The effects of masculine honor beliefs and beliefs in mental health stigma on honoring and supporting physical versus psychological injury in the military

by

Ashley A. Schiffer

B.A., Kalamazoo College, 2019

A THESIS

submitted in partial fulfillment of the requirements for the degree

MASTER OF SCIENCE

Department of Psychological Sciences
College of Arts and Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2023

Approved by:

Major Professor
Dr. Don Saucier

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Abstract

Many members of the military suffer injury as a result of their service, physically and/or psychologically, but these injuries are stigmatized differently (Goffman, 1963). Individual differences in Masculine Honor Beliefs (MHB; i.e., beliefs about men's values and behaviors, specifically that aggression is sometimes justifiable; Saucier et al., 2016) and in beliefs about mental health stigma likely affect perceptions of these different military injuries. For instance, although MHB are likely prevalent in the military, given its culture of honor (Saucier & McManus, 2014), individuals higher in MHB are less likely to believe combat contributes to PTSD and tend to discourage public discussion of mental health (Lawless et al., in preparation). In fact, the values of toughness and self-sufficiency that are promoted in both the military and honor cultures can contribute to increased beliefs in mental health stigma (e.g., Hoge et al., 2006). This research will assess how MHB and beliefs in mental health stigma (as assessed by the Endorsed and Anticipated Stigma Inventory; EASI; Vogt et al., 2014) relate to perceptions of how deserving each type of injury is in terms of military honors (Study 1) and monetary allocations between two veterans organizations (Study 2). Specifically, Study 1 will explore support for recognizing PTSD in Purple Heart qualifications, a military honor traditionally reserved for physical injuries. In Study 2, participants will allocate $1,000 between two veterans organizations: one that supports veterans with physical injuries and one that supports veterans with psychological injuries. This program of research has great theoretical implications for the nature of MHB in perceptions of military mental health as well as practical implications in terms of who supports the military's recognition of psychological injuries in military honors and how they allocate money toward helping veterans with these injuries.

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Acknowledgements

I have been very fortunate to experience the support of so many while conducting this research and writing my thesis. First, I would like to thank my advisor, Dr. Don Saucier, for his mentorship throughout my graduate career thus far as well with this project specifically. I would also like to thank my committee members, Dr. Jin Lee and Dr. Barbara Pitts, for not only their feedback on and recommendations for this research, but also for their flexibility in the completion of my thesis. The guidance I received from my committee is much appreciated and bettered the quality of this research. Finally, I would like to express my gratitude toward the other graduate students and faculty within the Department of Psychological Sciences, especially those in the Saucier Lab, for their continued support and encouragement.

Chapter 1 - Introduction

Many members of the United States (US) military suffer physical and/or psychological injury as a result of their service. However, these two types of injury are often perceived quite differently within the US military, due to the differing extents to which they are stigmatized. Public stigma can be defined as negative attitudes toward someone based on (perceived) difference/s and subsequent devaluation of them (Dovidio et al., 2000). In the military, physical injuries are often the basis for military honors (e.g., the Purple Heart) whereas psychological injuries have historically been viewed as one's own weakness (Pols & Oak, 2007). The current research investigates how physical versus psychological injuries differ in terms of the military awarding honors (e.g., the Purple Heart) to recognize these injuries (Study 1) and monetary allocations toward helping veterans with these injuries (Study 2).

Given the military's honor values (e.g., Westhusing, 2003) and historic mental health stigma (e.g., Tanielian & Jaycox, 2008), I argue Masculine Honor Beliefs (MHB; i.e., the prioritization of having a tough social reputation) and beliefs in mental health stigma are negatively associated with respecting psychological injuries in the military. Accordingly, I examined how individual differences in MHB and beliefs in mental health stigma relate to honoring service members (Study 1) and supporting veterans with (Study 2) physical versus psychological injuries. This program of research has great implications for how individual differences in MHB and beliefs in mental health stigma relate to perceptions of veterans as deserving military honors and monetary support as a function of the type of injury they have: either physical or psychological.

Military & Honor Cultures

Military Culture

The US military (also known as the armed forces) is designed to defend the US by maintaining national security. The division of labor within military varies by branch (e.g., Army, Navy, Air Force, Marine Corps, Coast Guard), type of duty (e.g., active, reserve), and rank (e.g., lieutenant, private). Despite the varied responsibilities throughout the military, there are some unifying cultural characteristics of the US military. Broadly speaking, military culture is a system of written and unspoken values, traditions, and behaviors that are reflected in rank structure and lifestyle (Gibbons et al., 2014), which manifest in "military ethos". Military ethos connects a service member's identity with the military's core values (e.g., integrity, selfless service) and skillsets required to serve one's country. Like warrior ethos, military ethos involves themes of discipline, not giving up, and never leaving another service member behind (Gibbons et al., 2014). Overall, military culture and ethos manifest in both the military's organizational culture and values.

Organizational Culture

There are three characteristics that make military culture unique from that of other organizations: the role of personal life, the presence of a strict hierarchy, and the importance of compliance (Lang, 1965). First, with respect to personal life, civilian businesses often encourage personnel to have private lives and leisure time whereas military personnel are expected to have a more demanding commitment to their organization. Moreover, this is likely reinforced by military personnel's communal and uniformed lifestyle (which decreases individuality) as well as their social and geographical isolation from society (Soeters et al., 2006). Second, the military follows a stricter hierarchy compared to most business sector organizations in which the

discrepancy of power within the military follows a strong, vertical social order that depends on one's power or status. Third, military organizations tend to have a much stronger rule orientation (i.e., compliance with orders) than civilian businesses. Obedience and compliance are often instilled through discipline, which 1) provides norms of what is acceptable and important to the organization, 2) establishes and clarifies the ingroups and outgroups between supervisors and personnel, and 3) increases one's identification with the organization (Arvey & Jones, 1985). Failure to comply with orders in such a culture is often met with overt punishment. Overall, this organizational culture defines the overarching norms and practices that make the military unique as an organization, but there are also more specific values that are central to military culture.

Values

Beyond organizational structure and expectations, there are certain values the military upholds that contribute to its culture or ethos. For example, mottos like "excellence in all that we do" and "selfless service" reflect a "duty first" mindset that is somewhat unique to the military (Meyer, 2015). Additionally, although there are underlying themes of obedience, discipline, and respect across all branches, the Army has an acronym for their values, LDRSHIP: Loyalty, Duty, Respect, Selfless Service, Honor, Integrity, and Personal Courage (Hooyer, 2012). It seems that many of these specific values can be conceptualized within the broader construct of honor.

Honor. Honor is not only explicitly identified as a core military value (e.g., Hooyer, 2012; Westhusing, 2003), but it also appears in mottos like "Death before Dishonor," highlighting the fact that service members would rather die than dishonor their country (or themselves; Saucier & McManus, 2014). Although there are many different types of honor relevant for the military (e.g., National Honor, Officer Honor), Westhusing (2003) maintains that Southern Honor is the truest (and most powerful) form of military honor. Southern Honor meets the demanding military honor definition that requires the moral virtues of both greatness of mind

(i.e., love of oneself; e.g., pride) and extended benevolence (i.e., love of others; e.g., protection [of justice systems]). The mere presence or embodiment of such virtues is not sufficient, service members must possess them in their extremes: "Both virtues for the warrior are deeply rooted in and expressive of a common life for which he is prepared to die." (Westhusing, 2003, p. 200). As its name suggests, Southern Honor resembles the ideologies and lifestyles of the American South, a region that can also be classified as a culture of honor.

Honor Cultures

Honor cultures are those that prioritize the management and protection of one's reputation as tough (e.g., Cohen & Nisbett, 1994). Such cultures are thought to originate from herding lifestyles because cattle were men's livelihoods, but were also vulnerable to being stolen, and this vulnerability threatens a man's ability to provide for himself and his family (e.g., Brown, 2016; Nisbett, 1993). In other words, social disorganization (e.g., lack of law enforcement) reinforces the culture of honor (Cohen et al., 1998) such that this lifestyle encouraged herders to not tolerate any disrespect and to treat threats to their livelihood seriously and/or aggressively. Moreover, men in honor cultures were not only expected to embody traditional masculinity (e.g., strength, toughness; Brown, 2016), but to display their power and dominance in order to deter future threats (e.g., Cohen et al., 1996). These beliefs remain prominent in the American South as evidenced by more recent state-level honor ideology research (e.g., Barnes et al., 2012b), likely due to the socialization of these values across generations (Cohen & Nisbett, 1994; Romo-Figeroa et al., in preparation).

Consistent with Vandello and Bosson's (2013) notion of precarious manhood, the crux of honor cultures is that men earn, display, and maintain their manhood. Thus, responses to insult and/or threat can vary as a function of honor. In terms of insults, when participants were insulted

and felt shame as a result, individuals with lower honor endorsement tended to withdraw whereas individuals with higher honor endorsement more often expressed disapproval of the insulter, presumably as a way to regain their social image or reputation (Mosquera et al., 2008). In terms of responding to threats, honor cultures are more accepting of violence than nonhonor cultures, but only in certain circumstances like self-defense (Hayes & Lee, 2005). For example, individuals from honor cultures were more likely to sympathize with honor-related violence (e.g., family insults) given that this violence was used to protect one's reputation and values (Cohen & Nisbett, 1997).

Honor ideology has been conceptualized in many different ways. Honor can be thought of as a regional (or cultural) variable, one that is particularly prevalent in the American South (e.g., Cohen & Nisbett, 1994; Cohen et al., 1996). But this can be broken down to the state-level, in which Southern or Western US states are categorized as "honor" states (e.g., Virginia) and others are categorized as "nonhonor" states (e.g., Michigan) based on the US Census Bureau (e.g., Cohen, 1998). Additionally, masculine honor ideology can be conceptualized as an individual difference, such as Masculine Honor Beliefs (MHB; Saucier et al., 2016). More recent research argues MHB are not geographically limited to a given region or state and that regional differences in honor-related variables are fully mediated by MHB (Saucier et al., 2018a). Accordingly, the current research used the Masculine Honor Beliefs Scale (MHBS) from Saucier et al. (2016) to measure individual differences in MHB to provide insight on how such an ideology relates to beliefs in mental health stigma directed toward military personnel.

Masculine Honor Beliefs (MHB)

Consistent with honor cultures, MHB reflect individual differences in the beliefs that aggression (or violence) is necessary and justifiable in response to provocation or in the

protection of oneself or others (e.g., Saucier et al., 2016). This means one's social reputation and their defense of it are the core values associated with MHB. In particular, MHB are positively associated with wanting to have a tough social reputation (Saucier et al., 2018b) which is likely fueled by competitive social beliefs about societal success (Saucier et al., 2018c). Thus, the questioning of one's masculinity (Saucier et al., 2015b) and romantic rejection (Stratmoen et al., 2018, 2020) are particularly insulting for individuals higher in MHB. Additionally, MHB are not only positively associated with favorable third-person attitudes toward undergraduate hazing (e.g., thinking hazing is all fun and games or demonstrates someone's manliness), but also longer (hypothetical) first-person hazing endurance (Schiffer et al., 2021b). This concern regarding one's social reputation even manifests in decision-making in hypothetical life-or-death moral dilemmas. For instance, MHB consistently predicted socially-motivated decision-making (to better one's reputation; e.g., to be the hero) in both military and nonmilitary dilemmas (Schiffer et al., 2020) as well as dilemmas related to the COVID-19 pandemic (Schiffer et al., 2021a). Thus, it is clear that maintenance and protection of one's social reputation is of great importance for those higher in MHB, and such individuals tend to go to great lengths to demonstrate their toughness to others.

Given that both masculinity (e.g., Vandello & Bosson, 2013) and honor (e.g., Saucier et al., 2016) are precarious constructs, individuals higher in MHB prioritize the protection and defense of oneself and others (Saucier & McManus, 2014). Accordingly, MHB are positively associated with not only believing honor threats should be confronted (O'Dea et al., 2018) but also that fights should be won by any means necessary (O'Dea et al., 2019). Such defenses of one's honor also have implications for their social reputation. For example, MHB predicts greater perceived manliness of men who fight when (either himself or his significant other is)

threatened and lower perceived manliness of men who walk away from a threat (O'Dea et al., 2017). Beyond responding to threat or insult though, MHB are also often associated with a desire to repel threats, which can manifest in greater muscularity concerns and motivations for men to engage in weightlifting to both defend themselves and intimidate others (Saucier et al., 2018b). Accordingly, individual differences in MHB are particularly relevant for the military and military-related topics (e.g., responses to national security threats, patriotism) due to the overlap between military culture and cultures of honor.

The Overlap Between the Military, Honor Cultures, & MHB

First and foremost, the military's historic honor values are thought to have inspired military units to engage in battles in which they are severely outnumbered, lowering their chance of success and/or survival. This, in addition to the Japanese samurai engaging in seppuku (i.e., intentional self-disembowelment to restore one's honor) can be further evidence of the "Death before Dishonor" principle (Saucier & McManus, 2014). Similarly, honor cultures, or leaders from honor cultures (e.g., Presidents from the South), may be more likely to engage in intergroup conflict generally (Nawata, 2020), but also for longer, with more force, and with a greater likelihood of winning (Dafoe & Caughey, 2016). This is thought to be the case because conflict provides warriors or leaders with opportunities to amplify their reputations through social rewards (e.g., praise). As potential evidence of this, soldiers from honor states received significantly more Congressional Medals of Honor for (often fatal) acts of bravery compared to soldiers from nonhonor states during World War II (Brown et al., 2011, unpublished). Somewhat similarly, members of the Canadian Forces who rated their peers as more honorable felt a stronger sense of duty which, in turn, predicted a greater willingness to sacrifice their own life in combat (Mandel & Litt, 2013).

Honor ideology is positively associated with support for militant responses to terrorism (Barnes et al., 2012a), similar to MHB's positive relationship with support for military action (even for self-serving purposes; e.g., revenge; Saucier et al., 2018c) and aggressive security policies (e.g., increased domestic spying; increased restrictions on immigration; the detainment, torture, and/or assassination of individuals who pose threats to national security; Saucier et al., 2018c). In other words, individuals higher in MHB are more willing to accept the risks associated with military action/aggression to maintain national security. Perhaps this could be explained by the fact that honor ideology is positively associated with internalizing the nation's identity as part of one's self-concept (Barnes et al., 2016) which makes any threat to the nation, a threat to oneself (Barnes et al., 2014).

In line with this idea, honor ideology is positively associated with blind patriotism, a noncritical allegiance to and sense of infallibility toward one's country (Schatz et al., 1999). Accordingly, not only was honor ideology associated with greater support for children's allegiance education (e.g., singing the National Anthem), but also a greater desire to punish those who fail to comply with such education (Barnes et al., 2016). Similarly, individuals higher in MHB were more likely to disapprove of NFL players taking a knee during the National Anthem (to protest police brutality) because they perceived this as disrespectful to the country (Stratmoen et al., 2019). Similarly, research suggests cultures of honor, specifically the American South, relate to military service itself and one's perceived value of such service.

