

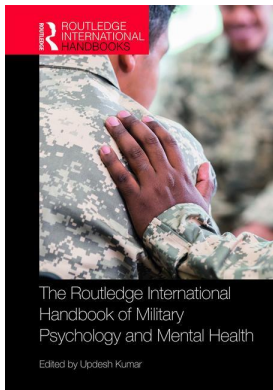
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Publisher: *Routledge*

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The Routledge International Handbook of Military Psychology and Mental Health

Updesh Kumar

Understanding suicide among female veterans

Publication details

<https://test.routledgehandbooks.com/doi/10.4324/9780429281266-27>

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Published online on: 19 Dec 2019

How to cite :- Lindsey L. Monteith, Ryan Holliday, Diana P. Brostow, Claire A. Hoffmire. 19 Dec 2019, *Understanding suicide among female veterans from: The Routledge International Handbook of Military Psychology and Mental Health* Routledge

Accessed on: 27 Sep 2023

<https://test.routledgehandbooks.com/doi/10.4324/9780429281266-27>

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UNDERSTANDING SUICIDE AMONG FEMALE VETERANS

A theory-driven approach

*Lindsey L. Monteith, Ryan Holliday, Diana P. Brostow,
and Claire A. Hoffmire*

There has been concern regarding excess risk for suicide among U.S. veterans for many years (Gibbons, Brown, & Hur, 2012). Yet only recently have advances in veteran suicide surveillance efforts enabled accurate quantification of the magnitude of this risk, including for female veterans (Department of Veterans Affairs, 2017b), who constitute the fastest growing subpopulation of veterans, having increased from <1% in 2000 to 9.4% in 2015 (Frayne et al., 2018). Through these efforts, it has become clear that suicide is a substantial problem that disproportionately affects female veterans relative to female non-veterans. In 2016, the suicide rate for female veterans was 80% higher than that observed for non-veteran females (Department of Veterans Affairs, 2018a). Moreover, from 2005 to 2016, female veterans experienced a 34% increase in age-adjusted suicide rates (Figure 27.1; Department of Veterans Affairs, 2018b). Understanding subgroups of female veterans who are at particularly elevated risk for suicide, as well as factors associated with suicide risk in this population, is critical for addressing this growing and tragic phenomenon.

Changing trends in relation to Veterans Health Administration use and age

Recent use of Veterans Health Administration care

Recent epidemiological work has revealed important subgroups of female veterans who have experienced notable changes in their suicide rates over time. For example, female veterans who used Veterans Health Administration (VHA) care in the year prior to their death experienced a 22% increase in age-adjusted suicide rates, compared to an increase of 31% among female veterans not using VHA care in the year preceding death (Department of Veterans Affairs, 2018b). Considering that approximately two-thirds of female veterans do not access VHA care (Department of Veterans Affairs, 2017a; Frayne et al., 2018), these differences are particularly salient. Moreover, these findings underscore the importance of elucidating the reasons for these differences while also determining effective means of preventing suicide in female veterans who do not use VHA care.

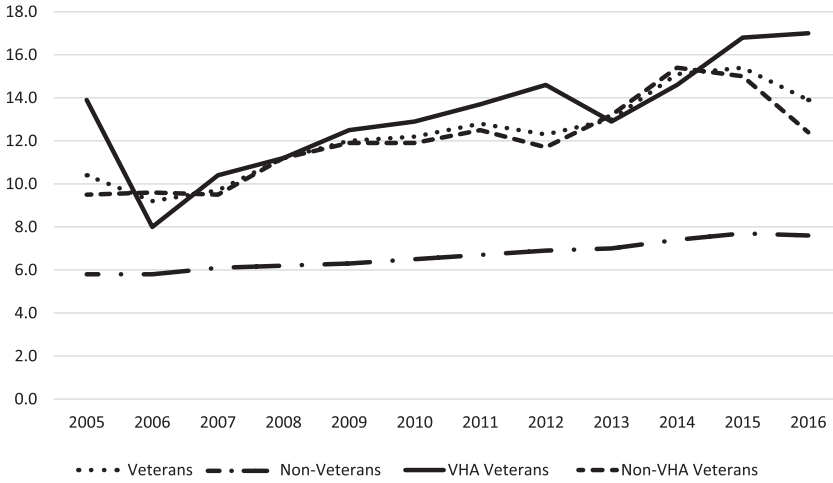


Figure 27.1 Age-Adjusted Suicide Rates among Females (per 100,000) by veteran Status. This figure was created from publically available data in the Department of Veterans Affairs 2016 National Suicide Data Report Appendix (Department of Veterans Affairs, 2018b).

Age

In addition to the aforementioned findings related to recent use of VHA care, several important findings have been reported with respect to age. From 2005 to 2016, suicide rates among females, including both veterans and non-veterans, were highest for those between 35 and 54 years of age (Figures 27.2a and 27.2b; Department of Veterans Affairs, 2018b).

Suicide rates also increased from 2005–2016 for all age groups of female veterans examined. However, from 2014 to 2016, a notable decline was observed for 35- to 54-year-old female veterans, which was not observed among non-veteran adult females. Further data are needed to determine

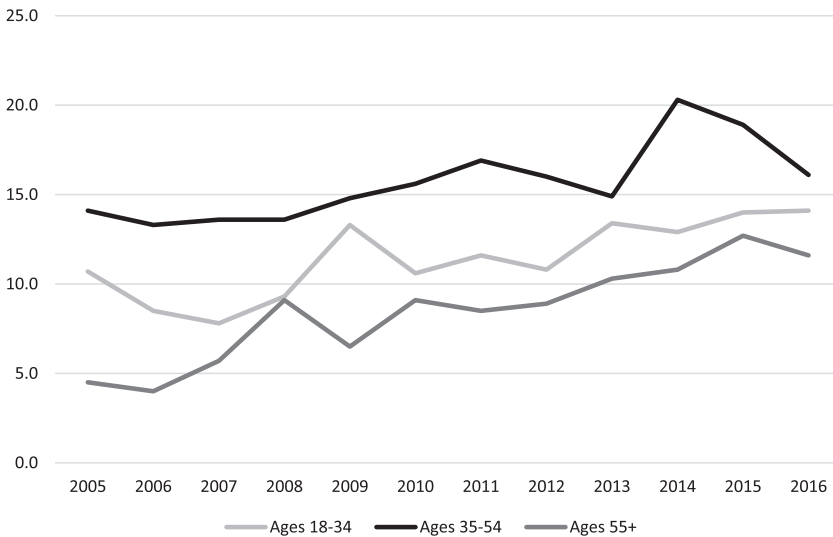


Figure 27.2 (a) Age-Specific Female veteran Suicide Rates (per 100,000). This figure was created from publically available data in the Department of Veterans Affairs 2016 National Suicide Data Report Appendix (Department of Veterans Affairs, 2018b). (Continued)

