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Transitioning from the Battlefield: A Theoretical Model for the Development of Posttraumatic Stress Disorder (PTSD) in Gender Diverse Veterans

RESEARCH

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ABSTRACT

It is estimated that over 134,000 American veterans identify as transgender and over 15,000 transgender people are serving in the US military today. As such, the prevalence rates of transgender individuals seeking services at Veterans Health Administration (VHA) facilities have increased and are expected to further increase in the years to come. Historically, transgender veterans have been diagnosed with posttraumatic stress disorder (PTSD) at higher rates in comparison to their cisgender veteran counterparts. This article summarizes what is known about PTSD in gender-diverse veterans and proposes a theoretical model to describe how bio-sociocultural factors in this population may interact to increase the risk of developing PTSD. This article will attempt to identify how these risk factors not only influence the development of PTSD but also impact the severity of posttraumatic symptomology. Consolidating the current academic knowledge for this marginalized population regarding the development of PTSD will also likely aid healthcare providers in making culturally appropriate treatment modifications. Finally, the authors of this article propose a theoretical model to describe how bio-sociocultural factors may interact to increase PTSD risk in gender-diverse veterans.

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Historically, military culture has ostracized and excluded individuals on the basis of their sexual orientation and gender identity (Lehavot et al., 2017). Sexual orientation refers to one's sexual preference and is defined as sexual attraction in relation to the gender in which they are attracted to (American Psychology Association, 2011). Gender identify is defined as a person's perception of their own gender, which may or may not correspond with their assigned birth sex (American Psychology Association, 2011). The term transgender describes a person whose gender identity does not align with their sex assigned at birth (i.e., transgender man, transgender woman, transfeminine person, transmasculine person). Some, but not all, gender expansive or nonbinary individuals may also identify as transgender. Cisgender describes individuals who identify with their sex assigned at birth. Gender expression is defined as a person's behaviors, mannerisms, interests, and appearance that are associated with their gender. In regard to cultural context, gender expression is related to how society views one's level of femininity or masculinity and is believed to be on a spectrum rather than being in a binary (i.e., male versus female) concept (Hughto et al., 2015). Throughout this article we refer to both active-duty personnel as well as veterans who do not identify as cisgender as gender diverse.

It is important to focus on this marginalized sub-group because our current models of psychopathology often do not capture the unique stressors experienced by this specialized minority group. In the United States (US), this sub-group experiences a number of unique challenges related to their gender identities and gender expression (Watson, 2019). These challenges are similar, but not identical, to the stressors often experienced by racial and ethnically diverse member of US minority groups and can give rise to minority stress. Minority stress is defined as chronically high levels of stress faced by members of stigmatized groups as a result of their minority status (Meyer, 2003). Gender-diverse active-duty members may have compounded minority stress associated with their sexual orientation, ethnic and racial background, or other (e.g., religious) minority statuses.

Transgender individuals are stigmatized during interpersonal interactions while seeking healthcare (Sevelius et al., 2014). This is evident when providers misgender gender-expansive veterans. Stigmatization can also occur during probing questions regarding the veteran's transition process that are unrelated to the veteran's referral question (Lutwak et al., 2014). An environment of this nature has been shown to have detrimental impacts on the therapeutic alliance and health outcomes (Kauth et al., 2019).

As noted above, the military has a higher US prevalence of transgender individuals as compared to cisgender people, however, experts have suggested that the US Department of Veterans Affairs (VA) has historically not provided these individuals with gender-affirming care (Sherman et al., 2014). Over the past 10 years the prevalence of veterans diagnosed with Gender Identify Disorder nearly doubled among veterans enrolled in VA services (Blosnich et al., 2013). Given the increasing numbers of transgender veterans accessing VA services, it is vital that we develop culturally responsive treatments to meet the needs of this marginalized population (Kauth et al., 2019). In recent years, the VA has been attempting to adapt a more inclusive policy in order to serve the increasing numbers of veterans within this marginalized population (Sharpe & Uchendu, 2014). This has been done by developing programs such as therapeutic support services (i.e., individual and group-based psychotherapy) as well as offering hormone replacement therapy (Valentine et al., 2019).

Despite efforts to provide supportive treatment programs, transgender veterans have higher overall rates of mental health diagnoses coupled with greater symptom severity (Hughto et al., 2015). This is evident within the VHA as the rate of suicide-related events among veterans diagnosed with Gender Identity Disorder (GID) is more than 20 times higher than rates for the general VHA population (Blosnich et al., 2013). Even with some support provided within VHA for mental health and physical health issues, gender-expansive veterans are less likely to seek help from VHA healthcare professionals in comparison to the cisgender veterans (Kauth et al., 2019). It is believed that this disconnect is being impacted by veterans obtaining non-affirming clinical care or unclear diagnostic profiles and treatment plans (Lehavot et al., 2017). Affirming clinical care has been shown to aid veterans by feeling validated and further developing a strong therapeutic alliance resulting in higher treatment adherence and symptom reduction (Valentine et al., 2019). Studies have shown that developing a culturally competent approach will aid in the overall treatment as well as improve treatment satisfaction (Smith et al., 2018).