In terms of military service itself, the rate of Army recruitment is significantly higher in honor states compared to nonhonor states (Brown et al., 2014a). Moreover, Southern high school students planning to enlist in the military (compared to going into the civilian workforce) after graduation reported higher integrity (e.g., less lying and cheating) whereas the opposite was true

for non-Southern high school students (Crane & Wise, 1987). In terms of respect for military service, Cohen and Leung (2012) researched how honor cultures relate to perceptions of Southern versus non-Southern political elites' fit for office (e.g., Presidents, Justices) in terms of their character, propensity for corruption, and moral leadership as a function of their military experience (a proxy measure of martial honor). Southern politicians with greater military experience were perceived more favorably (e.g., greater integrity, moral leadership, and character; less corrupt) than their counterparts with less military experience. The authors argue that, given these effects did not emerge for non-Southern politicians, martial honor (i.e., military service) is inextricable from (moral) character and integrity in cultures of honor whereas these constructs can be separated in nonhonor cultures.

Broader military-related MHB research has investigated decision-making using (hypothetical) life-or-death moral dilemmas that occurred in military and nonmilitary settings (Schiffer et al., 2020). Although participants reported that their decisions were more difficult to make in the military dilemmas compared to nonmilitary dilemmas, MHB consistently predicted easier (i.e., more confident) decision-making, believing their decision(s) would make them look good, and wanting credit for their decision(s) in both military and nonmilitary dilemmas. Given that these patterns emerged regardless of the type of dilemma (i.e., military or nonmilitary), these findings suggest MHB are associated with making difficult, (hypothetically) life-threatening decisions more easily, even in military settings.

In a different vein of emerging MHB research, Austin et al. (in preparation) examined perceptions of hazing compliance in military boot camp as a function of individual differences in MHB and Respect for Authority (RfA). In both studies, they manipulated who ordered the hazing, either a drill instructor or a peer. In their first study, they also manipulated the type of

hazing (i.e., humiliating or physical; e.g., singing and dancing like a clown in the mess hall or burpees until failure, respectively) and, in their second study, manipulated the severity of humiliating hazing specifically (e.g., eating like a dog with his hands tied behind his back, stripping off his clothes and singing Twinkle Twinkle Little Star while someone pours glitter on him). In both studies, MHB and RfA were positively correlated, and both MHB and RfA were consistently related to more positive perceptions of the recruit, his compliance, and, more specifically, thinking his compliance was necessary. These results provide evidence that MHB are related to endorsement of military culture, values, and expectations (e.g., compliance, obedience). Thus, honor ideology and MHB, specifically, are clearly relevant for understanding the military given the value they place on self-sufficiency and taking pride in the protection of others.

Military Injury & Stigma

Military Injury

Injury is an important topic to address within the military, given that the military's protective duties also mean there are great risks associated with one's service. In particular, combat is one of the more common causes of military injury due to the use of legitimized violence (Soeters et al., 2006). For the purposes of this research, my discussion is limited to injuries resulting from one's military service (i.e., not pre-existing or chronic conditions). This research explored two major types of injury, physical and psychological, within the military. Physical injury can be defined as "medical conditions that involve both impairments and functional limitations to the body itself or to its sensory apparatuses" (Livneh et al., 2014, p. 93). Therefore, this definition includes amputations, deafness, and traumatic brain injury (all common in the military) as physical disabilities. Psychological injury, for the purposes of this research,

can be defined as any mental health condition or issue resulting from one's military service (e.g., PTSD, depression), hence the term, psychological *injury*.[1]

Physical Injury in the Military

Physical injury can occur at any point in one's military service, from training to combat. In general, lower back and knee injuries are the most common conditions reviewed for compensation (Songer & LaPorte, 2000). Although the military assesses recruits' physical fitness to minimize the number of injuries during training (e.g., the Army's Physical Readiness Training), less physically fit recruits are at higher risk for physical injuries (e.g., Molloy et al., 2012; Rosendal et al., 2003). More relevant to the current research, though, is the notion of combat-related injuries. Of course, combat is especially dangerous and life-threatening (Soeters et al., 2006), meaning physical injuries resulting from combat are often more severe. For example, traumatic brain injuries were particularly common in the wars in Iraq and Afghanistan (Tanielian & Jaycox, 2008).

Eastridge et al. (2012) provide an overview of combat fatalities from 2001 to 2011 during Operations Iraqi Freedom and Enduring Freedom in which they report that the majority of these service members (87%) died before reaching a medical treatment facility. More specifically, of those deaths, most suffered nonsurvivable injuries, and the remaining 15% of potentially survivable (but ultimately fatal) injuries were often a result of hemorrhaging (i.e., excessive bleeding), most commonly in the truncal region (i.e., midsection). Accordingly, a lot of research has been devoted to identifying data-driven strategies for injury prevention and/or care in combat (e.g., Eastridge et al., 2011; Kotwal et al., 2011). Most notably, Butler et al.'s (1996) Tactical

[1] It is important to note that physical and psychological injuries can coexist (e.g., leg amputation and PTSD from the explosion that caused it; Baker et al., 2009), but further discussion of this coexistence is beyond the scope of the current research. See Hynes et al. (2021) for qualitative research in this area.

Combat Casualty Care revolves around treating the current injury while preventing additional injuries so that the mission can be completed. Overall, physical injuries are very common in the military and can vary in severity, especially in combat.

Psychological Injury in the Military

Given that psychological strength is crucial for service members, the military implemented prescreen testing around the time of World War I to identify recruits who may be psychologically unfit for duty (Cardona & Ritchie, 2006). Nonetheless, psychological injuries are rather common in the military, with rates of mental health issues often increasing with combat exposure (Hoge et al., 2006). For instance, given their combat experiences (e.g., fighting, killing, treating wounds), combat medics who had been deployed had worse behavioral health outcomes (e.g., increased PTSD symptoms, increased aggressive responses) compared to those who had never been deployed (Pitts et al., 2014). Some demographic factors related to combat and mental health include branch of service (e.g., members of the Army and Marine Corps were more likely to report PTSD symptoms than members of the Navy; Baker et al., 2009) and deployment location (e.g., 19% of military personnel returning from Iraq, 11% from Afghanistan, and 9% from other locations reported having a mental health problem; Hoge et al., 2006). Additionally, years of service were positively associated with post-traumatic stress symptoms, but only for those lower in psychological hardiness (Escolas et al., 2013; Pitts et al., 2016).

In combat, killing and/or witnessing trauma can negatively affect mental health (e.g., Pitts et al., 2013, 2014; Van Winkle & Safer, 2011), and this may partially be due to the fear inherent in combat situations and/or to these being morally injurious events. Moral injury refers to the psychological damage to one's moral belief system as a result of war-zone transgressions

(Litz et al., 2009). Transgressions are often frightening and can include, for example, disproportionate violence, civilian casualties, and within-ranks violence (Drescher et al., 2011). Moral injury can occur by perpetrating, witnessing, failing to prevent, or learning about a given transgression (Litz et al., 2009). A key component of moral injury is the (perceived) inability to negate a transgression (Nash & Litz, 2013). Accordingly, self-reported exposure to potentially morally injurious events (Nash et al., 2013) and one's own transgression/s (more than witnessing others'; Pitts et al., 2013; Schapiro et al., 2002; Van Winkle & Safer, 2011) were associated with greater PTSD symptoms. Overall, moral injury is another way in which psychological injury in the military can occur, particularly in relation to PTSD (e.g., Barnes et al., 2019), one of the overwhelmingly common mental health conditions in military personnel.

Post-Traumatic Stress Disorder (PTSD). According to the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013), a PTSD diagnosis requires exposure to a traumatic event (e.g., combat), at least one intrusion symptom (e.g., flashbacks, nightmares), avoiding reminders of the event, negative changes to cognition (e.g., dissociation) or mood (e.g., fear, helplessness, horror, guilt), and increased arousal/reactivity (e.g., hyperarousal, insomnia, inability to concentrate, increased startle responses). For a PTSD diagnosis, symptoms should exist for at least one month and significantly impair functioning in ways that are not attributable to other causes (e.g., another medical condition, side effects of substance abuse).

PTSD is often associated with a host of other symptoms and behaviors. For example, PTSD is commonly accompanied by dissociation, (the development of) avoidant coping strategies, delayed help-seeking (Schnurr & Green, 2004), self-medicating (e.g., with nicotine or alcohol; Feldner et al., 2007; Jacobsen et al., 2001), and lower medication adherence (e.g.,

Shemesh et al., 2004). All of these symptoms likely contribute to PTSD's negative implications for physical health (e.g., Yehuda, 2002; Zen et al., 2012). Although it is debated as to if/how PTSD differs between military and civilian populations, there do seem to be some unique manifestations in military personnel, like guilt (due to acts or omissions during warfare) and/or anger (which is thought to be preferred over fear in combat; Creamer et al., 2011). Of course, combat is one of the primary sources of trauma, and combatants can experience negative mental health outcomes as a result (Van Winkle & Safer, 2011). Overall, PTSD is, unfortunately, an all too familiar example of psychological injury in the military and, when untreated, can increase one's risk of suicide (Institute of Medicine, 2013).

Suicide.[2] In extreme cases, psychological injuries, specifically those resulting from trauma, can result in suicide (e.g., Fox et al., 2021; Salman et al., 2017). In the US, suicide is the tenth leading cause of death, but is the second leading cause of death in the US military ("Suicide in the Military," Center for Deployment Psychology). According to the Department of Defense's latest Annual Suicide Report from the 2020 calendar year, completed suicides have been steadily increasing in active-duty service members since 2015: 266 in 2015, 280 in 2016, 287 in 2017, 326 in 2018, 348 in 2019, and 377 in 2020. However, it is not just current (active-duty) service members who are at risk for suicide. Veterans make up approximately 18% of all adult suicide deaths in the US, even though they represent only 8.5% of the US population ("Suicide in the Military," Center for Deployment Psychology). In other words, 20-22 veterans, on average, commit suicide every day ("Veterans." National Council for Mental Wellbeing). Veterans also

[2] There are a couple of important caveats to note with suicide data. First, suicides can be classified as accidental deaths (e.g., single car accidents, overdose) unintentionally or because of the stigma associated with suicide (Chiarelli, 2010). Second, the scope of the military's suicide data is somewhat limited in that the Department of Defense started collecting suicide data in 2001 after the terrorist attacks of 9/11 (Kime, 2019).

report that it is harder to accept service members' suicide deaths compared to combat deaths because the latter are more expected and heroic (Lubens & Silver, 2019).

There are some common demographics among service members who commit suicide, like sex, race, and job responsibilities. According to the Department of Defense's 2017 Suicide Report, suicides were most commonly committed by White (81%) males (95%) with a history of deployment (57%). Of course, an additional risk factor for suicide is mental health. For example, 48.5% of completed suicides and 58.6% of suicide attempts in 2017 were accompanied by a mental health diagnosis. PTSD, in particular, is a risk factor for suicide ideation and behavior for both civilians (Tarrier & Gregg, 2004) and military personnel (e.g., DeBeer et al., 2016; Jakupcak et al., 2009), especially for veterans under 54 years old (Pitts et al., 2018). These (likely underreported) suicide statistics are staggering, but preventable. Unfortunately, stigma is one of the biggest barriers to military personnel seeking mental health treatment.

Stigma

Stigma can be defined as the devaluation of someone based on a (perceived) difference from norms (Crocker & Major, 1989; Dovidio et al., 2000; Goffman, 1963), meaning stigma is socially constructed (Crocker et al., 1998; Hebl & Dovidio, 2005). Although there are many types of stigma (e.g., self-stigma, stigma by association, structural stigma; see Bos et al., 2013), public stigma is the most relevant for the current research. Stigma is nuanced in that it can vary by type of condition both broadly (i.e., physical versus psychological) and specifically (e.g., schizophrenia versus generalized anxiety). For the purposes of this work, I focused on how psychological injuries are stigmatized in both military and honor cultures.

Stigma Associated with Physical Conditions

Physical injuries often have characteristics that relate to five components that can contribute to stigma (Livneh et al., 2014): visibility, aesthetics, course, disruptiveness, and peril. First, physical injuries can vary in their visibility and, therefore, in their ability to be concealed.[3] For example, amputations and blindness, both of which are common military injuries, are more difficult conditions to hide than are deafness or traumatic brain injury. Second, more extreme than being perceived as merely unattractive, the aesthetic quality of disfigurement is often met with public repulsion and avoidance. Third, course refers to a condition's 1) origin and 2) progression or stability. With respect to the former, origin is classified as either adventitious (i.e., one is personally responsible for their condition or suffered an unfortunate circumstance; e.g., military combat) or congenital (i.e., hereditary). With respect to the latter, stigma can vary depending on if the condition is static, worsens over time, or is curable. Fourth, disruptiveness refers to how affected one's social relationships are by their condition, particularly in terms of verbal and physical communication. Fifth, the peril component reflects the ostensible danger to others someone with physical injury may pose. Overall, these components can synergistically contribute to individuals with physical injuries experiencing stigma as a result of their injuries.

Stigma Associated with Psychological Conditions

Although mental illnesses are often far less visible than physical illnesses, there are three primary stereotypes that stigmatize individuals with mental illness that parallel Livneh et al.'s (2014) components of stigma associated with physical injuries. Specifically, the public often stereotypes individuals with mental health conditions as dangerous, incompetent, and/or

[3] Consistent with this research's interest in physical versus psychological injuries, Goffman (1963) differentiates between *discredited* and *discreditable* attributes, with the former reflecting obvious or visible deviance and the latter reflecting not immediately obvious or visible differences that, if discovered, could damage one's reputation (Corrigan & Kosyluk, 2014). Further, Goffman (1963) suggests discredited (i.e., visible) attributes are more damaging than those that can be (at least partially) concealed.

responsible for their condition (Corrigan & Kosyluk, 2014). The dangerousness component reflects the belief that people with mental health issues are unpredictable and/or violent. The incompetence component reflects the belief that individuals with mental health issues cannot work or live independently.

With respect to the responsibility component, there are two types of responsibility: onset responsibility (i.e., the blame associated with contracting the disorder; e.g., [repeated] exposure to stressful stimuli) and offset responsibility (i.e., one's efforts to remedy the condition; e.g., recovery, treatment participation). It is important to understand these stereotypes because some research suggests the stigma associated with mental illnesses may be more debilitating than the illness itself (Corrigan & Kosyluk, 2014). As a result, individuals with mental health issues may experience label avoidance (i.e., avoiding a diagnosis due to the stigma that accompanies it) in response to such stereotypes, which can be problematic because a diagnosis is often a gateway to treatment (e.g., Dickstein et al., 2010). Military personnel may be particularly motivated to avoid a mental health diagnosis because of the military's culture and values (Tanielian & Jaycox, 2008).

Mental Health Stigma in the Military. Military personnel may be in a unique position in terms of stereotypes associated with psychological injuries. Given the high-risk nature of the military as an occupation and the fact that enlistment is typically voluntary, combat veterans may feel responsible for their subsequent psychological distress (e.g., Britt & McFadden, 2012; Mittal et al., 2013), otherwise known as onset responsibility. Additionally, the legalized violence used within the military does not bode well with the dangerousness component of mental illness stereotypes. For example, service members suffering from mental health issues are sometimes considered dangerous or crazy and have been called "psychopaths" or "babykillers" (e.g.,

Hooyer, 2012; Mittal et al., 2013), likely because of the expectation to kill in combat and/or rare, anecdotal experiences. Moreover, military culture (i.e., values, warrior ethos) specifically can contribute to mental health stigma and lower help-seeking behaviors in several ways (Meyer, 2015).