Understanding suicide among female veterans

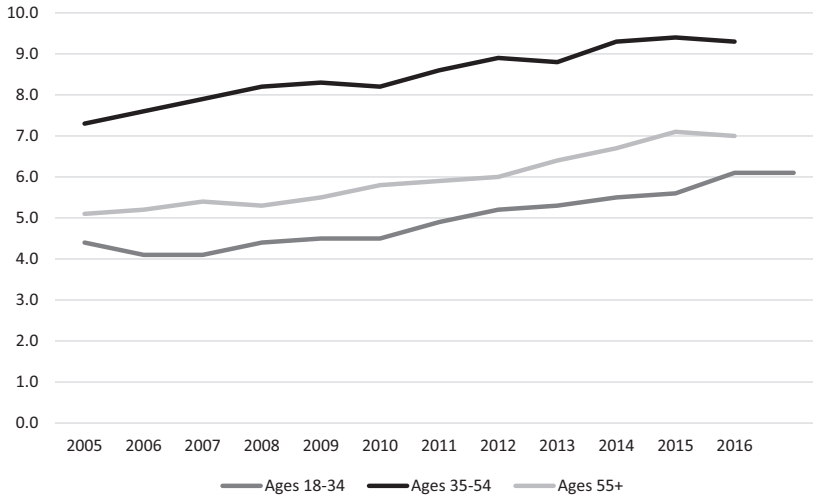


Figure 27.2 (Continued) (b) Age-Specific Female Non-veteran Suicide Rates (per 100,000). This figure was created from publically available data in the Department of Veterans Affairs 2016 National Suicide Data Report Appendix (Department of Veterans Affairs, 2018b).

if this represents a true declining trend among female veterans 35–54 years of age or random fluctuation. In addition, among female veterans, those between 18–34 years of age were at higher risk for suicide than females who were 55 years of age and older; in contrast, this trend was reversed for non-veteran females. These findings highlight the need for suicide-focused research with female veterans, whose overall suicide risk and periods of heightened risk differ from female civilians.

The excess risk observed among young female veterans (relative to older female veterans) may be attributable to a number of factors, including experiences during and following military service. Younger women are also more likely to have served in Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND), a service era that has entailed increased combat exposure and involvement for female veterans (Street, Vogt, & Dutra, 2009). For post-9/11 female veterans, combat and deployment are often experienced concurrently with military sexual harassment and assault (LeardMann et al., 2013), as well as stress regarding family separation (Mattocks et al., 2012). Younger female veterans are also more likely to have recently transitioned from military service back to civilian life, which may pose unique challenges and psychosocial stress (Ahern et al., 2015; Burkhart & Hogan, 2015; Mattocks et al., 2012), potentially heightening risk for suicide (Pease, Billera, & Gerard, 2015). For example, although risk for suicide decreases during the first seven years following separation from OEF/OIF male veterans, female veterans experience a different pattern in their suicide risk following separation that remains “relatively constant” (Bullman, Hoffmire, Schneiderman, & Bossarte, 2015, p. 965). As such, there is a strong need for research aimed at understanding female veterans’ military service, transition, and reintegration experiences in relation to suicide risk.

Factors associated with suicidal self-directed violence and suicidal ideation among female veterans

Mental health conditions

While the aforementioned findings suggest important subgroups of female veterans warranting increased attention, research has also focused on elucidating factors associated with suicidal

self-directed violence (SDV) among female veterans. Prior research has largely focused on the relation of mental health diagnoses with risk for suicide and primarily among female veterans in VHA care. Taken in aggregate, findings from these studies generally mirror findings from the general population. For example, in a study of veterans who used VHA care, having a psychiatric diagnosis was associated with significantly increased risk of suicide (Ilgen et al., 2010). Moreover, all psychiatric diagnoses examined (i.e., bipolar disorder, schizophrenia, alcohol abuse/dependence, drug abuse/dependence, depression, posttraumatic stress disorder [PTSD], and other anxiety disorders) were associated with increased age-adjusted suicide risk among female veterans, which exceeded the risk associated with psychiatric diagnoses among male veterans (Ilgen et al., 2010). Other research has also confirmed that a substance use disorder diagnosis (i.e., alcohol, cocaine, amphetamine, cannabis, and sedatives) is associated with suicide risk among female veterans, although opioid use disorder appears to be a particularly robust suicide risk factor for female veterans (Bohnert, Ilgen, Louzon, McCarthy, & Katz, 2017). Thus, elucidating pathways by which substance use disorders relate to suicide risk among female veterans is essential (Chapman & Wu, 2014).

Stressful and traumatic experiences

In addition to mental health conditions, stressful and potentially traumatic experiences also appear to be associated with suicide risk among female veterans. In particular, there is compelling evidence that military sexual trauma, which is experienced by approximately 38.4% of female veterans (Wilson, 2018), is associated with suicide, suicide attempts, and suicidal ideation among female veterans (Gradus, Street, Suvak, & Resick, 2013; Kimerling, Gima, Smith, Street, & Frayne, 2007; Kimerling, Makin-Byrd, Louzon, Ignacio, & McCarthy, 2016; Monteith et al., 2018). Other studies examining stressful or traumatic events among female veterans have primarily focused on suicidal ideation, rather than suicide or suicide attempts. For example, combat exposure, general harassment, and stressful post-battle experiences are also associated with post-deployment suicidal ideation among female veterans, although these associations are not significant when accounting for mental health symptoms (Gradus et al., 2013). Another recent study found that perceived life threat and sexual harassment during one's military service were both associated with suicidal ideation among female veterans (Khan et al., 2019).