Obtaining a clear diagnostic profile and a veteran-centered treatment plan is also vital to effective clinical care (Valentine et al., 2019). An effective clinical assessment and case conceptualization of a veteran's needs is essential for the treatment of complex clinical presentations. This is particularly salient when working with marginalized groups, as it has been noted that groups of this nature benefit from a variety of treatment options specifically focused on their individualized presentation and presenting problem. The transgender veteran population holds a unique combination of physical and mental health needs associated with their dual status of being both a gender diverse as well as a veteran (Ruben et al., 2017). This dual status is believed to increase an individual's risk

of developing PTSD due to the combination of specific pre-military factors and enlistment experiences.

It should be noted that many gender-diverse veterans are able to live successful and healthy lives; however, in comparison to both their cisgender veteran and transgender civilian counterparts, they are believed to be at a higher risk of being exposed to a variety of challenges that increase their likelihood for developing various mental health difficulties (Chen et al., 2017). The most common mental health diagnoses associated within this population are mood disorders, PTSD, and tobacco use disorder (Blosnich et al., 2016).

Current literature provides support for the notion that pre-military experiences influence the development of various mental health difficulties, specifically, the development of PTSD (María-Ríos & Morrow, 2020). Literature also supports the relationship between experiencing chronic gender-diverse discrimination and an increased likelihood of developing of PTSD (McLemore, 2018). However, there is a gap in the literature regarding how these factors interact with each other and how increased trauma exposure and minority stress, both pre-military and throughout enlistment, influence the development of PTSD. In this article, we will outline the unique aspects of trauma responses within the transgender veteran population, discuss specific pre-military risk factors associated with the development of PTSD within the transgender veterans population, and outline a theoretical model to aid providers in understanding the development of PTSD within this marginalized population.

Previous PTSD theoretical models use cognitive behavioral theories to understand the development and treatment of PTSD. These models analyze the interaction between thoughts, feelings, and behaviors. For example, cognitive processing theory suggests that following a traumatic event, veterans can develop associations among objectively safe reminders of the event (e.g., news stories, situations, people), meaning (e.g., the world is dangerous), and responses (e.g., fear, numbing of feelings; Monson et al., 2006; Rauch & Foa, 2006). These associations result in an individual experiencing unwarranted traumatic stress. Another well know theory for the development of PTSD is grounded in social cognitive theory (Benight & Bandura, 2004). According to social cognitive theory, individuals who try to incorporate their experience of trauma into their existing beliefs about oneself, others, and the world often develop maladaptive reasoning of their experience and perceptions of control of self or the environment (i.e., coping self-efficacy). In both models, avoidance of traumatic stimuli sustains PTSD symptomology.

The Deguire model that we are proposing will be looking at how chronic minority stress associated with gender identity effects a veteran following exposure to a combat-related trauma. This model incorporates a variety of cognitive behavior models. For example, much like Rauch and Foa's model (2006), this model is grounded in the belief that, following a traumatic event, transgender veterans are likely to develop traumatic stress in response to a variety of associations attached to reminders of the event. These veterans are also believed to create an internal rationale around the traumatic stimuli and develop maladaptive responses in order to decrease their felt traumatic stress. The Deguire model also incorporates social cognitive theory analyzing how transgender veterans incorporate their trauma experience into their existing belief system. What makes this model a novel approach is the interaction of gender-specific minority stress in addition to how lifetime experiences interact with the development of PTSD.

This model is aimed at understanding how gender identity/expression within a biased culture creates chronic discrimination, which in turn indirectly impacts how an individual perceives social support, and indirectly impacts their ability to effectively cope with traumatic events and experiences during their enlistment. This model's mechanism of change is centered on increasing social support as well as exposure to maladaptive traumatic associations. See ***Figure 1*** for a detailed graphic representation of the Deguire model of PTSD.

THEORETICAL FRAMEWORK

In this section, we present a theoretical framework of the Deguire model of PTSD development within the gender-diverse veteran population. The Deguire model conceptualizes a variety of risk factors for PTSD development within the gender-diverse veteran population integrating concepts that have documented as vital aspects in the development of PTSD. The goal of this model is to further explain how holding both a gender-diverse and veteran identity intersect in regard to the development of PTSD. This model proposes that transgender veterans are at an increased likelihood for developing PTSD following a traumatic event as a result of their exposure to various problematic pre-military factors unique to this marginalized population. Specifically, it is believed that the transgender veteran population is at higher risk of developing PTSD due to an increase in possible trauma exposure as well as chronic minority stress associated with their gender identity. ***Figure 1*** provides a graphic representation of the risk factors and their interplay when combined with various environmental circumstances.

