.org/10.1007/s11135-006-9018-6>
- 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>
- Paley, B., Lester, P., & Mogil, C. (2013). Family systems and ecological perspectives on the impact of deployment on military families. *Clinical child and family psychology review*, 16, 245-265. DOI 10.1007/s10567-013-0138-y
- Petrucci, C. J. (2009). A Primer for Social Worker Researchers on How to Conduct a Multinomial Logistic Regression. *Journal of Social Service Research*, 35(2), 193–205.
<https://doi.org/10.1080/01488370802678983>
- Ramchand, R. (2022). Suicide Among Veterans. *Rand Health Quarterly*, 9(3), 21.
PMID: 35837519; PMID: PMC9242579.
- Reger, M. A., Tucker, R. P., Carter, S. P., & Ammerman, B. A. (2018). Military Deployments and Suicide: A Critical Examination. *Perspectives on Psychological Science*, 13(6), 688–699. <https://doi.org/10.1177/1745691618785366>
- Rudd, M. D., Goulding, J., & Bryan, C. J. (2011). Student veterans: A national survey exploring psychological symptoms and suicide risk. *Professional Psychology: Research and Practice*, 42(5), 354–360. <https://doi.org/10.1037/a0025164>
- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of personality assessment*, 66(1), 20-40. DOI: 10.1207/s15327752jpa6601_2
- Sambrano, R. (2021). *Veterans' Perceptions of Mattering and Marginalization on Community College Campuses* [Ed.D., University of California, Los Angeles].
<https://www.proquest.com/docview/2616901251/abstract/2285322BE8A546CFPQ/1>
- Shi, R., & Conrad, S. A. (2009). Correlation and regression analysis. *Annals of Allergy, Asthma & Immunology*, 103(4), S35-S41. DOI: 10.1016/S1081-1206(10)60820-4
- Umucu, E., Grenawalt, T. A., Reyes, A., Tansey, T., Brooks, J., Lee, B., Gleason, C., & Chan, F. (2019). Flourishing in Student Veterans With and Without Service-Connected Disability: Psychometric Validation of the Flourishing Scale and Exploration of Its Relationships

With Personality and Disability. *Rehabilitation Counseling Bulletin*, 63(1), 3–12.
<https://doi.org/10.1177/0034355218808061>

Valenstein, M., Clive, R., Ganoczy, D., Garlick, J., Walters, H. M., West, B. T., ... & Pfeiffer, P. N. (2020). A nationally representative sample of veteran and matched non-veteran college students: Mental health symptoms, suicidal ideation, and mental health treatment. *Journal of American college health*, 1-10. DOI: 10.1080/07448481.2020.1753751

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner Jr, T. E. (2010). The interpersonal theory of suicide. *Psychological review*, 117(2), 575. DOI: 10.1037/a0018697

Zhou, J., Saha, K., Lopez Carron, I. M., Yoo, D. W., Deeter, C. R., De Choudhury, M., & Arriaga, R. I. (2022). Veteran Critical Theory as a Lens to Understand Veterans' Needs and Support on Social Media. *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW1), 1-28.

CHAPTER 5

CONCLUSION

Meaningful and substantial efforts have been made to address the phenomenon of disproportionate veteran suicide deaths (Ramchand, 2022) and rising active-duty military suicide (Department of Defense, 2020). Nonetheless, despite these efforts, the problem persists: despite considerable time, research, and financial investment by the Department of Defense (DoD), suicide rates among veteran and military populations remain historically elevated (Ramchand et al., 2014). This dissertation has explored the risk and protective factors that potentially contribute to this challenge. Accordingly, how risk and protection is contextualized within the body of research literature, what risk and protective factors are attended to, the epistemological frameworks from which they are viewed, and the methodological practices applied, are central characteristics that are considered.

In seeking to identify contributors to the intransigence of this public health crisis, this dissertation has outlined several potential causes and attendant gaps in the existing research literature. Among them, a narrow theoretical framework has historically been applied to the problem (Bylotas, 2023); one which decontextualizes the experience of the individual from their ecological surroundings (Hjelmeland & Loa Knizek, 2020). Quantitative methods outnumber qualitative approaches, and consideration of risks frequently take precedence over individual strengths and protective factors.