Early life experiences, such as childhood sexual and physical abuse, also appear to be associated with suicidal ideation and suicide attempts among female veterans (Benda, 2005; Roy & Janal, 2006). In addition, intimate partner violence has been found to be associated with suicidal ideation (Brignone, Sorrentino, Roberts, & Dichter, 2018), which may be due to shared risk factors (Iovine-Wong et al., 2019). These findings are particularly important given that female veterans tend to experience a high prevalence of stressful and traumatic experiences across their lifespan (Zinzow, Grubaugh, Monnier, Suffoletta-Maierle, & Frueh, 2007). For example, not only are female veterans highly likely to experience traumas and stressors during their military service (e.g., sexual harassment and sexual assault), they are also likely to encounter pre- (e.g., childhood abuse) and post-military stressful and traumatic events (e.g., intimate partner violence) that may also impact their risk for suicide (Kelly, Skelton, Patel, & Bradley, 2011; Tiet, Finney, & Moos, 2006). Thus, continued examination of such factors and the methods by which they impact female veterans' risk for suicide remains pertinent. As comprehensive examination of female veterans' suicide risk in relation to the range of potentially stressful and traumatic events across the lifespan has been limited, a broader lifespan-focused approach is needed.

Table 27.1 Overview of constructs relevant to each theory

<i>Theory</i>	<i>Constructs</i>
Interpersonal-psychological theory	Perceived burdensomeness, thwarted belongingness, and acquired capability for suicide (i.e., fearlessness about death and pain tolerance)
Fluid vulnerability theory	Cognitive, affective, physiological, and behavioral vulnerabilities; precipitating stressors; and risk factors
Three-step theory	Pain; hopelessness; connectedness (protective); and dispositional, acquired, and practical capacity
Cultural model of suicide	Life stressors (minority stress, social discord, and social sanctions), idioms of distress, and cultural meanings of stressors and suicide (e.g., cultural sanctions and acceptability)
Minority stress model	External minority stress (e.g., discrimination, prejudice, rejection) and internal minority distress (e.g., internalization of such experiences)

Note: This table summarizes the key constructs inherent to each theory discussed in this chapter.

Other factors

A comprehensive review of all published research on factors associated with suicide, suicide attempts, and suicidal ideation among female veterans is beyond the scope of the present chapter. Nonetheless, it is worth noting that other factors have also been found to be associated with suicidal ideation among female veterans. Examples include sexual dysfunction (Blais, Monteith, & Kugler, 2018) and being divorced, separated, or widowed (Blosnich, Brenner, & Bossarte, 2016). As such, further elucidation of such factors, as well as a comprehensive, theory-driven model of female veteran suicide, remains crucial to appropriately conceptualize and prevent suicide among this subset of the veteran population.

Applying current theories of suicide to female veterans

As previously noted, to date, research aimed at understanding factors associated with suicide among female veterans has been limited, primarily utilizing a diagnostic-based framework or examining specific types of stressful or traumatic events in isolation. However, the majority of women with mental health conditions do not die by suicide, suggesting that a transdiagnostic approach may be valuable for understanding factors underlying female veterans' risk for suicide. Theory-driven approaches to suicide can be useful for idiographic case conceptualization of suicide risk when working with female veterans. Nonetheless, research attempting to apply theories of suicide to female veterans has been limited. Below we describe several contemporary theories of suicide that could be applied to understanding suicide among female veterans. Key constructs relevant to each of these theories are also summarized in Table 27.1.

Interpersonal-psychological theory of suicide

The interpersonal-psychological theory of suicide (IPTS) (Joiner, 2007) proposes that thwarted belongingness (an unmet psychological need to belong) and perceived burdensomeness (the belief that one's existence poses a burden to others) cause passive suicidal ideation, which can progress into suicidal desire when an individual experiences hopelessness regarding perceived burdensomeness and thwarted belongingness (Van Orden et al., 2010). Suicidal intent is posited

to occur when an individual experiences both suicidal desire and lowered fear of death. Lastly, the IPTS proposes that suicidal self-directed violence (S-SDV) is most likely to occur in the context of elevated perceived burdensomeness, thwarted belongingness, lowered fear of suicide, and increased tolerance of pain (Van Orden et al., 2010). Thus, the acquired capability for suicide, which is composed of fearlessness about death and increased pain tolerance, is considered necessary for an individual to act upon suicidal desire.

The IPTS can be used to understand potential mechanisms by which specific experiences that are commonly experienced by female veterans relate to heightened suicide risk. For example, Van Orden et al. (2010) noted that childhood abuse, intimate partner violence, loneliness, and family conflict may increase thwarted belongingness. Indeed, research has found that childhood emotional abuse is associated with thwarted belongingness (Smith, Monteith, Rozek, & Meuret, 2018). Female veterans also are at risk for experiencing unemployment, homelessness, mental illness, and comorbid physical health diagnoses (Agha, Lofgren, VanRuiswyk, & Layde, 2000; Byrne, Montgomery, & Dichter, 2013; Hamilton, Williams, & Washington, 2015; Zinzow et al., 2007). These experiences may, in turn, exacerbate perceived burdensomeness (Silva, Ribeiro, & Joiner, 2015; Van Orden et al., 2010). In addition, repeated exposure to painful or fearful experiences, such as childhood abuse, suicide loss, combat exposure, and prior S-SDV are posited to lower fear of death and heighten physical pain tolerance (Van Orden et al., 2010). Such experiences are potentially relevant for many female veterans (Cerel et al. 2015; Street et al., 2009; Zinzow et al., 2007). Furthermore, childhood physical abuse and violent combat-related experiences have both been found to be associated with higher acquired capability for suicide (Bryan, & Cukrowicz, 2011; Smith et al., 2018), although these associations have not been examined in female veterans specifically.