It is believed that the way a transgender individual's gender expression is experienced within their environment

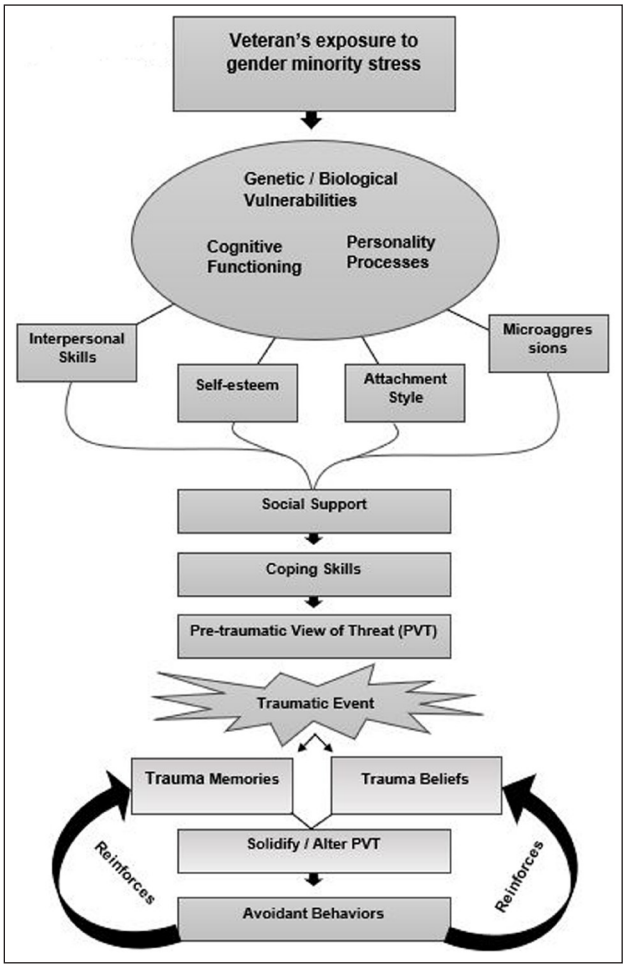

Figure 1 Pictorial Representation of Theoretical Model.

influences the individual's biological vulnerabilities, cognitive abilities, and personality processes. These factors further influence an individual's interpersonal skills, overall self-esteem, attachment style, and distress felt from micro-aggressions. A transgender veteran's perceived social support is believed to be a result of each of these factors combined.

The manner in which an individual internalizes their pre-traumatic experiences affects their perception of and beliefs regarding level of threat or the Pre-traumatic View of Threat (PVT). PVT is likely to fall onto a spectrum ranging from feeling completely safe in their environment, to feeling highly suspicious of others and believing that the world is unsafe. Following a traumatic event, a transgender veteran's traumatic experience would be processed by either assimilating, accommodating, or over-accommodating their belief system (including their PVT).

Assimilation occurs when new information or ideas are blended into an existing schema without deviating fully from the original schema (Payne et al., 2007). This can be problematic because specific information that is not congruent with their current belief system may be disregarded. This cognitive processing system is believed to be heavily influenced by the veteran's PVT. For example, if a transgender veteran views the world as completely unsafe following a traumatic event, the individual would discredit information that supports the idea that the world is relatively safe and assimilate the event to support their internal belief system.

Accommodation is a cognitive process in which new information is learned and the existing belief system changes to incorporate this new information (Payne et al., 2007). Accommodation involves the blending of existing beliefs or ideas in response to new information or new experiences. New beliefs may also be developed during the cognitive process of accommodation. For example, following a combat-related trauma, a transgender veteran might change their initial belief that the world is completely safe to the modified belief that the world is relatively safe, but not while in an active warzone. Accommodation is believed to be the most adaptive form of cognitive processing (Payne et al., 2007).

Over-accommodating occurs when an individual over generalizes the new incoming information by shifting their entire belief system (Muir et al., 2019). For example, if a transgender veteran believes that people are innately good, then, following a traumatic event such as a Military Sexual Trauma (MST), the veteran might over-accommodate their belief system and now believe that the world is completely unsafe and people can't be trusted (Lindsay et al., 2016).

Following exposure to a traumatic event, it is common for individuals to develop intrusive and distressing trauma-related thoughts (i.e., flashbacks, recurrent and involuntary trauma-related memories, or nightmares) as well as negative beliefs regarding the world, self, others, or the trauma. Theses reactions can naturally diminish over time; however, they may also solidify an individual's maladaptive PVT or shift their adaptive view of the world.

The specific coping skills used after a traumatic event strongly influence the development of PTSD and other mental health difficulties. Coping skills can be adaptive or maladaptive in nature. Coping mechanisms can vary and tends to depend upon a variety of personality factors. An individual's resiliency is believed to be a protective factor against developing PTSD (Keating & Muller, 2019). Adaptive copings tend to foster resiliency and healthy processing of traumatic events. Within the transgender population, an individual's resiliency level is impacted by exposure to gender-related discrimination, level of gender-related rejection, and experiences of non-affirmation of gender identity (Testa et al., 2015). A gender-diverse individual's resilience is bolstered by gender-affirming community connectedness (Chen et al., 2017; Cogan et al., 2020).

In regard to PTSD, avoidance is a relatively common maladaptive coping skill used to manage traumatic stress. Following traumatic exposure, it is common for individuals to use avoidant behaviors in an attempt to avoid trauma reminders or any stimuli related to the traumatic event, such as internal or external cues, thoughts, feelings, people, places, activities, and situations (Blakey et al., 2020). Avoidance behaviors are an effort for an individual to withdraw from situations or feelings that may produce trauma-related symptoms. However, over time these avoidant behaviors are believed to not only reinforce the traumatic memories and traumatic beliefs, but also exacerbate traumatic stress which increases the likelihood of developing PTSD.