Taken together, the three studies presented in chapters two through four highlight and reify the highly contextualized nature of risk and protection. They reinforce the critical

importance of considering individual ecology and psychosocial characteristics on equal footing with intrapersonal psychology and biology. Consequently, there is an opportunity for prevention to which the social work profession is uniquely suited. Necessarily, this results in several implications for the development of theory, policy, practice, and research.

Implications for Theory

The application of a hegemonic theoretical framework (the interpersonal psychological theory of suicide) has led to a reductionistic and narrow view of suicidality (Hjelmeland & Loa Knizek, 2020). Study 1, “A trans-conceptual model for suicide prevention in social work practice: Military and veteran populations as an example” forwards a conceptual framework that reflects the core principles of social work practice. Notably, this includes a highly contextualized interpretation of an individual’s experience, risk factors, and protective factors. This is a perspective currently underrepresented within suicidological literature (Hjelmeland, 2016). Alternative theoretical approaches provide a foundation by which more nuanced research, policy, and practice may be undertaken. They set the stage for diverse ideas and approaches that may run counter to dominant theoretical narratives. Study 1 contributes to this landscape of ideas by advancing a distinct framework that encourages a closer examination of the individualized nature of suicidality and the means by which cultures and structures may contribute to despair.

In the context of this dissertation, studies 2 and 3 have endeavored to apply the trans-conceptual model and demonstrate the ways in which both quantitative and qualitative research may incorporate both traditional theoretical approaches as well as more ecologically focused perspectives. Risk and protective factors are highly individualized. For example, despite the close association between depression and suicide deaths, few individuals who experience depressive symptoms ever go on to engage in suicidal behavior (Orsolini et al., 2020).

Alternative frameworks that both challenge the limitations of existing theory and include their useful characteristics are critically needed within contemporary suicidology. At a foundational level of understanding why suicidality occurs, incorporating ambiguity, individuality, and complexity is essential. Anything less is destined to perpetuate the same stagnation that has persisted within the field. This dissertation has attempted to expand how risk and protective factors are conveyed within the existing body of research. Study 2 underscores the dual nature of prevention in online communities and the ways in which risk and protection are interwoven through discussion. Study 3 highlights the complexity of resilience and how low distress may not indicate the absence of suicide risk. These results advance theory by reinforcing the need for individuality and context at the epistemological level. Anything less is missing critical components of the suicide phenomenon.

Implications for Policy

Suicide prevention, particularly for military members and veterans, is driven by policy (Kamareck & Mendez, 2021). However, policy mandates can fall short of prevention goals given a disproportionate focus on “mental illness” and a reliance on screening and assessment of risk factors that depend on self-disclosure (Bryan, 2021). The contextual nature of suicidality can frustrate broad-based attempts at prevention. Thus, policies that balance knowledge of well-established risk factors, like access to firearms (Theis et al., 2021), with sufficient room for flexible decision making by interventionists is necessary. This is a difficult needle to thread. Nonetheless, policy that acknowledges fundamental challenges associated with the complexity of suicide is necessary to advance suicidological research. Such efforts are particularly relevant to the social work profession, which centers the person-in-environment (NASW, 2021). For example, policy that guides how research funding is distributed might prioritize projects that

attempt to address the gaps noted here. The same policy may encourage research that moves beyond a risk focused paradigm and centers the role of individual strengths and abilities.

The results presented within this dissertation offer multiple entry points for targeted policy. Study 2 highlighted the critical role played by online communities in providing prevention resources to veterans and military members experiencing suicidal ideation. DoD and VA policy that facilitates intervention and support for digital environments could meaningfully target risk and protective factors that may otherwise go unnoticed. Study 3 revealed differences in risk factors that exist between non-traditional and veteran students as well as the limitations of resilience as a protective factor. These differences shed light on programmatic nuances that may better support both veteran and non-traditional student populations at the university level. As an example, recharacterizing resilience in a university context as distinct from a mission-based, military context may support help seeking among veteran students. Such policies may also encourage centering individual relationship building with veterans to overcome a hesitation to acknowledge distress. More broadly, this dissertation contributes to future policy decisions by emphasizing the contextuality of risk and protection and cautioning against overly prescriptive solutions to suicide prevention. This is accomplished at the conceptual level through the trans-conceptual framework presented in Study 1. Studies 2 and 3 present more specific examples in online and university contexts in which suicide risk and protective factors may be considered.