Recent systematic reviews of the IPTS, which were based on an extensive number of studies with diverse samples (albeit few samples of female veterans), have concluded that there is strong support for certain components of the theory (e.g., the main effect of perceived burdensomeness and the interaction between perceived burdensomeness and thwarted belongingness in suicidal ideation), whereas other components of the IPTS have either been untested or generally not supported (Chu et al., 2017; Ma, Batterham, Calcar, & Han, 2016). Research examining the IPTS in female veterans specifically remains limited to two studies. In a qualitative study of female veterans who had been deployed to combat zones in Iraq or Afghanistan, female veterans described feeling as if they did not belong – due to feeling like a minority in the male-dominated military setting, as well as feeling different from civilian women (Gutierrez et al., 2013). Female veterans also described feeling like a burden due to perceptions that they were not pulling their weight in relation to their male colleagues. Interpersonal difficulties, emotional numbing, substance use, and thoughts of self-directed violence were described in relation to acquired capability for suicide.

Monteith, Bahraini, and Menefee (2017) examined whether IPTS factors were associated with recent suicidal ideation among female veterans who had experienced military sexual trauma. Perceived burdensomeness, thwarted belongingness, and fearlessness about death were associated with suicidal ideation, accounting for past suicide attempts and recent PTSD and depressive symptoms. These studies provide initial support for the potential relevance of the IPTS to female veterans. However, results were based on relatively small and circumscribed samples, such as female veterans entering VHA inpatient treatment and post-9/11 female veterans. Thus, additional research is needed to examine if the IPTS is supported in other samples of female veterans, as well as to identify factors associated with perceived burdensomeness, thwarted belongingness, fearlessness about death, and elevated pain tolerance among female veterans.

Fluid vulnerability theory

While additional theories of suicide have yet to be robustly examined among female veterans, alternative, complementary theories may be relevant for further understanding and conceptualizing female veterans' risk for suicide. Rudd (2006) proposed the fluid vulnerability theory (FVT), which emphasizes that "suicidal episodes" are dynamic, with heightened periods of suicide risk (i.e., the suicidal mode) that occur based on interactions between specific vulnerabilities, stressors, and risk factors, which can be cognitive, affective, physiological, or behavioral in nature (Wolfe-Clark & Bryan, 2017). A unique feature of the FVT is that it distinguishes between baseline and acute risk for suicide, positing that relatively minor stressors may trigger suicidal episodes for individuals at high baseline risk for suicide (i.e., those with more vulnerability). In addition, negative beliefs about oneself, others, and the future are theorized to comprise an individual's suicide-belief system (Rudd, 2006). At the present time, research on the FVT remains limited, and no research has examined this theory in female veterans specifically. However, given its focus on various systems (e.g., cognitive, affective, physiological, and behavioral), this theory could be examined to determine what the "suicidal mode" entails for female veterans, as well as to elucidate specific cognitive, affective, physiological, and behavioral factors which drive suicide risk.

Three-step theory

Building upon prior theories of suicide, Klonsky and May (2015) proposed the three-step theory (3ST), which theorizes that pain and hopelessness lead to suicidal ideation, while connectedness (e.g., to a purpose or loved ones) potentially protects against escalation of suicidal ideation. The 3ST also emphasizes the importance of dispositional (e.g., genetics), acquired (c.f. Joiner, 2007), and practical components of suicide capacity, which facilitate the transition from suicidal ideation to S-SDV. The 3ST remains a relatively new theory that has received some initial support (c.f. Klonsky, Saffer, & Bryan, 2018), although it has not yet been tested in female veterans specifically.

Nevertheless, the specific emphasis on practical components of suicide capacity (i.e., concrete factors that facilitate S-SDV) may be highly relevant to understanding suicide among female veterans. Female veterans are more likely to own and have access to firearms, a highly lethal means of suicide that few individuals survive, compared to civilian women (Cleveland, Azrael, Simonetti, & Miller, 2017). Female veterans are also more likely to use firearms as their means of suicide, compared to civilian women (Department of Veterans Affairs, 2018a). Thus, future research could examine whether female veterans, in comparison to civilian women, are more likely to have elevated practical capacity surrounding firearms, which is essential for understanding potential ways in which female veterans' risk for suicide may be targeted. Future research on the 3ST could also examine other potential aspects of suicide capacity (e.g., dispositional, acquired), as well as sources of hopelessness, psychological pain, and connectedness in female veterans.

Cultural model of suicide

Lastly, the cultural model of suicide (Chu, Goldblum, Floyd, & Bongar, 2010) emphasizes the role of culture in suicide-specific stressors and the expression of S-SDV. This model was developed based on a synthesis and analysis of prior suicide-focused research with different minority populations. The cultural model of suicide posits that culture influences idioms of distress (e.g., words used to communicate suicidal ideation, methods used to attempt suicide). Culture is also

theorized to influence the specific stressors that result in S-SDV, with a particular emphasis on minority stress, cultural sanctions, and social discord. Lastly, cultural meanings of stressors and suicide are posited to influence both pain tolerance and S-SDV.

The cultural model of suicide emphasizes different facets of suicide risk (e.g., idioms of distress, culture) that are not explicitly included in other leading theories of suicide. Although this model has not been applied to female veterans, it would lend itself well to qualitative research (e.g., *How do female veterans experience and express SI? How do female veterans perceive suicide and the various stressors that they experience? What is the meaning of different methods of S-SDV among female veterans?*). Initial qualitative research has yielded valuable findings in relation to the potential context and precipitants of suicide among female veterans. For example, substance use disorders, lack of supportive relationships, non-military trauma, multiple prescriptions for sedatives, and insufficient patient-provider communication have been noted as common experiences among female veteran suicide decedents, based on qualitative review of VHA medical records (Denneson, Cromer, Jacobson, Teo, & Dobscha, 2016). Qualitative research also suggests that female veterans who call the Veterans Crisis Line often report concerns related to military sexual trauma, non-suicidal self-injury, mental health, relationships, and finances (Ramchand et al., 2016). In addition, female veterans less often directly asked for help, frequently presented with depressed affect, and generally reported familial responsibilities as their primary motivation to live. These studies may suggest potential life stressors (e.g., military sexual trauma, non-military trauma, lack of supportive relationships, financial problems) and idioms of distress (e.g., depressed affect, non-suicidal self-injury) to investigate in future research applying the cultural model of suicide to female veterans.