Within the transgender population, coping with traumatic stress is multifaceted. The veteran's ability to effectively cope is influenced by ongoing minority stressors, various preexisting avoidant coping behaviors coupled with LGBTQ-specific sociocultural influences (Felner et al., 2020). Within the transgender and the veteran population, avoidance has been shown to be commonly expressed through social isolation as well as with substance use (Sexton et al., 2019). For example, within the transgender population it is common for survivors of violent victimization to attempt to cope with the stress of gender abuse through chronic substance use (Felner et al., 2020).

According to the Deguire model, transgender veterans are at a higher risk of developing PTSD due to the unique combination of factors associated with their dual minority identities (i.e., being a gender-diverse veteran). Per this model, the most salient problematic factors are chronic minority stress, limited social support, and an increased likelihood of traumatic exposure. The following sections will discuss the various components associated with the Deguire model. The model will look at similarities to current trauma-based models as well as what makes each factor unique to the transgender veteran population.

MILITARY FACTORS

Despite policy changes in the US armed forces and society in general, gender-diverse active-duty personnel and veterans continue to experience minority stress. On September 20, 2011, the military's Don't Ask, Don't Tell policy was repealed, thus allowing lesbian, gay, and bisexual (LGB) individuals to openly serve in the US military (Kerrigan, 2012). However, it did not lift the ban on transgender veterans (Worthen, 2018).

According to the 2015 US Transgender Survey, a higher proportion of the transgender population can now be classified as a veteran or active-duty status in comparison to their cisgender counterparts. Specifically, 15% of transgender individuals in the US population between the ages of 35 and 54 were classified as veterans, which is three times higher than their cisgender counterparts at 5% (James et al., 2016). Transgender veterans continue to face various challenges. Specifically, this population has to manage the impact of chronic minority stress in relations to their gender identity prior to enlistment, while on active duty, as well as when trying to transition back to civilian life.

This has been shown to be present in a variety of their life experiences and impact their social support, internal stigma related stress, as well as access to VHA services. For instance, active-duty gender-diverse military members often experience minority stress in the form of discrimination during active duty (Chen et al., 2017). It has been shown that these veterans also experience minority stress within the VA healthcare systems (Ruben et al., 2017). Lastly, these veterans are likely to experience additional compounded minority stress within their civilian life (Chen et al., 2017).

Active-duty transgender service members may feel isolated and experience chronic fear of rejection by their fellow soldiers and supervising officers based on their transition status and gender expression (Chen et al., 2017). Gender-diverse active-duty service members experience more interpersonal violence as compared to their cisgender counterparts. This is evident by 17.2% of transgender veterans reporting that they experienced MST while they were enlisted, with specific prevalence rates of 30.0% for transmen and 15.2% for transwomen (Beckman et al., 2018).

Systemic discrimination has been observed by military leadership taking actions to discharge nearly 23% of the transgender service members based on solely their transgender status (James et al., 2016). As such, increased numbers of transgender service members discharge early (19%) from the military to avoid being mistreated or harassed on the basis of their gender identity (James et al., 2016).

PRE-MILITARY FACTORS

Pre-military factors combined with trauma history puts gender-diverse veterans at increased risk of developing PTSD. These factors include genetic/biological vulnerabilities, cognitive functioning, level of perceived social support, and exposure to previous traumatic events. The ongoing nature of problematic pre-military factors may not only further increase the likelihood of developing PTSD but also increase the severity of symptoms. Therefore, clinicians must be aware of the specific impact these pre-military factors

might have on veterans within this marginalized group. Understanding the impact of the risk factors associated with this population on the development and maintenance of PTSD is critical to making current treatment modalities more culturally competent and tailored to the specific needs of gender-diverse veterans (Pelts et al., 2019).

Pre-military factors are factors that an individual holds prior to their enlistment in the military. These factors are believed to affect an individual's ability to transition back into the civilian realm by influencing how the individual copes with situations experienced throughout enlistment (Elliott et al., 2019). Consequently, problematic pre-military factors are thought to increase the difficulty for an individual to effectively transition back into civilian life. For the purpose of this review, these factors have been categorized into the following five groups: an individual's (a) specific genetic/biological vulnerabilities, (b) cognitive functioning, (c) personality traits, (c) level of perceived social support, and (d) exposure to previous traumatic events.

It is believed that problematic pre-military factors not only increase the likelihood for developing PTSD, but also influences overall symptom severity. For example, a gender-diverse veteran with limited to no social support prior to enlistment has an increased likelihood of developing symptoms such as re-experiencing, social avoidance, and hyperarousal following exposure to a traumatic event in comparison to a gender-diverse veteran with sufficient pre-military social support (Nillni et al., 2014). It is also believed that repeated exposure to problematic pre-military factors, or exposure to a variety of these factors, will increase the likelihood of developing PTSD (Arenson, 2019). This is particularly relevant within the gender- diverse veteran population, due to their increased likelihood of being exposed to a variety of these problematic pre-military factors in addition to increased risk of experiencing chronic discrimination while enlisted. It is hypothesized that these pre-military factors, combined with the experiences exposed to while enlisted, place gender-diverse veterans at a higher risk of developing PTSD following exposure to a traumatic event.