Implications for Practice

Social workers frequently serve as front line interventionists for suicidality, with a recent survey indicating that over 92% of clinical social workers had encountered at least one suicidal individual over the past twelve months (Levine & Sher, 2019). Social workers also comprise the largest segment of clinical mental health providers within the workforce (Heisler, 2018). Yet, the

profession is substantially underrepresented within the generation of suicidological research (Maple et al., 2017). Consequently, social workers are guided to implement interventions that prioritize the values, perspectives, and goals of peer professional groups. By itself, this does not necessarily represent a problem. We are after all, working toward the shared objective of reducing suicide death. However, given the gaps in the literature (inadequate theoretical diversity, narrow interpretations of risk and protection, and a limited recognition of an individual's social ecology), contributions from the social work profession could help to move the field of suicidology forward in achieving its goals.

This dissertation holds implications for clinical practice from several angles. Study 1 introduces a conceptual model specifically targeted for social work practitioners. The intent of this trans-conceptual model is to provide a conceptual framework that grounds practice and interventions in the highly individualized nature of suicidality. Thus, encouraging practice that implements prevention in a commensurately individualized manner. For the clinician, this means avoiding decision making based on rote assumptions about risk and protection. It precludes rigid application of prevention frameworks, and reprioritizes individual strengths, resources, and preferences.

Study 2 sheds light on the digital environments in which veterans and military personnel communicate about suicidality. Among the results, was the presence of a diversity of information that could either mitigate or amplify stigma and perceived barriers to help-seeking. Commenters largely encouraged help seeking and prioritized individual mental health. However, this was not exclusively the case, and stigmatized perspectives cautioning against the use of formal resources were also present. From a practice perspective, Study 2 uncovers gaps in which formalized prevention resources are unavailable. In this instance, within an online community of veterans

and military members. Finally, Study 3 demonstrates the unique presentation of resilience, risk factors, and protective factors among veteran students as compared to their non-traditional student peers. Although veteran students were more likely to report increased resilience and lower distress, these individuals were also more likely to experience higher levels of suicidality and less flourishing. In a practice context, these results highlight the importance for university services to dig beneath the surface when a veteran reports that they are “doing fine”.

Relationship building and trust will be important factors in engaging in suicide prevention practice with veterans on campus. Taken together, these studies provide social work perspectives across a variety of practice settings in which risk and protective factors may be used to support suicide prevention.

Implications for Research

The preceding research studies have each endeavored to address gaps within the existing literature. Yet, through the presented findings new questions and opportunities for exploration emerge. New information yields greater context in which more specific questions may be asked. Similarly, the application of conceptual frameworks that reflect social work perspectives present opportunities to interpret findings from a new lens. Thus, iterating upon the findings presented here, further research questions are presented across multiple levels of intervention. These questions demonstrate both the utility of this dissertation’s findings as well as future opportunities to continue deepening our collective understanding of suicidality among military and veteran populations.

Individual Level Research

Study 2 revealed several findings regarding the risk and protective factors that emerge in anonymous online discussions involving military members and veterans. Specifically, this

included the overall protective structure that emerges within the community to support members experiencing suicidality. Additionally, the dual nature of risk and protection emerged. That is, the open community setting included a broad range of experiences and opinions, some of which may discourage help seeking rather than encourage it. The digital environment is a space of increasing importance in the lives of military service members (Salzmann-Erikson & Hiçdurmaz, 2017). Finding ways to support military members in navigating formal and informal resources online is an area for potential intervention. Study 2 proposes the use of ‘digitally embedded’ mental health personnel. This intervention could model existing embedded mental health programs put in place by the DoD (Pierce et al., 2020). In piloting a digitally embedded mental health program, the following research question could be instructive: *What are the experiences of military members who interact with trained subject matter experts, when using anonymous social media forums to seek advice regarding suicidal ideation?* The qualitative nature of this question could support the collection of rich data that further expands on gaps within the literature regarding risk, protection, and suicidality among military members and veterans in a digital environment.