The utility of alternative theories to understand female veteran suicide

Contemporary theories of suicide may be applied to understand suicidal SDV among female veterans. However, none of these theories were developed specifically for female veterans. Until researchers test these theories with female veterans specifically, it is not possible to determine the extent to which these theories sufficiently explain suicidal SDV and suicidal ideation among female veterans. Moreover, alternate theories have been developed in other contexts that may also be useful for understanding suicide among female veterans, despite not originating as theories of suicide. Below, we describe an example of how one such theory may be highly relevant to understanding suicide among female veterans.

Minority stress model

The minority stress model (MSM) was initially developed to understand stress experienced by marginalized groups (e.g., sexual and racial-ethnic minorities; Brooks, 1981; Meyer, 1995). It provides an understanding of how individuals within a minority group may face chronically high levels of stress. Although the MSM has only recently been applied to understanding suicide and only in select populations, it may provide additional insight relevant to the context of female veterans' suicide risk (e.g., discrimination, intersectionality) that is not emphasized in most leading theories of suicide.

Female veterans are the overwhelming minority in military settings, in which cisgender men are the overwhelming majority. In addition, female veterans experience high rates of gender-based violence (e.g., sexual harassment and assault, intimate partner violence) during their military service (Wilson, 2018; Zinzow et al., 2007). Such experiences may be experienced as disempowering and silencing, and can lead to internalization and self-blame (Brownstone,

Holliman, Gerber, & Monteith, 2018). Some female veterans prematurely separate from military service after experiencing military sexual trauma (Dichter & True, 2015). However, experiences of gender-based violence and being a minority do not necessarily end following military separation. Research suggests that female veterans may continue to experience sexual harassment in VHA settings, as well as perceptions of VHA care as male-dominated, which may heighten distress and deter female veterans from using VHA care (Klap et al., 2019; Monteith et al., 2018; Street, Gradus, Stafford, & Kelly, 2007; Washington, Kleimann, Michelini, Kleimann, & Canning, 2007; Washington, Yano, Simon, & Sun, 2006; Wolff & Mills, 2016). This continued minority stress may pose a continued risk for suicide (e.g., by limiting access to evidence-based care). Thus, the MSM may help with understanding the ways in which various experiences of female veterans relate to suicide risk, especially among female veterans not using VHA care.

The MSM also emphasizes the intersectionality of various identities (e.g., race, ethnicity, sexual orientation), which may be useful for understanding why specific groups of veterans (e.g., those who identify as a sexual minority) are at further increased risk for suicide (Blosnich, Bossarte, & Silenzio, 2012; Blosnich, Gordon, & Fine, 2015). According to the MSM, female veterans believing themselves to be a marginalized minority within the context in which they work and live would be at increased risk for experiencing distress. The intersectionality of additional factors could potentially exacerbate such distress. For instance, female veterans who identify as a racial-ethnic, gender, and/or sexual minority may experience a greater sense of being stigmatized and may not identify as part of a larger group (e.g., a woman who identifies as a lesbian, Black female veteran may feel as if she is a minority among female veterans as a whole). Although suicide-focused research with racial or ethnic minority female veterans has been sparse (Dorsey Holliman, Monteith, Spitzer, & Brenner, 2018), recent applications of the MSM to veteran suicide (e.g., Tucker et al., 2019) have been informative and can be used to consider further applications of this model to other potentially marginalized populations. Additional research is needed to fully examine the extent to which the MSM can be applied to better understand suicide among female veterans.

Additional theories to consider

While a comprehensive review of other theoretical models is beyond the scope of the present chapter, a few additional theories are worth briefly mentioning. Feminist theory has only sporadically been discussed in relation to suicide (e.g., Jaworski, 2010; Lester, 1990) and could be applied to better understand the ways in which female veterans' broader societal experiences relate to their risk for suicide. In addition, theory regarding institutional betrayal (Smith & Freyd, 2013, 2014) may provide insight into the potential role of institutional behaviors (or lack thereof) in risk for suicide, particularly in the context of military-related traumatic events (Monteith, Bahraini, Matarazzo, Soberay, & Smith, 2016).

Limitations, future research, and clinical implications

Taken in aggregate, limited research and theory preclude comprehensive understanding and conceptualization of suicide risk among female veterans, all the more so when attempting to determine the most appropriate assessments and interventions. Research on veteran suicide has less commonly focused on female veterans, which may be due to small samples of female veterans in prior research and a tendency to focus on male veterans. Although multiple studies of veterans have included women, most suicide-focused research with veterans has been sex- or gender-neutral, rarely attempting to delineate gender- or sex-specific correlates of suicide or differences by sex or gender

(Hoffmire & Denneson, 2018). Some studies have conducted analyses specifically with men in their samples but have not been able to extend such analyses to women in their samples (e.g., Tiet et al., 2006). In addition, suicide-focused qualitative research with female veterans has been limited and has often utilized methods that did not entail directly interviewing female veterans (e.g., Denneson et al., 2016; Ramchand et al., 2016). This suggests an important and underutilized method for future research with female veterans. Finally, even though research suggests that several different mental health diagnoses and trauma-related factors are associated with suicide risk among female veterans, many of these studies solely examined discrete traumatic experiences (e.g., military sexual trauma) occurring at specific periods in female veterans' lives (e.g., during their military service) or focused on suicidal ideation as their outcome. As a result, overarching understanding of risk and protective factors for suicide among female veterans remains limited, and several important knowledge gaps remain. Given that the etiology of suicide is known to be complex and is likely influenced by interactions between different experiences across the lifespan, future research is needed to address these complexities. Examination of various stressful and traumatic experiences over female veterans' lifespans will require considerably larger sample sizes, as well as assessments at different time periods, in order to form a comprehensive understanding of suicide risk in this population.