BIOLOGICAL VULNERABILITIES

It is important to note that merely holding a gender-diverse identity does not genetically place an individual at an increased risk for developing PTSD. The Deguire model uses a similar theoretical framework as the biopsychosocial model in terms of accounting for genetic and biological factors as well as social and psychological influences. However, this portion of the model is developed for evaluating how gender-diverse individuals not only hold the same likelihood for being born with the genetic vulnerabilities as those within the cisgender population, but also have additional factors that might influence the development of PTSD from a biological standpoint.

It is known that genetic and biological vulnerabilities have the ability to increase the likelihood of an individual developing addictive behaviors or experiencing a variety of other mental health difficulties such as PTSD (Kevorkian et al., 2015). Within this article, genetic vulnerabilities are defined as heritable traits which result in genetic risk regarding the development of mental health difficulties following deployment-related trauma (Schür et al., 2019). Biological vulnerabilities can be characterized by how an individual experiences situation through internal processes and how it influences an individual's physiological responses (María-Ríos & Morrow, 2020). Genetic vulnerabilities are known to influence an individual's biological and physiological reactivity.

The specific genetic vulnerabilities that are believed to have the strongest influence in the development of PTSD are response sensitivity, hippocampal size and volume, and hormonal imbalances (Schultebraucks et al., 2019). For example, individuals born with greater anxiety sensitivities are believed to be more prone to developing PTSD following exposure to a traumatic event (Schultebraucks et al., 2019). This phenomenon has been explained through various molecular genetic studies in which a cisgender individual's inherent neuroendocrine level of serotonin, catecholamines, and glucocorticoids increases the likelihood of developing PTSD following exposure to a traumatic event (Nillni et al., 2014).

McDuffie and Brown (2010) noted that, as a response to chronic gender dysphoria, transgender individuals have historically attempted to reject their felt gender identity and join the military in order to "purge their transgender feelings" (p. 23). In actuality, this increases a transgender individual's chance of experiencing additional chronic stress associated with enlistment (Tucker et al., 2019).

Environmental experiences, such as minority stress, can impact an individual's biological vulnerabilities, which would likely impact an individual's likelihood for developing PTSD (Flentje et al., 2020). Chronic minority stress associated with a transgender individual's gender identity has also shown to be associated with biological changes which influence the likelihood of developing PTSD (Flentje et al., 2020). For example, a gender-diverse service member who experienced chronic minority stress prior to enlistment is likely to have higher cortisone levels due to the chronic stress, and in return can be more impacted by a traumatic event (Flentje et al., 2020).

Furthermore, there is believed to be a linked relationship between increased minority stress and biological impact. Studies have linked minority stress with various overall physical-health outcomes, specifically, immune response,

HIV-specific outcomes, cardiovascular outcomes, metabolic outcomes, cancer-related outcomes, and hormonal outcomes (Flentje et al., 2020). In regard to PTSD development, chronic minority stress compounded with combat exposure leads to an increased likelihood of developing PTSD. Specifically, individuals exposed to increased minority stress experience a higher baseline of C-reactive protein (CRP) and interleukin-6 (IL-6; Wardecker et al., 2020). Increased numbers of CRP have been shown to increase a variety of mental health difficulties including PTSD (Congio et al., 2020). In conclusion, it is believed that transgender veterans are at a higher risk of developing PTSD due to not only possible genetic components that can be inherited by both cisgender and gender diverse individuals, but also due to biological factors that are impacted by chronic minority stress.

COGNITIVE FACTORS

Cognitive factors are characteristics that influence how an individual performs academically, professionally, as well as socially (Muir et al., 2019). The cognitive factors of the Deguire model were derived from a combination of various cognitive behavioral model for PTSD (Brown et al., 2019). Specially, it draws from the work conducted by Patricia Resick and Edna Foa in in the late 1990's. This model integrates concepts such as cognitive stuck points and cognitive distortions as components to support the theoretical framework (Foa et al., 1999; Monson et al., 2006). The cognitive factors believed to impact the developing PTSD include attention, memory, mental flexibility, and reasoning. These factors serve to modulate an individual's functioning by improving or reducing an individual's ability to learn and adapt in a given circumstance (Kleim et al., 2012). Potential problematic cognitive factors that are in place before an individual's military enlistment can influence the development of posttraumatic symptoms (Samuelson et al., 2019). These specific factors include cognitive rigidity, impaired neuropsychological functioning, and internalized cognitive biases or negative attributional processing styles (Bomyea et al., 2012). These cognitive factors have the ability to influence the severity of posttraumatic symptomatology as well as increase the likelihood of developing PTSD (Meyer et al., 2019).