First, to claim victimhood is in conflict with military values of mental, physical, and psychological toughness (e.g., "push through the pain", "If I need help, then I am weak,"; Dickstein et al., 2010; Skopp et al., 2012) because such values are perceived as a sign of weakness or incompetence (e.g., Chiarelli, 2010; Keats, 2010; Mittal et al., 2013; Pols & Oak, 2007). Second, mental health diagnoses can be a job hazard for military personnel because such conditions can negatively affect self-sufficiency, mission-focus, and combat readiness (e.g., Dickstein et al., 2010; Hooyer, 2012). Perhaps this is exacerbated by the fact that, unlike civilian-therapist relationships, patient confidentiality is not always guaranteed in the military because of the potential risk to combat missions (Gibbons et al., 2014). Thus, service members may fear that a diagnosis[4] would jeopardize their career/promotion opportunities, which can contribute to lower help-seeking behaviors (e.g., Britt et al., 2015; Hoge et al., 2004; Tanielian & Jaycox, 2008). [5] In other words, stigma and label avoidance present great barriers to mental healthcare for military personnel (e.g., Ben-Zeev et al., 2012; Sharp et al., 2015).

An extreme case of label avoidance can be seen in service members who go absent without leave (AWOL) in order to 1) seek mental health treatment or 2) avoid being discharged

[4] Efforts have been made to change the PTSD label itself. Specifically, to reduce some stigma and (ideally) increase help-seeking behaviors, military leaders advocated for creating a military-specific category of PTSD in the DSM-V, specifically named post-traumatic stress *injury* (rather than *disorder*) to recognize service (or combat) as a causal factor in the development of a given mental health condition (Hooyer, 2012).

[5] Pitts et al. (2017) found that although battlefield or medical experiences predicted post-traumatic stress symptoms, these experiences did not predict use of behavioral health services. However, post-traumatic stress symptoms did predict use of such services, suggesting that those who acknowledge their post-traumatic stress symptoms are more likely to seek and receive help.

and then denied PTSD claims (Hooyer, 2012). This can occur when the military diagnoses service members with personality disorders or "pre-existing conditions" instead of PTSD so that they are discharged without medical assistance and are denied benefits. Gutmann and Lutz (2010) estimate 22,500 service members were discharged in this manner between 2001 and 2007. Thus, understanding going AWOL as an extreme case of label avoidance highlights the fact that the process of receiving a mental health diagnosis within the military can be complex, problematic, and/or discouraging. In other words, military personnel do not often seek or receive the assistance they need (e.g., Chapman et al., 2014; Vogt, 2011), likely because military ethos (e.g., culture, values) contribute to mental health stigma and subsequently lower help-seeking behaviors (e.g., Gibbons et al., 2014; Tanielian & Jaycox, 2008).

Mental Health, Mental Health Stigma, & Honor. Honor ideology can be considered a sociocultural risk factor for mental health given that its values, like the military's, promote toughness and self-sufficiency (Gul et al., 2021). Compared to nonhonor states, honor states tend to have higher rates of depression and suicide, as well as 1) lower antidepressant prescription rates (Crowder & Kemmelmeier, 2014; Osterman & Brown, 2011); 2) lower investments in mental healthcare (by 30-40%, in terms of average expenditure, numbers of mental health professionals and hospitals; Brown et al., 2014b); and 3) lower likelihood of seeking mental health treatment (e.g., Foster et al., 2021; Gul et al., 2021). Together, these findings suggest that although individuals in honor states may be emotionally suffering, they are not getting the help they need, which could be attributed to reputational concerns (Brown, 2016), specifically as they relate to masculinity norms and ideals (Crowder & Kemmelmeier, 2017). Bock et al. (2021) even suggested men with greater honor endorsement may be at higher risk for suicide because they

have a greater "practical capability" for suicide due to increased risk-taking and gun ownership (typically obtained for self-protection purposes).

Although honor ideology's relationships with mental health (stigma) are fairly well-documented, not much research has specifically examined MHB in this context. Recently, Lawless et al. (in preparation) investigated how MHB relate to perceptions of how likely various situations (e.g., combat) were to result in PTSD. Interestingly, they found higher MHB were associated with lower perceptions that combat would be likely to lead to PTSD. They attributed this to expectations by those higher in MHB that military personnel would be too tough to experience PTSD after combat, which perhaps is reflective of MHB's positive relationship with respect for the military (Stratmoen et al., 2019). Additionally, MHB were related to thinking private (e.g., therapy) and independent (e.g., returning to the normal routine) coping strategies were more appropriate than public (e.g., posting on social media) coping strategies in response to a traumatic event. More specifically, MHB were associated with positive perceptions of men who returned to their daily routine (compared to women and/or reaching out to family, friends, or a therapist) after a traumatic event. These findings highlight MHB as promoting self-sufficiency, independence, and toughness even after trauma (especially for men). Given that this is likely a product of reputational concerns (e.g., O'Dea et al., 2017), it is clear that MHB have important implications for mental health stigma, which is likely exacerbated within a military context.

Chapter 2 - Current Studies Overview

This program of research examined how MHB relate to perceptions of physical versus psychological injuries in terms of military honors (Study 1) and monetary allocations between veterans organizations that support these injuries (Study 2), tapping into participants' tendencies toward distributive justice (e.g., Cook & Hegtvedt, 1983). This research further extends MHB research to both military and mental health contexts. Given the military's honor values (e.g., Westhusing, 2003) and historic mental health stigma (e.g., Hooyer, 2012), these studies assessed individual differences in MHB and beliefs in mental health stigma to better understand individuals' perceptions of various military injuries. Efforts were made to recruit comparable samples of (current or former) military personnel and civilians for these studies in attempts to explore differences between these populations. Although the current research provided numerous contributions to understanding respect for injured military personnel, the primary goal of this research is to examine how MHB relate to 1) beliefs about mental health stigma and 2) respect for service members suffering from psychological injuries.

Chapter 3 - Study 1: Military Honors

One of the clearest differences in the military's recognition of physical and psychological injury is through military honors, with most honors only recognizing the former. The Purple Heart is the oldest military honor (established in 1782), and its qualifications have evolved over time. Originally, Purple Hearts were only awarded to Army service members who performed a meritorious act, but this criterion was omitted during World War II and qualifications were extended to include service members (of any rank or branch) wounded or killed in combat by opposing forces (Latek, 2019). Today, Purple Heart qualifications have been expanded to include those wounded or killed while a prisoner of war (Wallace, 2021) and friendly fire injuries (i.e., accidental injuries caused by a member of the same military). However, there has been great debate about the types of injuries that should qualify for a Purple Heart, specifically if psychological injuries, like PTSD, should qualify as well (see Burrelli, 2012). It is important to note that what the military chooses to include in its qualifications for military honors reflects the kinds of values (or moral virtues) they want to uphold.

Arguments for the inclusion of psychological injuries in Purple Heart qualifications include that PTSD can be as debilitating as some physical injuries, if not more so (Sandel, 2009). While some may think PTSD is treatable or curable, this is often a chronic condition (Keynan & Keynan, 2016). Additionally, the failure to recognize such psychological injuries is arguably discriminatory and a form of oppression (Taylor, 1994). Arguments for the exclusion of psychological injuries from Purple Heart qualifications include that traumatic stress disorders are not intentionally caused by enemy action and are harder than physical injuries to objectively diagnose (Sandel, 2009). The Military Order of the Purple Heart (MOPH) argues that PTSD is a treatable disease, in stark contrast to permanent physical losses, like an amputated limb.

Moreover, the MOPH also feared service members would exploit Veterans Affairs benefits because they could fake PTSD but not a physical injury (Keynan & Keynan, 2016).

Reminiscent of distributive justice theories (i.e., fair allocation of resources between individuals or groups; see Cook & Hegtvedt, 1983), we investigated how honor ideology relates to the perceived deservingness of military honors. Specifically, Study 1 examined how individual differences in MHB and beliefs in mental health stigma relate to support for including psychological injuries (specifically PTSD) in Purple Heart qualifications (used as a proxy military honor). Participants read one of two opinion essays (presumably written by a combat veteran) arguing to either include or exclude psychological injury from Purple Heart qualifications. Each opinion essay provided multiple points in support of its argument, thus Argument Condition will refer to which opinion essay participants read: either to include or exclude psychological injury from Purple Heart qualifications. After reading one randomly assigned opinion essay, participants rated their agreement with the position presented. For additional insight, I inquired about participants' general perceptions of honoring psychological injuries in the military broadly.

Study 1 Hypotheses

The hypotheses for Study 1 pertain to the general relationships between MHB, beliefs in mental health stigma (as measured by the Endorsed and Anticipated Stigma Inventory; EASI), and support for recognizing various injuries in military honors. In terms of general correlations between these variables, I expected MHB and beliefs in mental health stigma to be positively correlated, but MHB and beliefs in mental health stigma to each be negatively correlated with support for recognizing psychological injuries in military honors. With respect to the opinion essays, I did not expect any main effects for MHB or beliefs in mental health stigma in

predicting agreement with the opinion essays (i.e., collapsed across the two Argument Conditions) because I expected agreement to vary depending on which Argument Condition the participants are randomly assigned to. In other words, I expect participants' MHB and beliefs in mental health stigma to interact with the Argument Condition manipulations. Specifically, I hypothesized higher levels of MHB will be associated with greater agreement with the opinion to *exclude* psychological injury from Purple Heart qualifications, and less agreement with the opinion to include these injuries. Similarly, I hypothesized higher beliefs in mental health stigma will be associated with greater agreement with the opinion to *exclude* psychological injury from Purple Heart qualifications, and less agreement with the opinion to include these injuries. These interaction hypotheses were based on previous research documenting honor beliefs' negative relationship with mental health support (e.g., Foster et al., 2021; Lawless et al., in preparation) as well as the nature of mental health stigma (e.g., Corrigan & Kosyluk, 2014) and its prevalence in the military (e.g., Ben-Zeev et al., 2012). Part of these hypotheses relate to demographic differences between military personnel and civilians, in which I expected both service members' MHB and beliefs in mental health stigma to be higher than their civilian counterparts, given the military's honor values (e.g., Westhusing, 2003) and increased mental health stigma (e.g., Ben-Zeev et al., 2012).

Study 1 Method

Participants

According to an a priori power analysis for a multiple linear regression with five predictors (the measure of individual differences in MHB, the measure of individual differences in beliefs in mental health stigma, Argument Condition, and Argument Condition's interactions with each individual difference measure; power = .80, $\alpha = .05$), I needed 211 participants for this

study. To account for careless responding and insufficient data, I attempted to recruit 300 participants in exchange for $0.25 each. To recruit comparable numbers of military personnel and civilians for this study, I posted the Study 1 Qualtrics survey twice on CloudResearch concurrently: one survey filtered in only (current or former) military personnel and the other had basic inclusion criteria (i.e., 18+ years of age, must live in the US). Each survey was set up to recruit a maximum of 150, meaning both the Study 1 Civilian and Study 1 Military would each recruit 150 participants each for a total of 300 participants in Study 1 altogether. These studies were offered on CloudResearch such that participants who participated in Study 1 could not participate in Study 2 and vice versa, and participants who completed the Study 1 survey as a military service member could not register for the Study 1 survey with broader inclusion qualifications.

Data collection began on April 18th, 2022 for both Study 1 surveys. The civilian survey sample finished with 150 participants on April 20th, 2022. We closed the military-filtered survey on July 15th, 2022 with 52 participants. Given that the military sample data collection was very slow (i.e., three months) and that the sum of the civilian and military samples would not meet the necessary sample size of 211 at that time, we reopened the civilian survey on July 15th, 2022 for an additional 100 participants. Theoretically, this gave us about 50 military participants and 250 civilian participants to reach my goal of recruiting 300 participants to meet the necessary sample size of 211 after data cleaning procedures.

Data Cleaning

361 people accessed this survey, but several were excluded and not compensated for failing at least one English proficiency check at the beginning of the survey (n = 47; see Appendix A). Additionally, participants were omitted for completing less than 90% of the survey

(*n* = 17), failing the attention checks within the individual difference scales (*n* = 4), reporting they did not read the opinion essay carefully (*n* = 3), or identifying their Argument Condition incorrectly (*n* = 15). Several participants were also omitted for careless responding, like completing either of the individual difference scales in under 60 seconds (*n* = 17) or putting the same answer (i.e., 5's) for all responses (*n* = 1). These data cleaning procedures left 255 participants for data analysis, surpassing the necessary sample size for this experimental design.

Participant Demographics

On average, participants were 45.39 years old (*SD* = 14.19), with 64% identifying as women and 33% identifying as men.[6] The majority of participants were White (79%) and heterosexual (86%). One fifth of participants reported either currently or formerly serving in the military. Their branch breakdown is as follows: Army (*n* = 23), Air Force (*n* = 14), Navy (*n* = 9), and Marine Corps (*n* = 8). Of these 54 military participants, 37% had been deployed to combat (*n* = 20). Of participants who had been deployed, 45% reported experiencing a life-threatening event in combat (*n* = 9). Participants with any military experience (i.e., not necessarily deployed to combat) were also asked if they had been injured as a result of their service: 43% reported no injuries (*n* = 23), 22% reported solely physical injuries (*n* = 12), 22% reported solely psychological injuries (*n* = 12), 9% reported both physical and psychological injuries (*n* = 5), and 4% did not want to share their injury status (*n* = 2). Of the 17 military participants who reported psychological injuries as a result of their service, 88% reported that their injury was clinically diagnosed (*n* = 15). Of the 29 military participants who reported any military injury (i.e.,

[6] Although the content of this research focused on masculine constructs (e.g., the military, MHB), I did not exclude women from participating, given that they serve in the military and have views about how men should behave. Additionally, with respect to the latter, the MHBS's items are written from a third-person perspective and women have completed this scale in numerous studies (e.g., O'Dea et al., 2018; Saucier et al., 2018c; Schiffer et al., 2020, 2021).

physical and/or psychological), 93% reported they were still suffering from their injury/injuries (*n* = 27). Table 1 provides the frequency of military participants' deployment status and injury status separated by their branch of service.

Table 1

Frequency Table for Study 1 Military Participants' Branch of Service, Deployment Status, & Injury Status

		Deployment Status		**Injury Status**				
	Branch of Service	Deployed to Combat	Never Deployed	No	Yes, physically	Yes, psychologically	Yes, both	Prefer not to say
Army	23 (43%)	10 (43%)	13 (57%)	11 (48%)	4 (17%)	4 (17%)	4 (17%)	0
Air Force	14 (26%)	2 (14%)	12 (86%)	5 (36%)	5 (36%)	3 (21%)	0	1 (7%)
Navy	9 (17%)	3 (33%)	6 (67%)	5 (56%)	2 (22%)	1 (11%)	0	1 (11%)
Marine Corps	8 (15%)	5 (63%)	3 (38%)	2 (25%)	1 (13%)	4 (50%)	1 (13%)	0
Totals	54 (100%)	20 (37%)	34 (63%)	23 (43%)	12 (22%)	12 (22%)	5 (9%)	2 (4%)

Note: Percentages were calculated within each of the broader groups (i.e., Branch of Service, Deployment Status, Injury Status) for each branch of service and are provided within the parentheticals.

Materials

Unless otherwise stated, all items were completed on 1 (*Strongly Disagree*) to 9 (*Strongly Agree*) Likert-type scales. Composite scores were created, when applicable, such that higher scores indicate greater levels of a given construct, after antithetical items were reverse-scored when necessary. The means, standard deviations, and alphas for the following measures are provided in Table 2.