The results presented in Study 3 also yield multiple opportunities for ongoing research and exploration into the experiences of veteran students in a university setting. This study demonstrated notable differences between veteran students and non-traditional student peers. Veteran students were more likely to report increased levels of resilience and lower levels of distress, while also being more likely to experience suicidality and less likely to report flourishing. One potential intervention to address the disparate results in resilience, distress, flourishing, and suicidality, would be to facilitate prevention resources that support a transition from resilience in a combat setting, to resilience in a university setting. To determine the

effectiveness of such an intervention, the following research question may be asked: *Does university provided psychoeducation and training that focuses on the transition between military service to a university setting change veteran student reports of distress and flourishing?*

Both questions presented here are a small representation of the many implications for ongoing research on suicide risk and protective factors among military personnel and veterans at the individual level. Nonetheless they reflect potential research that directly builds upon the findings presented here. Beyond the individual level, these findings present opportunities for deeper understanding at the organizational level as well.

Organizational Level Research

Study 2 holds implications for ongoing research at the organizational level, specifically for moderated communities that support military and veteran groups. These online communities are frequently moderated by volunteer members who establish behavioral norms and ensure that conversations remain consistent to established community guidelines (Saha et al., 2020). Volunteer moderators and peers respond to individuals in distress through online chats and telephone calls (Johnson, 2022). Despite the role of social media as a potentially preventive resource, there has been limited engagement through formalized efforts by military organizations and policy makers. Academic research has been similarly limited and has yet to examine the impact and role of social media as a resource in suicide prevention efforts with this population group. Understanding the processes by which these digital communities develop policies and practices regarding suicidality, the lessons learned, and challenges faced may provide a useful follow-up to the findings identified in Study 2. Understanding these factors may contribute to the existing body of knowledge regarding veteran prevention within digital spaces and offer insight into tailoring support from formalized prevention services.

By understanding what informal prevention efforts have organically developed within digital social networks and meso-level organizations, future prevention strategies may be better targeted and improved to meet the needs of an increasingly online social environment. Thus, the purpose of this study would be to explore how digital communities targeting veterans develop and provide support and resources to those struggling with suicidality to understand veteran-specific suicide prevention strategies. Accordingly, it asks the research question: *What practices for supporting individuals experiencing suicidality have emerged through the process of online content moderation?*

Institutional Level Research

The research presented within this dissertation raises several subsequent questions regarding how risk and protection intersect to affect the development of suicidality in military members. It has endeavored to shine a light on the inherent variability that exists within risk and protection. It also cautions against overly simplistic interpretations of risk factors and protective factors. Yet, advocating for contextuality and complexity in the assessment and examination of suicide is in many ways at odds with macro level, institutional systems that struggle to operate with ambiguity (Lacasse & Gambrill, 2015). Nonetheless a biomedical interpretation of suicidality diminishes the ecological, person in environment characteristics of suicidality (García-Haro et al., 2020). The constriction of existing research is perpetuated at the institutional level, in which policy, law, and funding perpetuate the same interpretations of risk and protection. Thus, additional research at the institutional level is needed to examine where novel approaches are improving the lives of veterans experiencing suicidality. In other words, examining the effects of systemic processes, such as the distribution of research funding, is necessary. These questions might address how governmental funding of suicide prevention

perpetuates existing gaps in research. As a result, qualitative methods may be expanded, or protective factors reprioritized. Another example might include exploring what research is preferentially selected within scholarly journals and reports, which may reveal selection biases that minimize certain perspectives or approaches. Further still, macro level research must consider the impacts of broad social issues like poverty, housing, and access to mental health care in relationship to veteran suicidality.

Conclusion

This dissertation has sought to contribute to understanding the crisis of veteran and military suicide deaths by addressing an overly narrow and de-contextualized body of knowledge regarding risk and protection. This has been accomplished by identifying and exploring several gaps within our current understanding of the subject matter. Conceptual, quantitative, and qualitative approaches have been applied to support a future in which the social ecology that we live in is considered on equal footing to the intrapersonal psychological characteristics that may contribute to the experience of suicidality.

Veterans and Active-Duty service members share several common experiences that contribute to a distinct culture comprised of unique risk and protective factors (Atuel & Castro, 2018; Hom et al., 2017). These factors are further complicated by the conjunction of individual backgrounds with which one enters military service. For this reason, military service-connected individuals remain a population of critical interest in the undertaking of suicide prevention. To this end, the three studies presented here address the problem from multiple approaches.