Cognitive rigidity and engrained fear-based internal biases are often found within the veteran population. Military culture is developed through creating an effective, context-relevant cognitive-appraisal system within each of the service members (Smith et al., 2018). It has been observed that the same social-cognitive-affective appraisal processes that promote survival while in the combat settings may also serve as a maladaptive cognitive appraising system during the transition process from active-duty service member to civilian (Elliott et al., 2019). For example, this rigid cognitive processing often promotes high levels of dissatisfaction with life and post-combat cynicism as well as increases the likelihood of developing PTSD following exposure to a traumatic event (Smith et al., 2018). This has been shown by cisgender veterans experiencing difficulty adjusting back into civilian life post deployment.

Increased risk of experiencing impaired neuropsychological function due to combat exposure is also a unique characteristic associated with the veteran population. Specifically, post- explosion, individuals have been shown to score lower on measuring of focused attention, memory, and executive functioning (Baker et al., 2018). These neuropsychological impairments have the abilities to further influence the development of PTSD (Bomyea et al., 2012).

Within the transgender population, minority stress related to gender identity is associated with experiencing chronic cognitive rumination as well as psychological distress (Sarno et al., 2020). Cognitive ruminations are a type of perseverative thinking often focused on negative content (Isaksson et al., 2020). The internalization of marginalized stigmas is a common byproduct of these cognitive ruminations (Timmins et al., 2019). Over time these stigmas have the ability to become engrained into one's internal cognitive processing system and may result in a negative attributional style of processing in regard to themselves (identity-based rejection sensitives) or others (interpersonal rejection sensitivities; London et al., 2020). Negative attributional styles of cognitive processing have been shown to influence the development of various mental health difficulties (Lindquist et al., 2017).

Transgender individuals experience two common internalized affective responses in accordance to anticipatory mistreatment and past experiences. These affective cognitive responses are internalized heterosexism (IH) as well as internalized transphobia (IT; Puckett et al., 2018). IT refers to the internalization of stigma, stereotypes, and negative views of gender minorities (Vargas et al., 2020). Such internalizations have been shown to affect individual's self-esteem and increase the risk for developing mental health difficulties (Sánchez & Vilain, 2009).

Transgender veterans are believed to be at risk of being influenced by both problematic pre-military cognitive factors associated minority stress, as well as factors associated with military training and enlistment experiences. Problematic cognitive factors have the ability to influence coping styles and effective processing. The specific cognitive factors, listed above, place this marginalized population at an increased risk for developing PTSD following a traumatic event.

ENVIRONMENTAL FACTORS

This portion of the Deguire model demonstrates how individual personality facets within specific environments might increase an individual's likelihood of experiencing traumatic events. This portion also integrates the impact of minority stress on personality within both the active-duty and civilian environment. An individual's environment is considered to be the surroundings or conditions in which they live or function (Davis et al., 2019). It is believed that how an individual interacts with their environment is considered one facet of an individual's personality. Personality is defined as a set of behaviors, cognitions, and emotional patterns that evolve from biological interactions and are exhibited through how an individual interacts with their environment (Meyer et al., 2019). Personality is a multi-faceted characteristic of an individual, and consists of an individual's attachment style, coping skills, emotion regulation strategies, decision-making style, and resiliency factors (Weiss et al., 2020). These personality facets will likely influence how individuals process their experiences following a traumatic event.

One aspect of personality that likely influences the development of PTSD is an individual's innate level of impulsivity. It is believed that without the presence of adaptive coping skills, an individual with inherent impulsivity may exhibit higher levels of risk-seeking behaviors which, in return, will likely increase the individual's exposure to traumatic events (Contractor et al., 2020). As such, without adaptive coping skills in place, innate impulsivity is likely to influence the expression of PTSD symptomology.

In addition to transgender veterans having the same likelihood of developing these specific personality characteristics as a cisgender veteran, it is also believed that gender-diverse veterans can experience additional problematic personality patterns. Specifically, in response to the minority stress, transgender veterans are at risk of developing an internalized rejection sensitivity (RS; Meyer, 2020). RS is described as how aware an individual is to possible rejection as well as how rejection impacts an individual's functioning (Meyer, 2020).

As a result of chronic minority stress associated with discrimination based on gender expression and gender identity, transgender individuals have historically had higher levels of negative ruminations related to RS (McLemore, 2018). Over time, these negative ruminations associated with possible rejection negatively impacts a transgender individual's self-esteem, interpersonal skills, and how they interact within their environment (Van den Brink et al., 2019). Low self-esteem influences personality expression by creating an internalized expectation of rejection and indirectly alters an individual's interpersonal skills (London et al., 2020). Specifically, these ruminations tend to affect an individual's openness and willingness to socially engage with others (Van den Brink et al., 2019). These underlying personality features associated with chronic minority stress often create muted interpersonal skills, which in turn influences social interactions.