Individual Difference Measures

Masculine Honor Beliefs Scale (MHBS). Participants completed the 35-item Masculine Honor Beliefs Scale (MHBS) from Saucier et al. (2016) to measure their third-person perceptions of men's values and behaviors (see Appendix B). During the scale development process of the MHBS (see Saucier et al., 2016), it demonstrated internal consistency and test–retest reliability over a four- to six-week time period, highlighting its stability as a construct. It also demonstrated predictive validity for responses to honor-related provocation beyond one's sex and trait aggression. Overall, this scale is a good measure of individual differences in MHB (e.g., the MHBS mediates regional differences in honor, Saucier et al., 2018a) and has been used many times with male and female participants (e.g., O'Dea et al., 2018; Saucier et al., 2018c; Schiffer et al., 2020, 2021).

The MHBS includes seven subscales with five items each that reflect the different facets of masculine honor: Masculine Courage (e.g., *It is important for a man to be courageous*), Pride in Manhood (e.g., *A man should be embarrassed if someone calls him a wimp*), Virtue (e.g., *It is morally wrong for a man to walk away from a fight*), Protection (e.g., *It is a male's responsibility to protect his family*), Provocation/Insult (e.g., *If a man is insulted, his manhood is insulted*), Socialization (e.g., *If your son got into a fight, you would be proud that he stood up for himself*),

and Family & Community Bonds (e.g., *A man's family should be his number one priority*). In terms of scoring participants' responses on the MHBS, I created an overall MHBS composite (across all subscales) and composites for each subscale, consistent with how this scale is typically used for data analysis (Saucier et al., 2016).

Endorsed & Anticipated Stigma Inventory (EASI). To measure participants' beliefs in mental health stigma, I used the 40-item Endorsed and Anticipated Stigma Inventory (EASI) from Vogt et al. (2014; see Appendix C). I elected to use this scale specifically despite existing scales that assess service members' perceptions of mental health and its treatment (e.g., Skopp et al., 2012) because this population was not guaranteed for the current study. Thus, the EASI was my preferred scale because although it was designed for military personnel, its wording generalizes to civilians as well. Additionally, during scale development (see Vogt et al., 2014), the EASI demonstrated sound psychometric properties (e.g., internal consistency; content, convergent, and discriminant validity), including discriminant validity between subscales.

The EASI includes five subscales with eight items each. The first three subscales address more general beliefs about mental health, including Beliefs About Mental Illness (e.g., *People with mental health problems can't take care of themselves*), Beliefs About Mental Health Treatment (e.g., *Mental health treatment generally does not work*), and Beliefs About Treatment Seeking (e.g., *Most mental health problems can be dealt with without seeking professional help*). The other two subscales reflect first-person attitudes toward mental health, including Concerns About Stigma From Loved Ones (e.g., *If I had a mental health problem and friends and family knew about it, they would see me as weak*) and Concerns About Stigma in the Workplace (e.g., *If I had a mental health problem and people at work knew about it my coworkers would think I am not capable of doing my job*). In terms of scoring participants' responses, I created an overall

composite score for the EASI (i.e., averaged across all subscales). Also, I created composites for each of the subscales, given that these were designed to identify specific beliefs about mental health and its treatment (Vogt et al., 2014).

Purple Heart Opinion Essays

To understand participants' support for including psychological injury in military honors, I used a between-groups design in which participants read one of two randomly assigned opinion pieces seemingly written by a combat veteran (see Appendix D). Regardless of condition, the first two sentences explained the debate about Purple Heart qualifications, specifically if psychological injuries should be included or not. The remainder of the opinion piece identified which position the author takes in this debate (i.e., to include or exclude psychological injuries from Purple Heart qualifications) and provided two reasons to support their position. After reading one opinion piece, participants responded to two attention checks: *Did you read the previous passage carefully?* [*Yes*/*No*] and *The previous passage argued to* [*include*/*exclude*] *psychological injury in Purple Heart qualifications*. Then, participants rated their agreement with the following statements: *I agree with the opinion presented* and *The author's argument was convincing*. Given that these two items were highly correlated (r = .90, *alpha* = .95), I combined them into a composite called Argument Agreement to use as my primary outcome variable.

Support for Psychological Injury in Military Honors Items

To supplement the between-groups design of the opinion essays, all participants rated their agreement with five items on their beliefs about supporting the inclusion of psychological injuries in military honors broadly (e.g., *It is appropriate to honor psychological injuries in the military*; see Appendix E). These items were aggregated into a composite, given that a reliable

alpha was obtained (*alpha* = .90), and used for examining correlations with the individual difference measures.

Social Desirability

To account for participants' potentially socially desirable responding, I used Stöber's (2001) 16-item Social Desirability Scale (see Appendix F). Participants responded to these items (e.g., *I always admit my mistakes openly and face the potential negative consequences; I never hesitate to help someone in case of emergency*) by marking either "true" or "false". After reverse-scoring certain items (e.g., *I sometimes litter; Sometimes I only help because I expect something in return*), participants' responses were summed such that higher Social Desirability scores reflected more socially desirable responding.

Procedure

This research received IRB approval, and this study was preregistered on the Open Science Framework (OSF): https://osf.io/yz643. On Qualtrics, participants provided informed consent, correctly responded to the three English proficiency questions, and reported their demographic information, including any relevant military information. In terms of survey flow, the presentation of the individual differences block (i.e., MHBS, EASI) and the Study 1 materials block was counterbalanced. The order of the individual difference scales was randomized, but not the Study 1 materials. Specifically, participants 1) read one opinion essay on the Purple Heart qualifications debate, responded to the attention check, and rated their agreement with it and then 2) completed the Support for Psychological Injury in Military Honors Items. Finally, participants were debriefed, thanked, and compensated.

Study 1 Results

General Relationships Between Variables

First and foremost, overall MHB scores were positively correlated with overall EASI scores, $r = .35$, $p < .001$, plus all of the EASI's subscales (see Table 2). In other words, the more strongly one adhered to MHB, the more strongly they tended to report beliefs about mental health stigma (e.g., thinking people with mental health issues are incompetent, thinking mental health treatment does not work, discomfort with treatment seeking). This is consistent with my hypotheses as well as existing research on honor ideology and mental health stigma (e.g., Foster et al., 2021; Lawless et al., in preparation; Osterman & Brown, 2011). More specifically, overall EASI scores were positively correlated with most of the MHBS subscales, except Family and Community Bonds. This could suggest that, from a masculine honor ideology perspective, family values may help normalize mental health issues and/or provide a buffer to mental health stigma by providing a support system. Overall, the relationships between MHB and beliefs about mental health stigma were largely consistent with my hypotheses and previous honor ideology research on mental health stigma (e.g., lower financial investments in mental healthcare; Brown et al., 2014b).

Table 2

Study 1 Pairwise Correlations for the MHBS, EASI, Support for Psychological Injuries in Military Honors, & Social Desirability

	M	*SD*	1	1a	1b	1c	1d	1e	1f	1g	2	2a	2b	2c	2d	2e	3
1. MHB	5.17	1.37	.95														
1a. Masculine Courage	5.49	2.04	**.85**	.90													
1b. Pride in Manhood	4.09	1.92	**.88**	**.79**	.84												
1c. Socialization	6.60	1.60	**.77**	**.60**	**.57**	.82											
1d. Virtue	2.57	1.53	**.73**	**.55**	**.74**	**.43**	.86										
1e. Protection	6.66	1.86	**.80**	**.64**	**.58**	**.70**	**.38**	.91									
1f. Provocation/Insult	3.39	2.25	**.75**	**.50**	**.64**	**.40**	**.64**	**.43**	.94								
1g. Family & Community	7.41	1.24	**.54**	**.39**	**.29**	**.50**	.12	**.62**	**.21**	.74							
2. EASI	3.62	1.62	**.35**	**.42**	**.45**	**.19**	**.35**	**.15**	**.22**	.01	.97						
2a. Mental Illness	2.90	1.57	**.38**	**.43**	**.48**	**.18**	**.37**	**.17**	**.24**	.08	**.80**	.90					
2b. Treatment	3.44	1.74	**.29**	**.37**	**.39**	**.13**	**.34**	**.15**	.10	.02	**.81**	**.65**	.91				
2c. Treatment Seeking	3.64	2.06	**.24**	**.28**	**.35**	.07	**.31**	.08	**.15**	-.02	**.78**	**.65**	**.68**	.93			
2d. Loved Ones	3.47	2.28	**.25**	**.31**	**.33**	**.17**	**.23**	.10	**.18**	-.02	**.83**	**.55**	**.50**	**.48**	.97		
2e. Workplace	4.67	2.37	**.28**	**.34**	**.33**	**.22**	**.22**	**.13**	**.20**	.01	**.82**	**.51**	**.52**	**.41**	**.74**	.97	
3. Support for Psych Military Honors	7.10	2.02	**-.18**	**-.27**	**-.30**	-.03	**-.18**	-.04	-.08	.02	**-.38**	**-.37**	**-.40**	**-.41**	**-.23**	**-.19**	.90
4. Social Desirability	8.98	3.81	.01	-.05	.00	.02	.07	.05	-.06	.05	**-.16**	-.04	-.04	-.08	**-.14**	**-.28**	.09

Note: Cronbach's alphas are provided on the diagonal. *p*-values < .05 are bolded. Items 1-3 could range from 1 to 9, and Item 4 could range from 0 to 16.

Purple Heart Opinion Essays

To examine these relationships within the context of the Purple Heart Opinion Essays, I used a simultaneous linear regression with MHB, beliefs in mental health stigma (i.e., EASI), Argument Condition (i.e., to include or exclude psychological injury in Purple Heart qualifications), and Argument Condition's interactions with each individual difference measure (i.e., MHB and beliefs in mental health stigma) as predictors of Argument Agreement. Together, these predictors accounted for 25% of variance in Argument Agreement, $F(5, 249) = 17.00$, $p < .001$, with unique effects for Argument Condition, $F(1, 249) = 67.11$, $p < .001$, and the EASI x Argument Condition interaction, $F(1, 249) = 14.90$, $p < .001$. Table 3 provides the effect tests and parameter estimates for this model.

Table 3

Study 1 Effect Tests & Parameter Estimates for Simultaneous Linear Regression with MHB, EASI, Argument Condition, & Their Interactions as Predictors of Argument Agreement

	F	*B*	*SE*	*t*	*p*
Intercept	-	5.35	0.64	8.32	<.001
MHB	0.21	0.06	0.12	0.46	.645
EASI	0.19	-0.05	0.11	-0.44	.662
Argument Condition [exclude]	67.11	-1.31	0.16	-8.19	<.001
MHB x Argument Condition	0.01	0.02	0.12	0.12	.904
EASI x Argument Condition	14.90	0.41	0.11	3.86	<.001

Note: Beta weights are unstandardized.

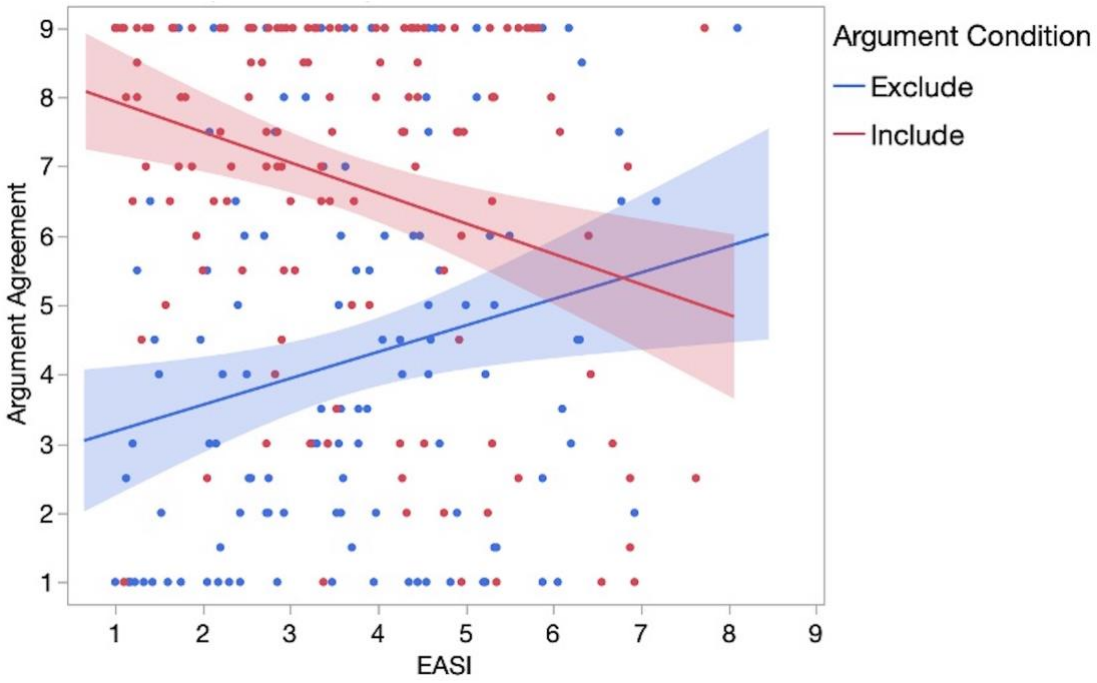
With respect to the main effect of Argument Condition, participants reported *lower* Argument Agreement when they were in the Argument Condition to *exclude* PTSD in Purple Heart qualifications.[7] Although I did not offer a formal hypothesis for this particular effect, it is consistent with normalizing mental health issues within society in recent years which seems to then also extend to participants' perceptions of service members' mental health issues specifically. Recall, individuals may be stigmatized based on the acuity of and their responsibility in the onset of their mental health issues (Corrigan & Kosyluk, 2014), which may be especially internalized by combat veterans (e.g., Britt & McFadden, 2012; Mittal et al., 2013). Despite the self-stigma service members may feel about their mental health condition, this finding suggests the public stigma directed toward these service members may be far less than what they internalize. One potential explanation for this, beyond the normalization of mental health, could be that combat is viewed as more "valid" trauma. In other words, while the average person may have a "mental health condition", a soldier may be perceived as having a "psychological injury*"* that directly resulted from their service (which is what the materials specified). Hence, participants generally had more favorable attitudes toward honoring service members' psychological injuries than not.

With respect to the EASI x Argument Condition interaction, as participants' (overall) EASI scores increased, so did their Argument Agreement when they were in the Argument Condition to *exclude* PTSD in Purple Heart qualifications (see Figure 1). In other words, on one

[7] For exploratory purposes, we ran a 2 (Argument Condition: include/exclude) x 2 (Military Status: military/civilian) factorial ANOVA predicting Argument Agreement to see if this effect held for military participants specifically, $F(3, 251) = 23.94$, $p < .001$. There was a significant interaction between Argument Condition and Military Status, $F(1, 251) = 4.18$, $p = .042$. According to a Tukey's HSD, civilians ($M = 7.10$, $SE = 0.25$) reported significantly more agreement with the opinion to *include* PTSD than military participants ($M = 5.67$, $SE = 0.48$), but there was no difference between civilian participants' ($M = 4.15$, $SE = 0.26$) and military participants' ($M = 4.34$, $SE = 0.52$) agreement with the *exclude* PTSD condition. Given the lower number of military participants, these findings should be interpreted with caution.

hand, the more beliefs in mental health stigma one had, the more they agreed with the opinion to exclude psychological injuries from military honors (b = 0.38). On the other hand, the more beliefs in mental health stigma one had, the less they agreed with the opinion to include psychological injuries from military honors (b = -0.44). This finding is consistent with both my hypotheses and the nature of mental health stigma, particularly in the military (e.g., Hooyer, 2012). Although the EASI was constructed using military populations, its items are not military-specific, meaning it serves as a stand-alone measure of beliefs about mental health stigma, and these findings further demonstrate that this measure of beliefs about mental health stigma is relevant for civilians' negative perceptions of honoring psychological injuries.