As it stands, the lack of theory-driven research in female veterans also poses a critical knowledge gap, and future research will need to examine the hypotheses posed in the theories described above. Comparing the utility of various theories may be useful for determining the extent to which existing theories of suicide apply to female veterans or need to be modified. Future research into factors associated with suicide risk in female veterans must also expand beyond the existing literature and in doing so address the limitations of previous studies. Several important factors remain understudied, and, crucially, there is a need for a more robust theoretical understanding of the interrelationships between various socio-demographic and cultural characteristics as they pertain to female veterans' risk for suicide.

Though further research is needed to more clearly elucidate potential drivers of suicide risk among female veterans, the result of female veterans' excess suicide risk has major implications both in clinical settings and from a population-health perspective to reduce the suicide burden. As such, the number of veteran lives lost to suicide will continue to increase unless the rising rate in this population can be curbed. Importantly, as previously noted, the majority of female veterans do not access VHA care (Frayne et al., 2018). Though a portion of those who do access VHA care are seen for mental health or substance use disorder specialty care (Department of Veterans Affairs, 2018a), unfortunately, the majority are not. As such, developing effective, upstream suicide prevention approaches for female veterans that can be implemented in a variety of settings that female veterans more commonly access (e.g., primary care or women's health clinic settings) is critical. Simultaneously, ensuring access to evidence-based care for female veterans seen in outpatient and inpatient mental health settings remains essential. Lastly, the majority of studies on suicide risk among female veterans have focused on those using VHA care, despite the increasing need to better understand and reach female veterans who are not accessing VHA services (Department of Veterans Affairs, 2018a). To facilitate these efforts, research is needed that tests the acceptability, feasibility, and effectiveness of delivering suicide-specific interventions (e.g., Safety Planning, lethal means safety) to female veterans in both VHA and non-VHA settings. This remains a critical frontier for future research.

Conclusion

Rising rates of suicide among female veterans underscore the need to better understand factors that explain both suicidal ideation and S-SDV among female veterans. Research

to date has focused primarily on mental health diagnoses and specific trauma-related experiences. Few studies have focused on non-VHA using female veterans, despite their increasing suicide rates (Department of Veterans Affairs, 2018a). Several theories may be pertinent to identifying and understanding factors that relate to suicidal SDV among female veterans. These include the IPTS, FVT, 3ST, cultural model of suicide, and MSM. Qualitative research, as well as quantitative research with larger samples of female veterans, is strongly needed to facilitate understanding of suicide and how to prevent it among the growing population of female veterans.

References

- Agha, Z., Lofgren, R. P., VanRuiswyk, J. V., & Layde, P. M. (2000). Are patients at Veterans Affairs medical centers sicker? A comparative analysis of health status and medical resource use. *Archives of Internal Medicine*, *160*(21), 3252–3257.
- Ahern, J., Worthen, M., Masters, J., Lippman, S. A., Ozer, E. J., & Moos, R. (2015). The challenges of Afghanistan and Iraq veterans' transition from military to civilian life and approaches to reconnection. *PLOS ONE*, *10*(7), e0128599.
- Benda, B. B. (2005). Gender differences in predictors of suicidal thoughts and attempts among homeless veterans that abuse substances. *Suicide and Life-Threatening Behavior*, *35*(1), 106–116.
- Blais, R. K., Monteith, L. L., & Kugler, J. (2018). Sexual dysfunction is associated with suicidal ideation in female service members and veterans. *Journal of Affective Disorders*, *226*, 52–57.
- Blosnich, J. R., Bossarte, R. M., & Silenzio, V. M. (2012). Suicidal ideation among sexual minority veterans: Results from the 2005–2010 Massachusetts Behavioral Risk Factor Surveillance Survey. *American Journal of Public Health*, *102*(S1), S44–S47.
- Blosnich, J. R., Brenner, L. A., & Bossarte, R. M. (2016). Population mental health among U.S. military veterans: Results of the Veterans Health Module of the Behavioral Risk Factor Surveillance System, 2011–2012. *Annals of Epidemiology*, *26*(8), 592–596.
- Blosnich, J. R., Gordon, A. J., & Fine, M. J. (2015). Associations of sexual and gender minority status with health indicators, health risk factors, and social stressors in a national sample of young adults with military experience. *Annals of Epidemiology*, *25*(9), 661–667.
- Bohnert, K. M., Ilgen, M. A., Louzon, S., McCarthy, J. F., & Katz, I. R. (2017). Substance use disorders and the risk of suicide mortality among men and women in the US Veterans Health Administration. *Addiction*, *112*(7), 1193–1201.
- Brignone, E., Sorrentino, A. E., Roberts, C. B., & Dichter, M. E. (2018). Suicidal ideation and behaviors among women veterans with recent exposure to intimate partner violence. *General Hospital Psychiatry*, *55*, 60–64.
- Brooks, V. R. (1981). *Minority Stress and Lesbian Women*. Lexington, MA: Lexington Books.
- Brownstone, L. M., Holliman, B. D., Gerber, H. R., & Monteith, L. L. (2018). The phenomenology of military sexual trauma among women veterans. *Psychology of Women Quarterly*, *42*(4), 399–413.
- Bryan, C. J., & Cukrowicz, K. C. (2011). Associations between types of combat violence and the acquired capability for suicide. *Suicide and Life-Threatening Behavior*, *41*(2), 126–136.
- Bullman, T., Hoffmire, C., Schneiderman, A., & Bossarte, R. (2015). Time dependent gender differences in suicide risk among Operation Enduring Freedom and Operation Iraqi Freedom veterans. *Annals of Epidemiology*, *25*(12), 964–965.
- Burkhart, L., & Hogan, N. (2015). Being a female veteran: A grounded theory of coping with transitions. *Social Work in Mental Health*, *13*(2), 108–127.
- Byrne, T., Montgomery, A. E., & Dichter, M. E. (2013). Homelessness among female veterans: A systematic review of the literature. *Women & Health*, *53*(6), 572–596.
- Cerel, J., Van De Venne, J. G., Moore, M. M., Maple, M. J., Flaherty, C., & Brown, M. M. (2015). Veteran exposure to suicide: Prevalence and correlates. *Journal of Affective Disorders*, *179*, 82–87.
- Chapman, S. L. C., & Wu, L. T. (2014). Suicide and substance use among female veterans: A need for research. *Drug and Alcohol Dependence*, *136*, 1–10.
- Chu, C., Buchman-Schmitt, J. M., Stanley, I. H., Hom, M. A., Tucker, R. P., Hagan, C. R., ... Michaels, M. S. (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.