It has been shown that chronic fear associated with experiencing discrimination tends to not only weaken interpersonal skills, but also enhance maladaptive coping styles (i.e., substance use; Keuroghlian et al., 2015). This has been demonstrated by higher drug abuse rate among the transgender population (Hill & Gunderson, 2015). Likewise, this chronic discrimination places transgender individuals at a higher risk for encountering interpersonal isolation (Galupo et al., 2019). Limiting social interactions has the ability to enhance underlying personality difficulties that might be normally masked by adaptive coping skills. For example, increased social isolation has been shown to enhance underlining trait anxiety and foster an environment that precipitates negative emotions towards one's self and the world. Over time, transgender individuals are believed to internalize these negative messages as a perceived level of worth or threat. This internalization influences how an individual may view themselves as well as how they view their place in the world. This internalized cognitive schema influences the level of perceived safety and trust a transgender individual might experience. An individual's pre-traumatic perceived level of threat has the ability to influence an individual's likelihood of developing PTSD following a traumatic event (Bomyea et al., 2012). As such, gender-diverse veterans are believed to be at risk of developing PTSD associated with the impact of chronic minority stress on their internal as well as external personality factors.

PERCEIVED SOCIAL SUPPORT

This portion of the Deguire model explores the impact of social support on the development of PTSD. Social support is defined as the perception that an individual is cared for, has assistance available from others, and feels supported in a social network (Ross et al., 2020). Social support may come in the form of tangible support (e.g., financial assistance) or intangible support (e.g., guidance) and may provide emotional support (e.g., validation) or informational support (e.g., advice; Bentley et al, 2020). Social support has been known to come from many sources, such as family, friends, pets, neighbors, coworkers, organizations, etc. (Lee et al., 2020). Limited social support is one of the leading factors for the development of cognitive distortions, social alienation, and other various psychological difficulties (Stanley et al., 2019). The novel component of this model is the integration of exploring how chronic minority stress and veteran identity impact how an individual perceives their level of social support.

Exposure to discrimination has a negative association with life meaning and one's self-identity due to expectations of social rejection (Douglass et al., 2020). Internalized expectations of social rejection and decreased self-esteem are both expected to influence an individual's perceived social support and have direct and indirect associations with the development of PTSD symptoms (Chen et al., 2019). Internalized expectations of social rejection may increase social isolation, despite social resources, and exacerbate feelings of loneliness. This internalized expectation of rejection is likely fueled by a fear of social rejection in response to minority stress as well as past experiences of discrimination (London et al., 2020). Increased social isolation and lack of social resources both influence the development of posttraumatic distress (McIlveen et al., 2019). Specifically, chronic fear and anxiety associated with anticipating social rejection exhausts an individual's will and drive to actively engage in life and utilize adaptive coping skills. As a result, an individual may heavily rely on the avoidance of relationship attachments to cope with their distress, which research has shown to contribute to the development, as well as maintenance, of PTSD (Keating & Muller, 2020). This is vital, as fear of rejection has the ability to limit veteran-to-veteran interactions/social support, which in return would further limit transgender veterans from feeling validated or connected to a community.

Lack of social support and perceived belonginess to a social group has also been associated with an increase in PTSD symptom severity (Stanley et al., 2019). It is believed that social support is influenced by an individual's culture and access to resources (Chen et al., 2019). Limited supportive social relationships and resources within the transgender community have been demonstrated through transgender men reporting constant fears of losing significant relationships (e.g., with romantic partners, parents, close friends, and children), losing their employment, and being victimized in public settings based solely on their gender expression (Galupo et al., 2019). As an individual's social support decreases, the individual's fear and psychological distress increases (Stanley et al., 2019). This leads to a maladaptive pattern in which exposure to a traumatic event is paired with limited support and resources resulting in an increased likelihood for developing PTSD.

In addition to the quantity of social support, the source of social support also impacts an individual's perceived level of social support (Bronfenbrenner, 1979). For example, family acceptance-rejection plays an important role in the psychosocial adjustment for transgender individuals. It was shown that caregiver indifference and sibling acceptance are associated with better mental health outcomes (Pariseau et al., 2019). On the other hand, chronic misgendering by close relationships has been shown to have a negative impact on an individual's perceived social support (McLemore, 2018). Specifically, a transgender individual who is chronically misgendered is likely to perceive their level of social support to be less than an individual who experiences affirming language regardless of the individual's actual level of support. As a result of the social factors listed above, it is believed that transgender veterans are more susceptible to experiencing decreased social support which increases their risk for developing traumatic stress disorders.

EXPOSURE TO TRAUMATIC EVENTS

This portion of the model integrated a variety of trauma-based theories. This model used concepts from well-researched cognitive models (Monson et al., 2006) as well as behavioral models (Foa et al., 1999) to aid in explaining the development of PTSD. Many of the trauma theory components within this portion of the model are laid out in the introductory portion of this article. However, the unique factors of this model include the ingratiation of pre-military chronic minority stress, the impact of a non-affirming enlistment environment, as well as post-deployment experiences, and how these factors influence the development of PTSD.

The American Psychiatric Association defines a traumatic event as an event in which an individual is exposed to death, life-threating experiences, actual or threatened serious injury, or actual or threatened sexual violence (American Psychiatric Association, 2013). In order to develop PTSD, individuals must be exposed to at least one of these events by direct exposure, learning that a relative or close friend has been affected, or indirect exposure to aversive details of the traumatic event (American Psychiatric Association, 2013). Transgender individuals experience higher levels of discrimination-based trauma exposure, which are often interpersonal in nature (Shipherd et al., 2018; Valentine & Shipherd, 2018). As such, we can hypothesize that gender-diverse individuals are more likely to have experienced traumatic experiences prior to enlistment in comparison to cisgender recruits. It is known that exposure to multiple traumatic events over the course of an individual's life increase the risk of developing PTSD (Finley et al., 2020).