Figure 1. The Argument Condition x EASI Interaction Predicting Argument Agreement



The image above depicts the interaction between participants' overall EASI scores (i.e., beliefs in mental health stigma) and their Argument Agreement as a function of Argument Condition (i.e., include or exclude PTSD from Purple Heart qualifications). The shaded regions reflect the 95% CI. As participants' beliefs in mental health stigma (i.e., EASI scores) increased, so did their agreement with the opinion to *exclude* PTSD from Purple Heart qualifications. As participants' beliefs in mental health stigma (i.e., EASI scores) increased, their agreement with the opinion to *include* PTSD in Purple Heart qualifications decreased.

Although I expected no unique main effects for the individual difference measures (i.e., MHB and beliefs in mental health stigma) in predicting Argument Agreement, I did not expect the lack of interaction effect between MHB and Argument Condition. Given that this interaction effect emerged for EASI and Argument Condition, the lack of an interaction effect with MHB does not seem to be evidence of a weak manipulation. Rather, this seems to suggest a more theoretical reason for why MHB did not affect Argument Agreement as a function of Argument Condition. Specifically, because participants were told this opinion essay was written by a war veteran, it is possible individuals higher in MHB's respect for service toward the presumed opinion-essay-writer outweighed their personal disagreement with the position presented in the opinion essay. In this case, individuals higher in MHB's beliefs about mental health stigma may manifest situationally when it comes to applying that stigma toward military service members directly.

Support for Psychological Injury in Military Honors

My hypotheses regarding how the individual difference measures would relate to Support for Psychological Injury in Military Honors were supported. Specifically, both MHB and EASI scores, and most of their subscales, negatively correlated with Support for Psychological Injury in Military Honors. In other words, the more strongly an individual adhered to masculine honor ideology or the more strongly an individual possessed beliefs about mental health stigma, the less they supported the idea of recognizing psychological injuries (e.g., PTSD) in military honors. This is consistent with both my hypotheses and the nature of mental health stigma as a construct (e.g., Vogt et al., 2014). Moreover, this finding extends previous demonstrations of honor ideology and increased mental health stigma (e.g., Brown et al., 2014b; Gul et al., 2021;

Osterman & Brown, 2011) by applying it to both service members and military honors specifically.

MHB's negative correlation with Support for Psychological Injury in Military Honors may seem contradictory to the lack of MHB findings in relation to the Purple Heart Opinion Essays. However, I argue this is further evidence of MHB's relationship with mental health stigma toward service members being more situational in nature. It is theoretically consistent that MHB were positively correlated with beliefs in mental health stigma and negatively correlated with Support for Psychological Injury in Military Honors.[8] Again, I argue the lack of an MHB interaction effect for the Purple Heart Opinion Essay was due to the fact that the opinion was seemingly presented by a war veteran specifically. Taken together, while individuals higher in MHB stigmatized service members with mental health conditions (as evidenced by MHB's negative relationship with Support for Psychological Injury in Military Honors), this pattern did not hold when we inquired about their agreement with a war veteran's opinion on this topic (as evidenced by the lack of effect for the MHB x Argument Condition in the Purple Heart Opinion Essay manipulations and model), perhaps due to respect for their service.

Demographic Differences

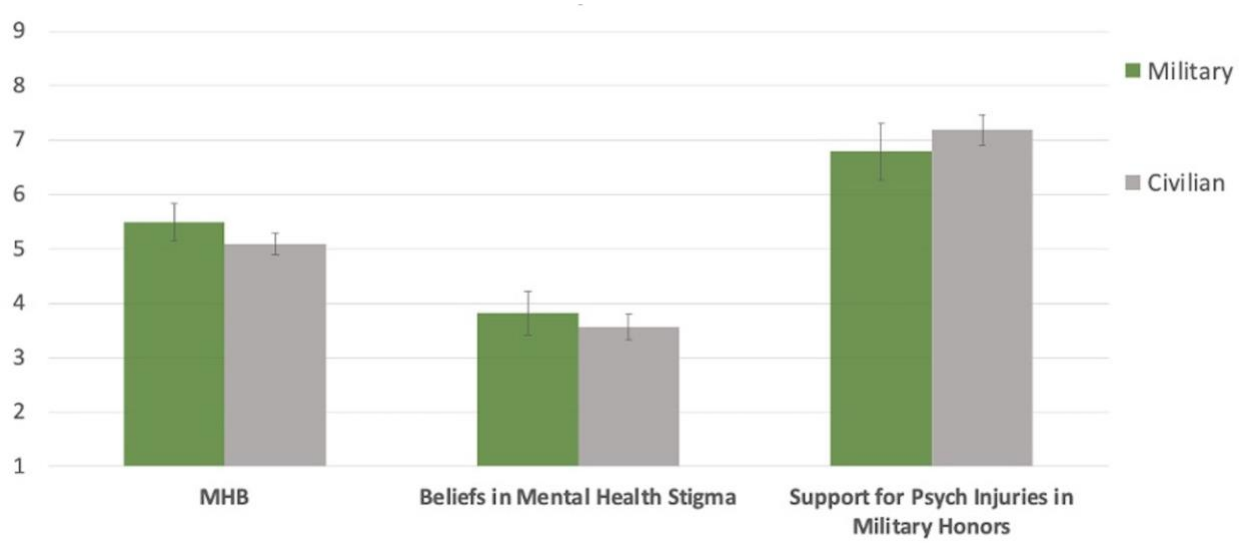
Given that a fifth of this sample were military personnel, we were able to examine how civilian (n = 201) and military (n = 54) participants differed on the core constructs (see Figure 2). As expected, military participants (M = 5.49, SD = 1.24) had higher MHB than civilian participants (M = 5.09, SD = 1.40), $t(254) = 2.07$, $p = .041$, $d = 0.30$. Although I cannot comment

[8] For exploratory purposes, we ran a regression with MHB and EASI predicting Support for Psychological Injury in Military Honors, $F(2, 252) = 21.94$, $p < .001$. There was no main effect of MHB, but there was a main effect of EASI, $F(1, 252) = 34.79$, $p < .001$. Thus, although MHB and EASI scores positively correlated with one another (r = .35), EASI appeared to be a better predictor of Support for Psychological Injury in Military Honors than MHB.

on if individuals higher in MHB seek out more military careers or if military culture attracts individuals higher in MHB, there is a lot of overlap between honor and both military cultures (e.g., Saucier & McManus, 2014) and values (e.g., Westhusing, 2003). However, military (M = 3.82, SD = 1.45) and civilian (M = 3.57, SD = 1.67) participants did not differ in beliefs about mental health stigma, $t(254) = 1.11$, $p = .271$, $d = 0.16$, contrary to my hypothesis. This could be evidence of normalizing mental health treatment publicly but also the increasing awareness of military mental health specifically and military-specific mental health initiatives as well.

Moreover, military (M = 6.79, SD = 1.93) and civilian (M = 7.19, SD = 2.04) participants did not significantly differ in their Support for Psychological Injury in Military Honors, $t(254) = -1.35$, $p = .182$, $d = 0.20$. Given that these means are fairly high (i.e., above the midpoint of the scale) for both groups, this indicates participants generally held more favorable attitudes toward honoring psychological injuries. Again, this could be further evidence of normalizing mental health which manifests in society broadly and in military populations specifically, given that both civilians and service members tended to have these favorable attitudes. Beyond evidence of normalization, this may also suggest that respect for service and/or perceived legitimacy of (combat) trauma contributes to a willingness to honor service members with psychological injuries.

Figure 2. Independent Samples *t*-tests Comparing Military and Civilian Participants in Study 1 Constructs



The image above presents the bar graphs comparing military (n = 54) and civilian (n = 201) participants on the core Study 1 constructs: MHB, beliefs in mental health stigma (i.e., EASI scores), and Support for Psychological Injuries in Military Honors. Military participants are represented in green whereas civilian participants are represented in grey. Error bars reflect +/- 2 *SE*.

Given the lower number of military participants, it is difficult to statistically test for differences in these constructs (e.g., MHB, beliefs about mental health stigma) based on more specific demographics (e.g., branch of service, deployed to combat, injured). Accordingly, I have provided the descriptive statistics (i.e., means and standard deviations) for overall MHB scores, overall EASI scores, and Support for Psychological Injury in Military Honors as a function of military participants' branch of service, deployment status, and injury status in Table 4. On average, the Marine Corps had the highest MHB (perhaps because they all trained for combat, unlike other branches) whereas the Navy had the lowest; the Navy had the highest EASI scores whereas the Army had the lowest; and the Marine Corps had the highest Support for Psychological Injury in Military Honors whereas the Army had the lowest. Additionally, military participants who had been deployed to combat had higher MHB and EASI, but lower Support for Psychological Injury in Military Honors compared to those who had never been deployed (recall, not tested for significance). Finally, on average, the two military participants who did not disclose their injury status had the highest MHB whereas those who were not injured had the lowest; military participants who did not disclose their injury status had the highest EASI whereas those who were injured both physically and psychologically had the lowest; and physically injured military participants reported the highest Support for Psychological Injury in Military Honors whereas those who did not disclose their injury status reported the lowest. It seems worth noting that these two military participants who did not disclose their injury status had, on average, both the highest MHB and EASI scores, suggesting individuals who pride themselves in their reputation and/or are sensitive to perceived (mental) weakness may self-stigmatize and avoid acknowledging any injuries as a result. It is important to note that these averages were computed from very low numbers of participants and were, therefore, not used for

statistical comparisons, so these interesting trends should be examined in future research. Overall, although participants' military status related to their MHB, future research should further explore how more specific military demographics (e.g., branch of service, deployed to combat, injured) relate to these constructs.

Table 4

Means & Standard Deviations for Individual Differences based on Study 1 Military Participants' Branch of Service, Deployment Status, & Injury Status

		MHB		EASI		SPIMH	
Branch of Service	*n*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Army	23	5.41	1.36	3.54	1.49	6.50	1.91
Air Force	14	5.54	1.11	3.92	1.28	6.76	1.96
Navy	9	5.11	1.18	4.18	1.62	6.80	2.46
Marine Corps	8	6.05	1.13	4.07	1.54	7.65	1.28
Deployment Status	*n*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Deployed to Combat	20	6.04	1.24	4.08	1.65	6.36	2.26
Never Deployed	34	5.17	1.13	3.67	1.31	7.04	1.70
Injury Status	*n*	*M*	*SD*	*M*	*SD*	*M*	*SD*
No	23	5.31	1.15	3.87	1.35	6.37	2.01
Yes, physically	12	5.46	1.57	3.74	1.77	7.48	2.00
Yes, psychologically	12	5.33	1.08	3.96	1.52	7.05	1.79
Yes, both physically & psychologically	5	6.06	0.77	2.85	0.46	6.84	2.05
Prefer not to say	2	7.29	0.77	5.36	0.34	5.60	0.00

Note: "SPIMH" refers to "Support for Psychological Injury in Military Honors."

Summary of Study 1

Study 1 examined support for including psychological injuries in military honors as a function of individual differences in MHB and beliefs in mental health stigma. Consistent with my hypotheses, these two individual difference measures were positively correlated with one another. Although MHB did not predict Argument Agreement within the Purple Heart Opinion Essays, EASI scores positively predicted agreement with excluding PTSD from Purple Heart qualifications. More broadly, both MHB and EASI scores negatively correlated with supporting psychological injuries in military honors, consistent with my hypotheses. Taken together, these findings may suggest that individuals higher in MHB are less likely to support the idea of honoring psychological injuries in the military and that individuals higher in beliefs in mental health stigma may be more receptive to arguments about mental health-related topics. Overall, Study 1 extended our theoretical understanding of MHB in relation to 1) beliefs about mental health stigma (using the EASI specifically) and 2) individuals' perceptions about what types of injuries should qualify for military honors.

Chapter 4 - Study 2: Veterans Organizations

Many organizations are designed to support veterans, but they vary in their priorities. For example, some organizations prioritize supporting veterans with physical injuries (e.g., Paralyzed Veterans of America), some prioritize supporting veterans with psychological injuries (e.g., Til Valhalla), and some support veterans with physical and/or psychological injuries (e.g., Wounded Warriors Project). Given that it is an individual's decision to provide support for a particular organization, their monetary donations to such organizations provide evidence of perceived fairness and/or moral desert (see Sandel, 2009 for a review of justice theories). Complementary to Study 1's assessment of recognizing injuries in military honors, Study 2 explored monetary support for veterans organizations as a function of the type of injury the veterans organization prioritizes and individual differences in MHB and beliefs in mental health stigma.

To do this, Study 2 participants hypothetically allocated $1,000, however they saw fit, between two organizations: one that prioritizes support for veterans with physical injuries and one that prioritizes support for veterans with psychological injuries. This design allowed for the identification of participants who allocate the money equally between the two organizations (i.e., $500 to each organization) and those who were preferential in supporting one organization (i.e., injury) over the other (e.g., by donating more than $500 to one organization). Participants also responded to items about factors related to their allocation decision (e.g., perceived cost of treatment, how frequent each injury is within the military, likelihood of recovery, quality of life). Additionally, as in Study 1, participants provided their general perceptions about supporting veterans with psychological injuries more broadly, in terms of organizational funding needs and public awareness. In sum, the current study provided insight on how MHB and beliefs in mental

health stigma relate to monetary allocations toward supporting veterans with physical versus psychological injuries.

Study 2 Hypotheses

Similar to Study 1, Study 2 hypotheses involved the general relationships between MHB, beliefs in mental health stigma, and support for veterans organizations that help veterans with various types of injuries. In terms of general correlations between these variables, I expected 1) MHB and beliefs in mental health stigma to be positively correlated and 2) both MHB and beliefs in mental health stigma to be negatively correlated with supporting veterans organizations that assist veterans with psychological injuries. In terms of participants' allocations, there was an inverse relationship between allocations to each organization given the nature of this outcome variable. Although I did not offer formal hypotheses regarding differences in allocations to each organization nor the items designed to help contextualize participants' allocations, I used the latter as supplementary information. More importantly, I hypothesized MHB and beliefs in mental health stigma would be positively correlated with allocations to the organization that supports veterans with physical injuries (and, thus, negatively with allocations to the organization that supports veterans with psychological injuries). These hypotheses were based on honor beliefs' negative relationship with mental health support (e.g., Foster et al., 2021; Lawless et al., in preparation; Osterman & Brown, 2011) and the nature of mental health stigma (Corrigan & Kosyluk, 2014).

Again, part of these hypotheses include demographic differences between military personnel and civilians, with the same expectations as described in the Study 1 Hypotheses for MHB and beliefs in mental health stigma. However, I had competing hypotheses for military versus civilian participants in terms of donations between organizations. On one hand, military

personnel may donate more than civilians to the organization that supports veterans with psychological injuries because veterans' mental health is more personally relevant for them. On the other hand, military personnel may donate less to such organizations (compared to civilians) because of the military's long standing mental health stigma (e.g., Hoge et al., 2006).