Study 1 argues the need for increased social work perspectives and approaches across the spectrum of suicidology. This study presented a trans-conceptual model of suicidality for social work practice. This model for understanding suicide highlights the complexity of military

populations and the utility of applying an epistemologically diverse perspective. Nonetheless at the conclusion of this study, one is left with the question ‘what next?’ After acknowledging the need for greater contextuality, theoretical diversification, and a social work lens, how might this conceptual model support future research? Studies two and three aim to shed light on this question through both quantitative and qualitative methods.

Study 2 uses thematic analysis as the driving methodological approach to derive meaning from an online community of military members and veteran’s communication about suicidality, suicide risk factors, and suicide protective factors. Emerging from this research study was a well of empathetic connection with peers and deep thinking about the nature of suicidality and its etiology. This was also contrasted with statements and beliefs that could perpetuate stigma or discourage individuals from seeking help from formalized prevention resources. The diversity of responses reinforces the complex nature of risk and protection at the intersection of a digital world. As military members and veterans increasingly engage with informal tools online, the presence of formalized prevention resources will become increasingly important.

Finally, Study 3 applied ANOVA and multinomial logistic regression to examine the differences across non-traditional students, veteran students with hazardous duty experience and veteran students without hazardous duty experience in risk, protection, and suicidality. Findings indicated that veterans may experience higher resilience and less psychological distress, but lower levels of flourishing and higher suicidality when compared to their non-traditional student peers. These results indicate that, although protective factors demonstrate a mitigating effect on risk, low distress does not necessarily indicate the inverse occurrence of flourishing. In other words, feeling as though one is surviving does not also mean that they are thriving.

Together, these studies represent an attempt to demonstrate a contextualized understanding of suicidality across the research spectrum, from the conceptual to quantitative and qualitative approaches. This dissertation situates the social work profession as an underrepresented yet essential piece within suicidological scholarship. Its fundamental values, commitment to just outcomes, and person in environment frameworks have the potential to push forward a stagnating and intractable public health crisis that impacts all of us. Despite the inevitable challenges moving forward, there is much reason for optimism in addressing suicide deaths among veterans and military personnel. In the pursuit of better understanding this phenomenon, we support a prevention framework that builds communities of belonging, dispels burdensomeness, and reflects both cultural and structural systems that reflect the diversity of the people that comprise them. I, for one, remain hopeful.

REFERENCES

- Anderson, B. (2015). What kind of thing is resilience?. *Politics*, 35(1), 60-66.
<https://doi.org/10.1111/1467-9256.12079>
- Atuel, H. R., & Castro, C. A. (2018). Military Cultural Competence. *Clinical Social Work Journal*, 46(2), 74–82. <https://doi.org/10.1007/s10615-018-0651-z>
- Bryan, C. J. (2021). *Rethinking suicide: Why prevention fails, and how we can do better*. Oxford University Press.
- Bylotas, J. (2023). A trans-conceptual model for suicide prevention in social work practice: military and veteran populations as an example. *Social work in mental health*, 1-17. doi: 10.1080/15332985.2023.2244624
- Elliott, T. R., Hsiao, Y. Y., Kimbrel, N. A., DeBeer, B. B., Gulliver, S. B., Kwok, O. M., Morissette, S. B., & Meyer, E. C. (2019). Resilience facilitates adjustment through greater psychological flexibility among Iraq/Afghanistan war veterans with and without mild traumatic brain injury. *Rehabilitation Psychology*, 64(4), 383–397.
<https://doi.org/10.1037/rep0000282>
- García-Haro, J., García-Pascual, H., González, M. G., Barrio-Martínez, S., & García-Pascual, R. (2020). Suicide and mental disorder: A necessary critique. *Psychologist Papers*, 41(1), 35-42. DOI: <https://doi.org/10.23923/pap.psicol2020.2919>
- Heisler, E. J. (2018). The mental health workforce: A primer. 18. Congressional Research Service. CRS Report No. 43255. <https://crsreports.congress.gov/product/pdf/R/R43255>
- Hjelmeland, H. (2016). A critical look at current suicide research. *Critical suicidology: Transforming suicide research and prevention for the 21st century*, 31-55.
- Hjelmeland, H., & Loa Knizek, B. (2020). The emperor's new clothes? A critical look at the interpersonal theory of suicide. *Death Studies*, 44(3), 168–178.
- Hom, M. A., Stanley, I. H., Podlogar, M. C., & Joiner Jr, T. E. (2017). “Are you having thoughts of suicide?” Examining experiences with disclosing and denying suicidal ideation. *Journal of Clinical Psychology*, 73(10), 1382-1392.
- Johnson, D. (2022, February 2). ‘A debt I can never repay’ – How Reddit is filling the gaps in the military’s failing mental health care system. Task & Purpose.
<https://taskandpurpose.com/news/army-subreddit-resource/>
- Kamareck, K. N., & Mendez, B. H. LIBRARY OF CONGRESS WASHINGTON DC. (2021).