Non-traumatic events such as the harassment, marginalization, and discrimination experienced by transgender individuals, also has detrimental effects (Livingston et al., 2020). Many of these nontraumatic events result in chronic stress associated with specific aspects of an individual's identity. In recent literature, it was noted that exposure to chronic stressful situations not classified as traumatic events also increase an individual's likelihood of developing PTSD following the exposure to a traumatic event (Feinstein et al., 2020). Specifically, within

the transgender veteran population an individual might experience chronic stress associated with their gender express or even their veteran identity. These nontraumatic stressful events may include episodes of discrimination, chronic misgendering, or minority stress (Galupo et al., 2019). Over time, repeated exposure to these events is known to increase the likelihood of developing mental health difficulties such as PTSD (Bomyea et al., 2012). For example, experiencing chronic racism or transphobia contributes to an increase in PTSD among racially/ethnically diverse sexual and gender minorities (Vargas et al., 2020).

Merely holding either a veteran identity or gender-diverse identity does not innately place you at a higher risk of developing PTSD. Rather, the experiences an individual is exposed to throughout their lifespan influences this population's likelihood of developing PTSD (Shipherd et al., 2011). The transgender veteran population is commonly exposed to higher levels of daily stressors such as discrimination within their civilian life, while on active duty, as well as post deployment. Over time, exposure to these nontraumatic stressful events have the likelihood to result in rumination based on victimization, microaggressions, and internalized stigmas (Regan, 2019). These cognitive ruminations are likely to influence one's self-esteem and increase traumatic stress following a traumatic event. As such, avoidant maladaptive behaviors are likely to be integrated into an individual's coping style in an attempt to manage non-gender affirming environments. This pattern is likely to influence the development of PTSD. This pattern of chronic exposure to minority stress across a variety of settings not only increases the likelihood of developing PTSD following a traumatic event but is also believed to increase symptom severity (Woulfe & Goodman, 2020).

DISCUSSION

The transgender veteran population is a highly specialized group (Kauth, 2012). These individuals hold multiple minority statuses. As transgender individuals, they have a dysphoric feeling regarding their assigned sex and socially normalized gender expression (Blosnich et al., 2013). Holding a veteran status is characterized by these individuals serving in the military, an experience which puts this population at increased risk of experiencing traumatic events (Blosnich et al., 2016). There is a large body of research examining PTSD development in both veterans and the transgender population. However, there has been minimal research looking at how the intersection of these two identities influence the development of PTSD following exposure to a traumatic event. This review has looked at the development of PTSD following deployment and exposure to a traumatic event within this highly marginalized population. As rates of transgender veterans increase within the veteran's healthcare system, it is imperative to fully understand the impact of minority stress on this population in order to aid in assessing and addressing any unmet needs. Additional insight into this issue and the impact these intersecting identities have on the development of PTSD will also further aid in the development of culturally informed treatment options (Sharan et al., 2019).

As noted above, lesbian, gay, and transgender (LGBT) VHA users have significantly increased within the VHA over the years, along with an increase in system-wide staff training to raise awareness and competency of VA providers on LGBT care (Kauth et al., 2019). However, transgender veterans are often overlooked, and their unique needs frequently remain unaddressed. This article addresses this issue by providing a conceptional framework regarding how the unique dual identities of being a gender-diverse veteran interface with the likelihood of developing PTSD following a traumatic event. Understanding their risk factors can help clinicians improve their conceptualization of PTSD within this marginalized population and, in return, assist them in tailoring treatment in a culturally competent manner (Sharan et al., 2019). Working in a culturally competent manner is goal within all VHA facilities and requires providers to be able to identify how various sociocultural factors interact and contribute to an individual's unique clinical needs (Kauth et al., 2019). As noted throughout this article, transgender veterans are disproportionately affected by PTSD in comparison to their cisgender- veteran counterparts. Various pre-military factors (i.e., minority stress and limited social support) and enlistment experiences are likely to play an important role in transgender veterans developing PTSD (Keating & Muller, 2019). Therefore, clinicians must recognize the impact of minority stress and other problematic pre-military factors when working with this marginalized group in order to make appropriate recommendations and accurate diagnoses (Im et al., 2020).

A major limitation of this study is the limited amount of research about the transgender veteran population. This is likely a product of not only the societal view of gender diversity, but also the military view on gender-diverse active service members. As military culture shifts, it is important that future studies explore the impact of minority stress on transgender veterans within the realm of other mental health disorders as well as further studies aiding in identifying specific resources to effectively treat PTSD within the gender-diverse veteran population. Further studies that would also be beneficial to this marginalized population would mirror studies looking at increasing resiliency and

other sociocultural factors to foster community connection while on deployment. This would likely start to diminish the impact of minority stress, decrease PTSD rates within the gender-diverse veteran population, and foster hope, acceptance, and validation.

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COMPETING INTERESTS

The authors have no competing interests to declare.

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