Study 2 Method

Participants

According to an a priori power analysis for a correlational study (power = .80, $\alpha = .05$), I needed 82 participants for this study. The same recruitment techniques as described in the Study 1 Participants Section were employed for Study 2. Data collection began on April 18th, 2022. The civilian survey sample finished with 150 participants on April 19th, 2022. The military-filtered survey closed with 53 participants on June 19th, 2022. Again, although we aimed for 150 military participants, data collection for this group was very slow, and after several months, we stopped data collection with a sufficient number of total participants according to the a priori power analysis.

Data Cleaning

249 people accessed this survey, but several were excluded for failing the two English proficiency checks at the beginning of the survey (*n* = 27; see Appendix A). Additionally, participants were omitted for completing less than 90% of the survey (*n* = 11), failing the attention checks within the individual difference scales (n = 2), and completing either of the individual difference scales in under 60 seconds (*n* = 27). After these data cleaning procedures, this left 172 participants for data analysis, surpassing the necessary sample size for this correlational design.

Participant Demographics

On average, participants were 48.51 years old (*SD* = 13.81), with 55% identifying as women and 43% identifying as men. The majority of participants were White (76%) and heterosexual (86%). One third of participants reported either currently or formerly serving in the military within the following branches: Army (*n* = 25), Air Force (*n* = 14), Navy (*n* = 12), Marine Corps (*n* = 4), and Coast Guard (*n* = 2). Of these 57 military participants, 39% had been deployed to combat (*n* = 22). Of participants who had been deployed, 55% reported experiencing a life-threatening event in combat (*n* = 12). Participants with any military experience (i.e., not necessarily deployed to combat) were also asked if they had been injured as a result of their service: 49% reported no injuries (*n* = 28), 21% reported solely physical injuries (*n* = 12), 18% reported solely psychological injuries (*n* = 10), 9% reported both physical and psychological injuries (*n* = 5), and 4% did not want to share their injury status (*n* = 2). Of the 15 military participants who reported psychological injuries as a result of their service, 93% reported that their injury was clinically diagnosed (*n* = 14). Of the 27 military participants who reported any military injury (i.e., physical and/or psychological), 81% reported they were still suffering from their injury/injuries (*n* = 22). Table 5 provides the frequencies of military participants' deployment status and injury status separated by their branch of service.

Table 5

Frequency Table for Study 2 Military Participants' Branch of Service, Deployment Status, & Injury Status

		Deployment Status		**Injury Status**				
	Branch of Service	Deployed to Combat	Never Deployed	No	Yes, physically	Yes, psychologically	Yes, both	Prefer not to say
Army	25 (44%)	7 (28%)	18 (72%)	11 (44%)	6 (24%)	4 (16%)	2 (8%)	2 (8%)
Air Force	14 (25%)	4 (29%)	10 (71%)	8 (57%)	3 (21%)	2 (14%)	1 (7%)	0
Navy	12 (21%)	7 (58%)	5 (42%)	7 (58%)	1 (8%)	2 (17%)	2 (17%)	0
Marine Corps	4 (7%)	3 (75%)	1 (25%)	1 (25%)	1 (25%)	2 (50%)	0	0
Coast Guard	2 (4%)	1 (50%)	1 (50%)	1 (50%)	1 (50%)	0	0	0
Totals	57 (100%)	22 (39%)	35 (61%)	28 (49%)	12 (21%)	10 (18%)	5 (9%)	2 (4%)

Note: Percentages were calculated within each of the broader groups (i.e., Branch of Service, Deployment Status, Injury Status) for each branch of service and are provided within the parentheticals.

Materials

Unless otherwise stated, all items were completed on 1 (*Strongly Disagree*) to 9 (*Strongly Agree*) Likert-type scales. Again, participants completed the MHBS (Saucier et al., 2016; see Appendix B), the EASI (Vogt et al., 2014; see Appendix C), and the Social Desirability Scale (Stober, 2001; see Appendix F). As in Study 1, I created composites for each scale (and their subscales, where appropriate) such that higher scores reflect a greater presence of the measured construct. The means, standard deviations, and alphas for the following measures are provided in Table 6.

It is important to note that in the materials below we did not reference actual, existing veterans organizations because this could have potentially biased participants. For instance, existing organizations may not use funds appropriately/as donors may wish or have political affiliations donors may not support. As a result, we broadly described two organizations as prioritizing veterans with either physical or psychological injuries within these materials.

Allocations

The primary outcome variables in Study 2 involved (hypothetical) monetary allocations between two veterans organizations: one that helps veterans with psychological injuries and one that helps veterans with physical injuries (see Appendix G). Specifically, we provided two spaces for participants to type in their donation to each organization such that the sum of the two totals to $1,000. Then, participants responded to the following attention check: "*Did you make your donation decision thoughtfully?*" Yes or No. Allocations were used to measure participants' perceptions of which organization's priorities are (seemingly) more deserving of support.

Allocation Response Items. To help contextualize participants' allocations, we inquired about their allocation decision in terms of perceived cost of treatment, frequency within the

military, likelihood of recovery, and effect on quality of life in two ways. First, we applied these factors to the allocation itself (e.g., *My donation decision was based on the* [*cost of treating these injuries*].). Second, we applied these factors to comparisons between types of injuries (e.g., *Which of these two injuries is* [*more expensive to treat*]*?*) using a -4 (*Psychological Injuries*) to +4 (*Physical Injuries*) Likert-type scale. These items provided context for allocations given that these relevant factors (e.g., cost of treatment) may be more important for one's decision than their mental health stigma.

Support for Psychological Injury in Veterans Organizations

Similar to Study 1, participants rated their agreement with five items on supporting veterans with psychological injuries specifically through veterans organizations (e.g., *Organizations that support veterans suffering from psychological injuries serve an important cause.*; see Appendix H). Given that a reliable *alpha* was obtained (*alpha* = .81), these items were aggregated into a composite referred to as Support for Psychological Injury in Veterans Organizations.

Procedure

This study was also preregistered on the OSF: https://doi.org/10.17605/OSF.IO/6HYGT. Again, on Qualtrics, participants provided informed consent and demographic information. As in Study 1, the individual differences block (i.e., MHBS, EASI) was counterbalanced with the Study 2 materials block, with the individual difference scales being randomized. In terms of Study 2 materials, participants read the descriptions of the two veterans organizations, typed in their allocation to each organization, responded to the Allocation Response Items, responded to the attention check, and then completed the Support for Psychological Injury in Veterans Organizations items. After being debriefed, participants were thanked and compensated.

Study 2 Results

General Relationships Between Variables

First, MHB positively correlated with overall EASI scores, $r = .28$, $p < .001$, and most of its subscales (see Table 6). In other words, individuals higher in MHB reported having greater beliefs about mental health stigma, consistent with my hypotheses and Study 1. MHB did not correlate with Concern About Stigma from Loved Ones, which could be the case because of the family values that are central to honor ideology. Somewhat similarly, overall EASI scores were positively correlated with most of the MHBS subscales, except Family and Community Bonds. Although the Family and Community Bonds subscale was not significantly negatively correlated with these subscales, this relationship did trend in a negative direction, suggesting that perhaps one's family and/or community may help buffer mental health stigma. Given that these Family and Community Bonds patterns also emerged in Study 1, future research should replicate these findings and/or explore the possibility that these microlevel entities may help buffer mental health stigma.

Table 6

Study 2 Pairwise Correlations for the MHBS, EASI, Allocations, Support for Psychological Injury in Veterans Organizations, & Social Desirability

	M	*SD*	1	1a	1b	1c	1d	1e	1f	1g	2	2a	2b	2c	2d	2e	3	4	5
1. MHB	5.12	1.57	.96																
1a. Masculine Courage	5.33	2.22	**.89**	.92															
1b. Pride in Manhood	4.12	2.08	**.92**	**.84**	.88														
1c. Socialization	6.45	1.68	**.78**	**.68**	**.64**	.79													
1d. Virtue	2.63	1.64	**.78**	**.64**	**.78**	**.48**	.87												
1e. Protection	6.57	1.99	**.82**	**.73**	**.67**	**.70**	**.47**	.91											
1f. Provocation/Insult	3.45	2.43	**.82**	**.63**	**.78**	**.47**	**.72**	**.51**	.95										
1g. Family & Community	7.26	1.45	**.59**	**.41**	**.39**	**.50**	**.24**	**.56**	**.39**	.77									
2. EASI	3.40	1.51	**.28**	**.26**	**.33**	**.20**	**.29**	**.17**	**.27**	-.01	.96								
2a. Mental Illness	2.63	1.50	**.36**	**.34**	**.41**	**.26**	**.35**	**.25**	**.30**	.05	**.75**	.91							
2b. Treatment	3.13	1.57	**.27**	**.28**	**.34**	**.21**	**.31**	.13	**.26**	-.08	**.81**	**.62**	.88						
2c. Treatment Seeking	3.34	1.99	**.32**	**.33**	**.34**	**.27**	**.27**	**.25**	**.28**	.02	**.81**	**.64**	**.78**	.92					
2d. Loved Ones	3.29	2.22	.06	.07	.12	.02	.13	-.03	.10	-.09	**.79**	**.45**	**.46**	**.45**	.96				
2e. Workplace	4.59	2.32	**.16**	.10	**.17**	.09	.14	.11	**.18**	.07	**.77**	**.40**	**.44**	**.40**	**.62**	.96			
3. $ to Physical Vet Org	492.62	155.33	.14	**.15**	.14	.12	.14	.09	.10	.06	.09	.08	.05	.11	.07	.05	-		
4. $ to Psych Vet Org	507.38	155.33	-.14	**-.15**	-.14	-.12	-.14	-.09	-.10	-.06	-.09	-.08	-.05	-.11	-.07	-.05	**-1.0**	-	
5. Support for Psych Vet Org	7.51	1.51	-.05	**-.17**	-.11	.00	-.10	-.05	.05	**.19**	**-.25**	**-.29**	**-.29**	**-.32**	-.07	-.10	-.14	-.14	.81
6. Social Desirability	8.91	3.67	.01	-.06	-.04	.00	-.03	-.00	.02	**.20**	-.11	-.11	-.12	-.04	-.09	-.09	.02	.02	.13

Note: Cronbach's alphas are provided on the diagonal. *p*-values < .05 are bolded. Items 1, 2, and 5 could range from 1 to 9, Items 3 and 4 could range from 0 to 1,000, and Item 6 could range from 0 to 16.

Allocations

There was no difference between participants' allocations to organizations supporting veterans with either physical (M = 492.62, SD = 155.33) or psychological (M = 507.38, SD = 155.33) injuries, according to a paired samples t-test, $t(171) = 0.62$, $p = .534$, $d = .095$. It is perhaps worth noting that participants' average allocations favored organizations supporting veterans with psychological injuries, which may again reflect increased mental health awareness. In general, neither participants' MHB or EASI overall composites nor their subscales correlated with participants' allocations, with the exception of one MHBS subscale: Masculine Courage (see Table 6). Specifically, individuals higher in Masculine Courage allocated significantly *less* money to the organization prioritizing veterans with *psychological* injuries and, therefore, significantly *more* money to the organization prioritizing veterans with *physical* injuries. The Masculine Courage subscale pertains to bravery, the ability to take pain, and face danger, all of which are very relevant in a military context. While this is the only effect to emerge in relation to the allocations, it is consistent with my hypothesis that greater social reputational concerns would correspond to less monetary allocations to support veterans with psychological injuries.

In general, the lack of relationships for MHB and beliefs about mental health stigma with participants' allocations is particularly interesting and worthy of discussion. There are some potential reasons for the lack of relationship that can be eliminated. First, it is important to note that the majority of participants evenly donated $500 to each organization (73%), but because allocations to either organization spanned the full range of $0 to $1,000, there does not seem to be a restriction of range issue. In fact, it is possible that the design of this study helped legitimize psychological injury as a cause worthy of donations in participants' minds, as evidenced by the high frequency of participants who allocated the money evenly. Second, these individual

differences, broadly speaking, did not correlate with Social Desirability, with the exception of the Family and Community Bonds subscale of the MHBS, $r = .20$, $p = .009$.

As such, there is likely a more theoretical explanation for the lack of relationship between MHB, beliefs about mental health stigma, and participants' allocations. Despite the fact that MHB positively correlated with beliefs in mental health stigma broadly (i.e., overall EASI scores), neither MHB nor EASI were associated with discriminatory behavior (e.g., in allocating money) toward veterans. Of course, prejudice is a precursor for discrimination, which may only occur under a specific set of circumstances (see the Justification Suppression Model of Prejudice; Crandall & Eshleman, 2003) that were not present in this online survey. Two alternative explanations for this would be that participants' respect for service may have outweighed their (prejudiced) beliefs about mental health stigma, and subsequently did not manifest in discriminatory monetary allocations or participants' simply made decisions that were consistent with distributive justice theories (e.g., Cook & Hegtvedt, 1983) and principles of equity. Overall, these allocation findings highlight the nuances of how (primarily civilian) participants may be less inclined to stigmatize service members' mental health issues.

Allocation Response Items (see Table 7). As previously stated, I had no formal hypotheses regarding the relationships between the individual difference measures and the Allocation Response Items because I included them to help contextualize participants' allocations. Interestingly, the overall MHB composite and several MHBS subscales significantly correlated with the Allocation Response Items. Specifically, the overall MHB composite positively correlated with making donation decisions based on the cost of treatment, the frequency of the injury, and likelihood of recovering from the injury, but not relative quality of life. This suggests that individuals higher in MHB made pragmatic decisions about how they

allocated the money by considering factors related to the donation (e.g., costs), not just the merit of the injury. More broadly, MHB were positive correlated with thinking physical injuries were more frequent in the military compared to psychological injuries. This expectation of more physical injuries may have also contributed to the positive correlation between the Masculine Courage subscale and allocations to the organization supporting veterans with physical injuries.

Interestingly, participants' beliefs about mental health stigma (as measured by the EASI) did not correlate with these Allocation Response Items. Given that MHB did correlate with these items, it could be that participants' beliefs about mental health stigma exist regardless of these more pragmatic factors that may or may not factor into how one allocates the money. In this case, the MHB effects could have emerged because MHB reflect more general/lifestyle values whereas the EASI is more specific and restricted in its focus. There were some other correlations among participants' allocations and the Allocation Response Items worth noting as well. Specifically, the more participants thought a certain type of injury was easier to recover from and/or easier to live with, the less money they allocated to that type of injury. In other words, if participants perceived the psychological injuries to be easier to recover from compared to physical injuries, they tended to allocate more money to the organization supporting veterans with physical injuries and vice versa. This is consistent with theories of distributive justice (e.g., Cook & Hegtvedt, 1983) and principles of equity that endorse the allocation of goods and services based on relative need.