- Chu, J. P., Goldblum, P., Floyd, R., & Bongar, B. (2010). The cultural theory and model of suicide. *Applied and Preventive Psychology, 14*(1–4), 25–40.
- Cleveland, E. C., Azrael, D., Simonetti, J. A., & Miller, M. (2017). Firearm ownership among American veterans: Findings from the 2015 National Firearm Survey. *Injury Epidemiology, 4*(1), 33.
- Denneson, L. M., Cromer, R., Jacobson, L. E., Teo, A., & Dobscha, S. K. (2016). Female veterans who died by suicide: Qualitative analysis of medical records. *Military Behavioral Health, 4*(3), 276–284.
- Department of Veterans Affairs. (2017a). *The past, present and future of women veterans*. Retrieved from https://www.va.gov/vetdata/docs/SpecialReports/Women_Veterans_2015_Final.pdf
- Department of Veterans Affairs. (2017b). *Suicide among veterans and other Americans, 2001–2014*. Retrieved from <https://www.mentalhealth.va.gov/docs/2016suicidedatareport.pdf>
- Department of Veterans Affairs. (2018a). *VA National Suicide Data Report 2005–2016*. Retrieved from https://www.mentalhealth.va.gov/docs/data-sheets/OMHSP_National_Suicide_Data_Report_2005–2016_508.pdf
- Department of Veterans Affairs. (2018b). *2016 National Suicide Data Report Appendix*. Retrieved from https://www.mentalhealth.va.gov/mentalhealth/suicide_prevention/data.asp
- Dichter, M. E., & True, G. (2015). “This is the story of why my military career ended before it should have”: Premature separation from military service among US women veterans. *Journal of Women & Social Work, 30*(2), 187–199.
- Dorsey Holliman, B. A., Monteith, L. L., Spitzer, E. G., & Brenner, L. A. (2018). Resilience, cultural beliefs, and practices that mitigate suicide risk among African American women veterans. *SAGE Open, 8*(1), 1–10.
- Frayne, S. M., Phibbs, C. S., Saechao, F., Friedman, S. A., Shaw, J. G., Romodan, Y., ... Haskell, S. (2018). *Sourcebook: Women Veterans in the Veterans Health Administration. Volume 4: Longitudinal Trends in Sociodemographics, Utilization, Health Profile, and Geographic Distribution*. Retrieved from https://www.womenshealth.va.gov/WOMENSHEALTH/docs/WHS_Sourcebook_Vol-IV_508c.pdf
- Gibbons, R. D., Brown, C. H., & Hur, K. (2012). Is the rate of suicide among veterans elevated? *American Journal of Public Health, 102*(Suppl 1), S17–19.
- Gradus, J. L., Street, A. E., Suvak, M. K., & Resick, P. A. (2013). Predictors of suicidal ideation in a gender-stratified sample of OEF/OIF veterans. *Suicide and Life-Threatening Behavior, 43*(5), 574–588.
- Gutierrez, P. M., Brenner, L. A., Rings, J. A., Devore, M. D., Kelly, P. J., Staves, P. J., ... Kaplan, M. S. (2013). A qualitative description of female veterans’ deployment-related experiences and potential suicide risk factors. *Journal of Clinical Psychology, 69*(9), 923–935.
- Hamilton, A. B., Williams, L., & Washington, D. L. (2015). Military and mental health correlates of unemployment in a national sample of women veterans. *Medical Care, 53*(4 Suppl 1), S32–38.
- Hoffnir, C. A., & Denneson, L. M. (2018). Concerning trends in suicide among women veterans point to need for more research on tailored interventions. *HSR&D Forum, 6*(3), 9.
- Ilgel, M. A., Bohnert, A. S., Ignacio, R. V., McCarthy, J. F., Valenstein, M. M., Kim, H. M., & Blow, F. C. (2010). Psychiatric diagnoses and risk of suicide in veterans. *Archives of General Psychiatry, 67*(11), 1152–1158.
- Iovine-Wong, P. E., Nichols-Hadeed, C., Thompson Stone, J., Gamble, S., Cross, W., Cerulli, C., & Levandowski, B. A. (2019). Intimate partner violence, suicide, and their overlapping risk in women veterans: A review of the literature. *Military Medicine, 184*(5–6), e201–e210.
- Jaworski, K. (2010). The gender-ing of suicide. *Australian Feminist Studies, 25*(63), 47–61.
- Joiner, T. E. (2007). *Why People Die by Suicide*. Cambridge, MA: Harvard University Press.
- Kelly, U. A., Skelton, K., Patel, M., & Bradley, B. (2011). More than military sexual trauma: Interpersonal violence, PTSD, and mental health in women veterans. *Research in Nursing & Health, 34*(6), 457–467.
- 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.
- Kimerling, R., Gima, K., Smith, M. W., Street, A., & Frayne, S. (2007). The Veterans Health Administration and military sexual trauma. *American Journal of Public Health, 97*(12), 2160–2166.
- Kimerling, R., Makin-Byrd, K., Louzon, S., Ignacio, R. V., & McCarthy, J. F. (2016). Military sexual trauma and suicide mortality. *American Journal of Preventive Medicine, 50*(6), 684–691.
- Klap, R., Darling, J. E., Hamilton, A. B., Rose, D. E., Dyer, K., Canelo, I., ... Yano, E. M. (2019). Prevalence of stranger harassment of women veterans at Veterans Affairs Medical Centers and impacts on delayed and missed care. *Women’s Health Issues, 29*(2), 107–115.
- 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.
- Klonsky, E. D., Saffer, B. Y., & Bryan, C. J. (2018). Ideation-to-action theories of suicide: A conceptual and empirical update. *Current Opinion in Psychology, 22*, 38–43.