- Military Suicide Prevention and Response. *Congressional Research Service*. Retrieved from <https://apps.dtic.mil/sti/citations/AD1144124>
- Lacasse, J.R., & Gambrill, E. (2015). Making assessment decisions: Macro, mezzo, and micro Perspectives (pp. 69-84). In B. Probst (Ed.), *Critical Thinking in Clinical Diagnosis and Assessment*. New York: Springer.
- Levine, J., & Sher, L. (2019). Social Work and Suicide Prevention. *Psychiatric Services*, 2019, 70: 638, doi: 10.1176/appi.ps.201900165
- Maple, M., Pearce, T., Sanford, R., & Cerel, J. (2016). The role of social work in suicide prevention, intervention, and postvention: A scoping review. *Australian Social Work*, 70(3), 289–301. <https://doi.org/10.1080/0312407X.2016.1213871>
- National Association of Social Workers. (2021). Preamble to the code of ethics. Retrieved May 4, 2022, from <http://www.socialworkers.org/pubs/>
- Orsolini, L., Latini, R., Pompili, M., Serafini, G., Volpe, U., Vellante, F., Fornaro, M., Valchera, A., Tomasetti, C., Fraticelli, S., Alessandrini, M., La Rovere, R., Trotta, S., Martinotti, G., Di Giannantonio, M., & De Berardis, D. (2020). Understanding the Complex of Suicide in Depression: from Research to Clinics. *Psychiatry investigation*, 17(3), 207–221. <https://doi.org/10.30773/pi.2019.0171>
- Pierce, K. E., Broderick, D., Johnston, S., & Holloway, K. J. (2020). Embedded Mental Health in the United States Marine Corps. *Military Medicine*, 185(9–10), e1499–e1505. <https://doi.org/10.1093/milmed/usaa076>
- Ramchand, R. (2022). Suicide Among Veterans. *Rand Health Quarterly*, 9(3), 21
- Ramchand, R., Eberhart, N. K., Guo, C., Pedersen, E. R., Savitsky, T. D., Tanielian, T., & Voorhies, P. (2014). Developing a research strategy for suicide prevention in the Department of Defense: Status of current research, prioritizing areas of need, and recommendations for moving forward. *Rand Health Quarterly*, 4(3). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5396216/>
- Saha, K., Ernala, S. K., Dutta, S., Sharma, E., & De Choudhury, M. (2020). Understanding moderation in online mental health communities. In *Social Computing and Social Media. Participation, User Experience, Consumer Experience, and Applications of Social Computing: 12th International Conference, SCSM 2020, Held as Part of the 22nd HCI International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020, Proceedings, Part II 22* (pp. 87-107). Springer International Publishing. https://doi.org/10.1007/978-3-030-49576-3_7
- Salzmann-Erikson, M., & Hiçdurmaz, D. (2017). Use of Social Media Among Individuals Who Suffer From Post-Traumatic Stress: A Qualitative Analysis of Narratives. *Qualitative Health Research*, 27(2), 285–294. <https://doi.org/10.1177/1049732315627364>

Sanborn, A. J. B., Yalch, M. M., & Bongar, B. (2021, November 22). The Effect of Military Service and Trauma Exposure on Resilience. *Traumatology*. Advance online publication. <http://dx.doi.org/10.1037/trm0000355>

Theis, J., Hoops, K., Booty, M., Nestadt, P., MD, & 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>