Table 7

Pairwise Correlations for MHB, EASI, & Study 2's Allocation Response Items

	1	2	3	4	5	6	7	8	9	10	11	12
1. MHB	-											
2. EASI	**.28**	-										
3. $ to Physical Vet Org	.14	.09	-									
4. $ to Psych Vet Org	-.14	-.09	**-1.0**	-								
5. Cost of Treatment	**.23**	-.02	**.35**	**-.35**	-							
6. Frequency of Injury	**.16**	-.03	-.00	.00	**.59**	-						
7. Recovery	**.31**	-.03	.14	-.14	**.66**	**.63**	-					
8. Quality of Life	.07	-.12	.07	-.07	**.48**	**.53**	**.58**	-				
9. More Expensive	.07	.01	**.25**	**-.25**	**.24**	.10	.11	.14	-			
10. More Frequent	**.21**	.10	**.27**	**-.27**	**.21**	.01	.13	-.09	.08	-		
11. Easier to Recover	-.03	.03	**-.34**	**.34**	**-.15**	-.01	.02	.01	**-.22**	**-.20**	-	
12. Easier to Live	-.05	.09	**-.40**	**.40**	-.13	.00	-.04	.05	**-.27**	**-.18**	**.85**	-
13. Social Desirability	.01	-.11	.02	-.02	**.17**	.06	.15	**.19**	.08	.14	.11	.09

Note: *p*-values < .05 are bolded. Recall, the Allocation Response Items were collected in two ways. First, 5-8 used the root phrase, "*My donation decision was based on…*" and were completed on a 1 (*Strongly Disagree*) to 9 (*Strongly Agree*). Second, 9-12 used the root phrase, "*In your opinion, which injury is…*" and were completed on a -4 (*Psychological Injuries*) to +4 (*Physical Injuries*).

Support for Psychological Injury in Veterans Organizations

My hypotheses regarding how the individual difference measures would relate to Support for Psychological Injury in Veterans Organizations were partially supported. The overall MHB composite did not correlate with Support for Psychological Injury in Veterans Organizations, likely because two subscales had divergent correlations. Specifically, Masculine Courage negatively correlated with Support for Psychological Injury in Veterans Organizations while Family and Community Bonds positively correlated with it. The former is consistent with the earlier finding that greater Masculine Courage was associated with allocating less money to veterans with psychological injuries as well as my hypotheses. The latter, however, was unexpected but may suggest more communal and caretaking values (i.e., Family and Community Bonds) extend to veterans suffering from psychological injuries (perhaps as a sign of one's respect for service). As expected though, the overall EASI composite and most of its subscales negatively correlated with Support for Psychological Injury in Veterans Organizations. This is consistent with both my hypotheses and the nature of mental health stigma as a construct (e.g., Vogt et al., 2014) in that greater stigmatized beliefs about mental health issues corresponded to lower support for veterans with psychological injuries.[9]

Demographic Differences

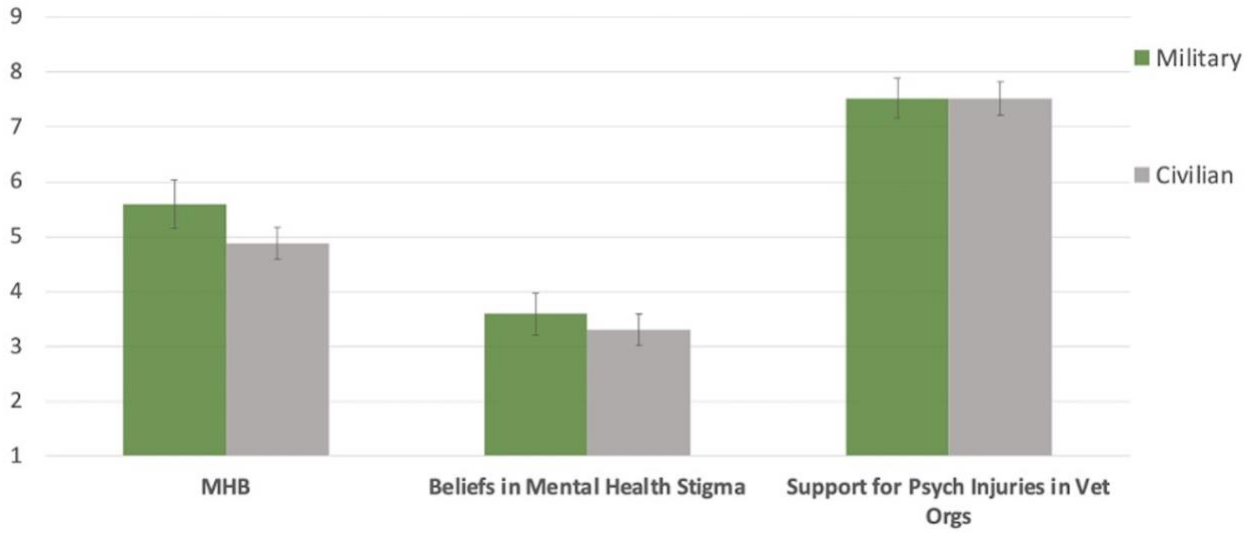
Given that a third of this sample were military personnel, we were able to examine how civilian (n = 115) and military (n = 57) participants differed on the core constructs (see Figure 3). As expected, military participants (M = 5.59, SD = 1.63) had higher MHB than civilian

[9] Again, for exploratory purposes, we ran a regression with MHB and EASI predicting Support for Psychological Injury in Veterans Organizations, $F(2, 169) = 5.87$, $p = .003$. Similar to Study 2, there was no main effect of MHB, but there was a main effect of EASI, $F(1, 169) = 11.43$, $p = .001$. Thus, although MHB and EASI scores positively correlated with one another ($r = .28$), EASI appeared to be a better predictor of Support for Psychological Injury in Veterans Organizations than MHB.

participants (M = 4.88, SD = 1.48), $t(171) = 2.78$, $p = .007$, $d = 0.46$, consistent with Study 1. Again, I cannot comment on the directionality of this relationship, but reiterate that there is a lot of overlap between honor and military cultures and values (e.g., Saucier & McManus, 2014).

Contrary to my hypothesis that military participants would have greater beliefs about mental health stigma but consistent with Study 1, military (M = 3.59, SD = 1.41) and civilian (M = 3.30, SD = 1.55) participants did not differ in beliefs about mental health stigma, $t(171) = 1.22$, $p = .226$, $d = 0.13$. Again, this could be evidence of normalizing mental health treatment in both society broadly and the military specifically. Moreover, military and civilian participants did not differ in either Support for Psychological Injury in Veterans Organizations, $t(171) = 0.02$, $p = .985$, $d = 0.01$, or allocations to organizations supporting veterans with physical or psychological injuries, $t(171) = |1.58|$, $p = .119$, $d = 0.25$. This latter finding does not support either of my competing hypotheses that military personnel would donate either more or less to organizations prioritizing veterans with psychological injuries (compared to civilians) because this issue is more relevant for military personnel or they could donate less money than civilians to such organizations due to mental health stigma in the military (e.g., Hoge et al., 2004), respectively. The lack of differences here may suggest that both service members and civilians have similar views toward veterans with psychological injuries. Regardless, future research should seek out more comparable sample sizes for further insight.

Figure 3. Independent Samples *t*-tests Comparing Military and Civilian Participants in Study 2 Constructs



The image above presents the bar graphs comparing military (n = 57) and civilian (n = 115) participants on the core Study 2 constructs: MHB, beliefs in mental health stigma (i.e., EASI scores), and Support for Psychological Injuries in Veterans Organizations. Military participants are represented in green whereas civilian participants are represented in grey. Error bars reflect +/- 2 *SE*.

Similar to Study 1, I reported the descriptive statistics (i.e., means and standard deviations) for overall MHB scores, overall EASI scores, and Support for Psychological Injury in Veterans Organizations as a function of military participants' branch of service, deployment status, and injury status (see Table 8) because I cannot test them statistically due to the lower number of military participants. On average, the Coast Guard had the highest MHB whereas the Navy had the lowest; the Navy had the highest EASI scores whereas the Marine Corps had the lowest; and the Marine Corps had the highest Support for Psychological Injury in Veterans Organizations whereas the Coast Guard had the lowest. Additionally, military participants who had been deployed to combat had higher MHB, EASI, and Support for Psychological Injury in Veterans Organizations compared to those who had never been deployed. Finally, on average, military participants who did not disclose their injury status had the highest MHB whereas those who were physically injured had the lowest; military participants who did not disclose their injury status had the highest EASI whereas those who were psychologically injured had the lowest; and psychologically injured military participants reported the highest Support for Psychological Injury in Veterans Organizations whereas physically injured military participants reported the lowest. Consistent with Study 1, military participants who did not disclose their injury status had both the highest MHB and EASI scores, which may reiterate how an injury (of any kind) has negative implications for one's social reputation due to perceived weakness. Again, these findings call for further research on how specific military demographics (e.g., branch of service, deployed to combat, injury status) relate to these constructs with larger military sample sizes.

Table 8

Means & Standard Deviations for Individual Differences based on Study 2 Military Participants' Branch of Service, Deployment Status, & Injury Status

		MHB		EASI		SPIVO	
Branch of Service	*n*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Army	25	5.55	2.10	3.40	1.27	7.59	1.39
Air Force	14	5.76	1.21	3.60	1.47	7.07	1.37
Navy	12	5.31	1.14	4.22	1.49	7.82	1.35
Marine Corps	4	5.71	1.44	2.86	1.95	8.30	1.01
Coast Guard	2	6.49	0.32	3.56	0.76	6.30	0.71
Deployment Status	*n*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Deployed to Combat	22	6.01	1.61	3.70	1.69	7.77	1.33
Never Deployed	35	5.33	1.61	3.52	1.22	7.35	1.37
Injury Status	*n*	*M*	*SD*	*M*	*SD*	*M*	*SD*
No	28	5.66	1.33	3.68	1.43	7.70	1.18
Yes, physically	12	5.34	1.82	3.83	1.42	6.70	1.76
Yes, psychologically	10	5.66	2.31	3.07	1.34	8.08	1.27
Yes, both physically & psychologically	5	5.42	1.76	3.43	1.68	7.36	1.12
Prefer not to say	2	6.34	1.50	3.88	1.45	7.40	0.57

Note: "SPIVO" refers to "Support for Psychological Injury in Veterans Organizations."

Summary of Study 2

Study 2 examined how participants allocate money between organizations designed to help veterans with physical versus psychological injuries as a function of MHB and beliefs in mental health stigma. There was no difference in average allocations to veterans organizations for either injury. In general, neither MHB nor EASI scores correlated with participants' allocations. Interestingly, MHB, but not beliefs about mental health stigma, correlated with several of the Allocation Response Items, suggesting individuals higher in MHB perhaps made their allocation decisions more pragmatically (e.g., based on cost of treatment, frequency of the injury, likelihood of recovery). Although EASI scores negatively correlated with Support for Psychological Injury in Veterans Organizations, MHB's relationship with this construct was more nuanced (i.e., one subscale corelated positively and another correlated negatively). In sum, this study extended Study 1's assessment of perceptions of various injuries as deserving military honors to monetary allocations toward supporting veterans with different injuries while also assessing individual differences in MHB and beliefs in mental health stigma.

Chapter 5 - General Discussion

The current research investigated support for service members with physical versus psychological injury in terms of military honors (Study 1) and monetary allocations to veterans organizations designed to support them (Study 2). This is a particularly important topic given the increasing discussion of military personnel's mental health and their lower likelihood of seeking mental health treatment (e.g., Britt et al., 2015). Given the military's honor values (e.g., Westhusing, 2003) and historic mental health stigma (e.g., Ben-Zeev et al., 2012), this program of research examined how individual differences in MHB and beliefs in mental health stigma may predict support for military personnel with psychological injuries. As such, this research is the first to 1) explicitly test the relationship between MHB and beliefs in mental health stigma using validated scales, 2) apply this relationship to support for military personnel with psychological injuries specifically, and 3) examine military participants' levels of MHB.

Masculine Honor Beliefs (MHB)

Although honor ideology has been applied to military recruitment (e.g., Brown et al., 2014a), recipients of Congressional Medals of Honor (e.g., Brown et al., 2011, unpublished), military moral decision-making (e.g., Schiffer et al., 2020), and hazing in boot camp (e.g., Austin et al., in preparation), the main goal of this research was to explore how MHB relate to perceptions of service members with physical versus psychological injuries. Given the well-documented relationship between honor ideology and increased mental health stigma (e.g., Foster et al., 2021; Osterman & Brown, 2011) and beliefs that combat would/should not result in PTSD (Lawless et al., in preparation), I hypothesized individuals higher in MHB would display less favorable attitudes toward service members with psychological injuries.

My hypothesis that MHB would be positively associated with beliefs in mental health stigma was supported in both studies with moderate positive correlations between the two. In other words, individuals higher in MHB tended to have greater beliefs about mental health stigma (e.g., thinking people with mental health issues are incompetent, thinking mental health treatment does not work, discomfort with treatment seeking). This is consistent with honor ideology's relationship with mental health, stigma, and treatment (e.g., Brown et al., 2014; Foster et al., 2021; Gul et al., 2021; Osterman & Brown, 2011). Beyond testing MHB's relationship with beliefs about mental health stigma using validated scales, this research examined participants' mental health stigma toward service members specifically. I hypothesized higher MHB would be associated with less support for recognizing psychological injury in military honors (Study 1) and with relatively lower monetary allocations to veterans organizations that prioritize supporting veterans with psychological (versus physical) injuries (Study 2).

Interestingly, we did not find these hypothesized relationships with respect to the primary outcome variables for each study. Specifically, in Study 1, MHB did not interact with Argument Condition when predicting Argument Agreement with the Purple Heart Opinion Essays as expected. Further, in Study 2, MHB did not significantly correlate with participants' allocations between the organizations designed to help veterans with physical and psychological injuries. However, MHB had nuanced relationships with the secondary outcome variables in each study. As previously described, these items were included to supplement the primary outcome variable for each study. In Study 1, higher levels of MHB were associated with lower support for honoring psychological injuries in the military, as expected. In Study 2, participants' overall MHB scores did not correlate with supporting for psychological injuries in veterans organizations, likely because two subscales had divergent correlations. Specifically, support for

psychological injuries in veterans organizations correlated negatively with Masculine Courage and positively with Family and Community Bonds. Taken together, although MHB were relatively unassociated with the primary outcome variables in either study, MHB's relationships with the secondary outcome variables highlight the nuances of directing mental health stigma toward service members.

The primary theoretical implications of this research pertain to how MHB relate to beliefs about mental health stigma as well as perceptions of various military injuries as worthy of public recognition and/or private monetary support. Broadly, higher levels of MHB were positively associated with beliefs about mental health stigma, consistent with my hypotheses and previous research (e.g., Foster et al., 2021). However, when we applied mental health stigma toward service members specifically, this relationship became more complex. For instance, in Study 1, MHB were negatively associated with the prospect of honoring psychological injuries in general (as evidenced by the negative correlation between MHB and Support for Psychological Injuries in Military Honors), but this pattern did not emerge when participants were asked about their agreement with a combat veteran's opinion on this topic (as evidenced by the lack of MHB x Argument Condition effect in the Purple Heart Opinion Essays). Somewhat similarly, in Study 2, higher levels of MHB were unassociated with allocations between the two veterans organizations, consistent with theories of distributive justice (e.g., Cook & Hegtvedt, 1983) and principles of equity in that participants tended to allocate the same amount of money to each organization. However, when examining the value of supporting injured veterans more broadly, two divergent correlations emerged among the MHBS subscales with the more general items, canceling out a correlation with the overall MHB composite.