- LeardMann, C. A., Pietrucha, A., Magruder, K. M., Smith, B., Murdoch, M., Jacobson, I. G., . . . Millennium Cohort Study Team. (2013). Combat deployment is associated with sexual harassment or sexual assault in a large, female military cohort. *Women's Health Issues, 23*(4), e215–e223.
- Lester, D. (1990). The study of suicide from a feminist perspective. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 11*(1), 38–43.
- 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.
- Mattocks, K. M., Haskell, S. G., Krebs, E. E., Justice, A. C., Yano, E. M., & Brandt, C. (2012). Women at war: Understanding how women veterans cope with combat and military sexual trauma. *Social Science & Medicine, 74*(4), 537–545.
- Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior, 36*(1), 38–56.
- Monteith, L. L., Bahraini, N. H., Gerber, H. R., Dorsey Holliman, B., Schneider, A. L., Holliday, R., & Matarazzo, B. B. (2018). Military sexual trauma survivors' perceptions of Veterans Health Administration care: A qualitative examination. *Psychological Services*. Advance online publication. doi:10.1037/ser0000290
- Monteith, L. L., Bahraini, N. H., Matarazzo, B. B., Soberay, K. A., & Smith, C. P. (2016). Perceptions of institutional betrayal predict suicidal self-directed violence among veterans exposed to military sexual trauma. *Journal of Clinical Psychology, 72*(7), 743–755.
- Monteith, L. L., Bahraini, N. H., & Menefee, D. S. (2017). Perceived burdensomeness, thwarted belongingness, and fearlessness about death: Associations with suicidal ideation among female veterans exposed to military sexual trauma. *Journal of Clinical Psychology, 73*(12), 1655–1669.
- Monteith, L. L., Hoffnir, C. A., Holliday, R., Park, C. L., Mazure, C. M., & Hoff, R. A. (2018). Do unit and post-deployment social support influence the association between deployment sexual trauma and suicidal ideation? *Psychiatry Research, 270*, 673–681.
- Pease, J. L., Billera, M., & Gerard, G. (2015). Military culture and the transition to civilian life: Suicide risk and other considerations. *Social Work, 61*(1), 83–86.
- Ramchand, R., Ayer, L., Kotzias, V., Engel, C., Predmore, Z., Ebener, P., . . . Haas, G. (2016). Suicide risk among women veterans in distress: Perspectives of responders on the Veterans Crisis Line. *Women's Health Issues, 26*(6), 667–673.
- Roy, A., & Janal, M. (2006). Gender in suicide attempt rates and childhood sexual abuse rates: Is there an interaction? *Suicide & Life-Threatening Behavior, 36*(3), 329–335.
- Rudd, M. D. (2006). Fluid vulnerability theory: A cognitive approach to understanding the process of acute and chronic suicide risk. In T. E. Ellis (Ed.), *Cognition and Suicide: Theory, Research, and Therapy* (pp. 355–368). Washington, DC: American Psychological Association.
- Silva, C., Ribeiro, J. D., & Joiner, T. E. (2015). Mental disorders and thwarted belongingness, perceived burdensomeness, and acquired capability for suicide. *Psychiatry Research, 226*(1), 316–327.
- Smith, C. P., & Freyd, J. J. (2013). Dangerous safe havens: Institutional betrayal exacerbates sexual trauma. *Journal of Traumatic Stress, 26*(1), 119–124.
- Smith, C. P., & Freyd, J. J. (2014). Institutional betrayal. *American Psychologist, 69*(6), 575–587.
- Smith, N. B., Monteith, L. L., Rozek, D. C., & Meuret, A. E. (2018). Childhood abuse, the interpersonal–psychological theory of suicide, and the mediating role of depression. *Suicide and Life-Threatening Behavior, 48*(5), 559–569.
- Street, A. E., Gradus, J. L., Stafford, J., & Kelly, K. (2007). Gender differences in experiences of sexual harassment: Data from a male-dominated environment. *Journal of Consulting and Clinical Psychology, 75*(3), 464–474.
- Street, A. E., Vogt, D., & Dutra, L. (2009). A new generation of women veterans: Stressors faced by women deployed to Iraq and Afghanistan. *Clinical Psychology Review, 29*(8), 685–694.
- Tiet, Q. Q., Finney, J. W., & Moos, R. H. (2006). Recent sexual abuse, physical abuse, and suicide attempts among male veterans seeking psychiatric treatment. *Psychiatric Services, 57*(1), 107–113.
- 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.
- 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.
- Washington, D. L., Kleimann, S., Michelini, A. N., Kleimann, K. M., & Canning, M. (2007). Women veterans' perceptions and decision-making about Veterans Affairs health care. *Military Medicine, 172*(8), 812–817.

- Washington, D. L., Yano, E. M., Simon, B., & Sun, S. (2006). To use or not to use: What influences why women veterans choose VA health care. *Journal of General Internal Medicine*, 21(Suppl 3), S11–18.
- Wilson, L. C. (2018). The prevalence of military sexual trauma: A meta-analysis. *Trauma, Violence, & Abuse*, 19(5), 584–597.
- 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.
- Wolff, K. B., & Mills, P. D. (2016). Reporting military sexual trauma: A mixed-methods study of women veterans' experiences who served from World War II to the war in Afghanistan. *Military Medicine*, 181(8), 840–848.
- Zinzow, H. M., Grubaugh, A. L., Monnier, J., Suffoletta-Maierle, S., & Frueh, B. C. (2007). Trauma among female veterans: A critical review. *Trauma, Violence, & Abuse*, 8(4), 384–400.