Taken together, the MHB findings in each study lend themselves to one common theoretical implication. Specifically, individuals higher in MHB did not necessarily discriminate against veterans with psychological injuries when placed in specific situations to do so (as with the primary outcome variables in either study), but they still seemed to possess stigmatized mental health beliefs generally and toward service members. Thus, it seems that individuals higher in MHB's application of mental health stigma toward service members may be situational (e.g., Study 1) and/or nuanced (e.g., Study 2). Future research should explore the possibility that individuals higher in MHB's respect for service may outweigh their beliefs about mental health stigma toward a service member with a psychological injury, and the situations in which their stigma may emerge (e.g., anonymous donations or voting behaviors).

Beliefs in Mental Health Stigma

Psychological injuries are often met with public feelings of fear and/or incompetence (e.g., Corrigan & Kosyluk, 2014) and such stereotypes conflict with the military's values of honor, toughness, and self-sufficiency (e.g., Dickstein et al., 2010; Skopp et al., 2012). Thus, we included a measure of beliefs about mental health stigma, specifically the EASI (Vogt et al., 2014), to account for this important construct related to the objective of this research. In general, my hypotheses regarding beliefs about mental health stigma were supported in that individuals higher in beliefs about mental health stigma tended to have more negative attitudes toward service members with psychological injuries.

With respect to the primary outcome variables, more effects emerged for overall EASI scores than for MHB. In Study 1, the EASI x Argument Condition interaction predicted Argument Agreement with the Purple Heart Opinion Essays such that individuals higher in EASI reported lower agreement with the opinion to include psychological injuries (e.g., PTSD) in

Purple Heart qualifications. This is consistent with my hypotheses as well as with the nature of mental health stigma (e.g., Vogt et al., 2014). However, participants' overall EASI scores did not correlate with their allocations between the two veterans organizations designed to help either physical or psychological injuries in Study 2. This is inconsistent with my hypothesis, but similar to MHB's finding and also consistent with theories of distributive justice (e.g., Cook & Hegtvedt, 1983) and principles of equity.

With respect to the secondary outcome variables, beliefs about mental health stigma negatively correlated with both Support for Psychological Injuries in Military Honors and Support for Psychological Injuries in Veterans Organizations. Both of these broader findings are consistent with my hypotheses and the nature of mental health stigma (e.g., Vogt et al., 2014). Compared to MHB, it makes sense that more effects emerged for beliefs about mental health stigma because this construct is more closely tied to the content of this research. Overall, these findings extend past research on military mental health stigma and treatment-seeking behaviors to how stigma manifests in public recognition of and private support for military personnel who suffer from psychological injuries.

One of the primary theoretical implications of this research in relation to beliefs about mental health stigma pertains to their application toward perceptions of various military injuries, specifically service members with psychological injuries. A lot of mental health (stigma) research in military settings focuses on service members only (e.g., Creamer et al., 2011) and/or their propensity to self-stigmatize (e.g., Britt & McFadden, 2012; Mittal et al., 2013). By examining both civilian and military personnel's perceptions of service members with psychological injuries, we gain deeper insight into how beliefs about mental health stigma affect one's perceptions of military injuries broadly. Furthermore, this research identified two specific

ways that individuals could stigmatize service members with psychological injuries. Beliefs about mental health stigma were consistently negatively associated with inclinations to broadly honor and support psychological injuries. Overall, this research extended our theoretical understanding of beliefs about mental health stigma by applying them to perceptions of service members as well as MHB.

Nuanced Relationship between MHB & EASI

Although MHB were consistently positively correlated with overall EASI scores in both studies, the correlation patterns among their subscales were somewhat inconsistent across the two studies. In Study 1, beyond miscellaneous nonsignificant correlations (e.g., Socialization x Beliefs About Treatment Seeking, Protection x Beliefs About Treatment Seeking, Protection x Concerns About Stigma from Loved Ones), most relationships emerged as expected -- except for Family and Community Bonds. Specifically, the Family and Community Bonds subscale did not correlate with overall EASI scores nor any of its subscales in either study. Although we did not necessarily hypothesize this (lack of) relationship, it makes sense that, of all the MHBS subscales, Family and Community Bonds would not necessarily map on positively to beliefs about mental health stigma because it is more closely related to empathetic connection and support whereas other subscales are more concerned with maintaining and/or defending a tough social reputation (e.g., Masculine Courage, Pride in Manhood). This may also be the case because one's sense of belonging within their family and/or community can help buffer negative stigma toward people with mental health issues and perhaps normalize them.

Military Versus Civilian Participants

Research has explored broader conceptualizations of honor in relation to military populations in several different ways. For instance, Mandel and Litt (2013) examined service

members' perceptions of their leaders', peers', and subordinates' honor and morality within the Canadian Forces. Somewhat similarly, Helkama et al. (2013) assessed honor levels across different groups (e.g., military cadets, Red Cross volunteers, university students) in Estonia, Finland, Italy, Russia, and Switzerland. It is worth noting that these studies refer to honor more broadly whereas we refer to the construct of masculine honor ideology specifically. The latter conceptualization of honor refers to a way of life that people adhere to and seems to overlap a great deal with military cultures and values (e.g., Westhusing, 2003; Saucier & McManus, 2014). Taken together, this previous research focused on honor within service members outside of the US, and occasionally used unvalidated measures. Therefore, the current research is the first to recruit US military personnel with the intent to examine alongside MHB.

Despite the smaller sample sizes of military participants in either study, we examined differences between military and civilian participants in the broader constructs in these studies. In general, participants did not differ in their beliefs about mental health stigma, Support for Psychological Injury in Military Honors, or Support for Psychological Injury in Veterans Organizations. Consistent with Helkama et al.'s (2013) finding that military cadets reported higher honor (measured as a broad construct related to integrity and moral character) compared to other groups (e.g., Red Cross volunteers, university students), we found, using the MHBS (a validated measure of masculine honor ideology founded in the American South; Saucier et al., 2016), that military and civilian participants differed in their MHB in both studies, with military participants having higher MHB than their civilian counterparts. This finding is consistent with my hypotheses as well as the overlap between military and honor cultures.

It is important to note that there may be the issue of bidirectionality here, though. On one hand, the military explicitly names "honor" as one of its values (e.g., Hooyer, 2012; Westhusing,

2003) and further promotes it with mottos like, “Death Before Dishonor” (Saucier & McManus, 2014). In this case, military participants’ levels of MHB may have increased as a result of their service through the indoctrination of military culture and values (for how this process occurs, see McGurk et al., 2006). On the other hand, honor ideology in civilians has been shown to be positively associated with respect for military service (e.g., in preferring elected officials with military experience; Cohen & Leung, 2012; Stratmoen et al., 2019) and blind patriotism (Barnes et al., 2016). In this case, individuals with higher MHB may be more drawn to careers in the military because they believe themselves to be a conduit of protection for their country and are subsequently willing to commit their lives to the military. Future research should seek to replicate these findings with larger sample sizes.

Limitations & Future Directions

Although this research investigated perceptions of military injuries, it focused more on psychological injuries than physical injuries because of the lack of representation of psychological injuries (e.g., PTSD) in military honors and greater mental health stigma, especially in the military. As such, the current research approached these injuries as distinct rather than as coexisting (see Hynes et al., 2021). Although this decision increased the experimental control and internal validity of these studies, the comorbidity of these injuries is important to note. For instance, a combat veteran may have lost a limb due to an explosion in combat and as a result, suffered both depression and PTSD (e.g., Baker et al., 2009). Within the context of these studies, it is possible that a new military honor could be created for veterans with psychological injuries and/or veterans suffering from both types of injuries simultaneously. However, the logistics of such a decision may be more difficult given the more subjective nature of symptoms associated with psychological injuries and, therefore, their diagnostic criteria (e.g.,

Sandel, 2009). Similarly, organizations exist that support veterans with both types of injuries (e.g., Wounded Warriors Project), so future research should take the possibility of comorbid injuries into consideration.

Despite my efforts to recruit equal numbers of military and civilian participants in each study, only 20-30% of participants were current or former military personnel in either study. These samples allowed for surface-level comparisons across the two groups in the individual difference constructs and constructs related to each study, in which we found military participants consistently had higher MHB than their civilian counterparts. Broadly speaking though, the lack of differences between military and civilian participants in constructs related to each study (e.g., Support for Psychological Injuries in Military Honors, Support for Psychological Injuries in Veterans Organizations) suggests the predominantly civilian samples still provide relevant insights into general perceptions of military injuries. For instance, the normalization of mental health issues and awareness is a societal movement that is simultaneously occurring within the military specifically as well. While military and civilian participants reported similar beliefs regarding psychological injuries in military honors and veterans organizations, these findings should be interpreted with caution and, ideally, replicated with larger sample sizes. Additionally, future research should explore how more specific military demographics (e.g., branch, rank, gender, occupational specialty) relate to these constructs because it could be the case that more combat-focused branches and/or occupational specialties, people in higher authority positions, and/or men may differ from their counterparts in their perceptions of psychological injuries.

There are also some limitations within each study specifically. For instance, because Study 1 only assessed one type of military honor (i.e., the Purple Heart), its findings may not

generalize to other existing honors (e.g., Congressional Medal of Honor) or the possibility of creating a new honor that recognizes injuries of all types. Nonetheless, the Purple Heart is a good proxy measure for military honors in the current research because its qualifications only involve injury and not tremendous acts of bravery (which could be confounded with physical injuries). In Study 2, not many effects emerged in relation to the primary outcome variable, participants' allocations to organizations supporting veterans with either physical or psychological injuries. This could be the case because of a discrepancy between participants' hypothetical and actual behavior in which case their allocations did not accurately reflect how they would distribute such a donation in real life. To achieve better external validity, future research could investigate individuals' donations to existing veterans organizations. Overall, this design was a reasonable, approximate measurement of support for various veterans organizations.

Future research should continue to investigate military mental health and barriers to care, including the role of gender in these areas (e.g., Elnitsky et al. 2013; Heath et al., 2017). Additionally, such research should be used to determine the most effective intervention strategies directed at destigmatizing mental health in the military (see Dickstein et al., 2010), which may potentially be especially important for individuals higher in MHB and/or beliefs about mental health stigma. Although recognizing psychological injuries in military honors is an important step toward reducing stigma, there are many other avenues to promote the support of service members' mental health. As Vanderploeg et al. (2012) advocate, post-deployment care should take a holistic or integrated approach for service members' physical and mental healthcare. Overall, despite these limitations, the current research has important theoretical and practical implications for military mental health.

Practical Implications

Additionally, this research has numerous important practical implications. First, this research has implications for which military injuries are respected and, therefore, deserving of recognition and/or support. Specifically, these studies most readily apply to support for public recognition (Study 1) and personal support (Study 2) of psychological injuries in the military, respectively. More specifically, Study 1 demonstrated that participants generally tended to favor the idea of recognizing psychological injuries in military honors, as evidenced by the main effect of Argument Condition in predicting Argument Agreement with the Purple Heart Opinion Essays as well as the fact that the mean Support for Psychological Injuries in Military Honors was above the midpoint of the scale (M = 7.10, SD = 2.02). Study 2 demonstrated, somewhat similarly, that participants also tended to hold favorable attitudes toward veterans with psychological injuries, as evidenced by the fact that the mean Support for Psychological Injuries in Veterans Organizations was above the midpoint of the scale (M = 7.51, SD = 1.51).

Broadly speaking, although soldiers with mental health issues may tend to self-stigmatize more than their civilian counterparts due to perceived weakness conflicting with the military's values of toughness (e.g., Britt & McFadden, 2012; Mittal et al., 2013), this research suggests that public stigma directed toward service members may not be as severe as or equivalent to their own self-stigma. If this is the case, this may be indicative of civilians being more accepting of service members professing their mental health issues that result from their service. Overall, the main constructs within each study (i.e., honoring and supporting psychological injuries in the military) consistently show generalized support for service members with psychological injuries and thus demonstrates the normalization of mental health concerns.

Second, this research helps inform us of *who* is more or less inclined to support said injuries. The assessment of individual differences in MHB and beliefs in mental health stigma contextualizes the role of honor ideology in respecting military injuries while incorporating beliefs in mental health stigma, a previously documented relationship with other honor measures (e.g., Foster et al., 2021). Recall, MHB had a slightly nuanced relationship with reporting stigmatizing attitudes toward service members with mental health issues whereas individuals higher in beliefs about mental health stigma were more consistent in reporting these same attitudes. More broadly, these individual differences are particularly important when we start to consider *who* is voting on legislation pertaining to military mental health both internally within the military (e.g., Department of Defense) or more broadly in public legislation. Overall, the current research has important real-world applications for perceptions of and support for military injuries.

Conclusion

These studies provided insight on perceptions of service members' psychological and physical injuries as a function of individuals' MHB and beliefs in mental health stigma. In particular, this program of research examined participants' support for awarding military honors to (Study 1) and monetary allocations toward veterans organizations that help veterans with (Study 2) various injuries. Taken together, these studies have important theoretical implications for understanding MHB and beliefs in mental health stigma in a military context and practical implications in terms of who is more inclined to respect and/or support service members with psychological injuries (as a function of MHB and beliefs in mental health stigma) in two different ways: public military recognition and more private (hypothetical) financial allocations. Overall, this research demonstrates the importance of understanding individuals' MHB and

beliefs in mental health stigma in relation to their perceptions of service members with psychological injuries.

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Appendix A - English Proficiency Questions

Instructions: Please fill in the blank by selecting the phrase that makes grammatical sense. Incorrect responses will result in survey ineligibility and no compensation.

Question 1. During the early years of email, _____ any need for spam filters.

A. there hardly
B. hardly was
C. hardly there is
D. there was hardly (correct answer)
E. so that hardly is

Question 2. Rumors and innuendo are powerful _____ people's reputations.

A. as they can ruining
B. enough to ruined
C. because to ruin
D. so can have ruin
E. because they can ruin (correct answer)

Appendix B - Masculine Honor Beliefs Scale (Saucier et al., 2016)

Masculine Courage

1. It is very important for a man to act bravely.
2. A man should not be afraid to fight.
3. It is important for a man to be able to face danger.
4. It is important for a man to be able to take pain.
5. It is important for a man to be courageous.

Pride in Manhood

1. It is important for a man to be more masculine than other men.
2. A man should be embarrassed if someone calls him a wimp.
3. A man should be expected to fight for himself.
4. If a man does not defend his wife, he is not a very strong man.
5. If a man does not defend himself, he is not a very strong man.

Socialization

1. If your son got into a fight, you would be proud that he stood up for himself.
2. You would want your son to stand up to bullies.
3. As a child you were taught that boys should defend girls.
4. If your son got into a fight to defend his sister, you would be proud that he protected his sister.
5. As a child you were taught that boys should always defend themselves.

Virtue

1. You would praise a man who reacted aggressively to an insult.
2. Physical aggression is always admirable and acceptable.
3. It is morally wrong for a man to walk away from a fight.
4. “A man who doesn't take any crap from anybody” is an admirable reputation to have.
5. Physical violence is the most honorable way to defend yourself.

Protection

1. A man should do whatever it takes to protect his wife because it is the right thing to do.
2. If a man cares about his wife, he should protect her even if everyone else thinks it's wrong.
3. A man should stand up for a female who is in his family or is a close friend.
4. It is a male's responsibility to protect his family.
5. A man should protect his wife.

Provocation/Insult

1. If a man's wife is insulted, his manhood is insulted.
2. If a man's mother is insulted, his manhood is insulted.
3. If a man's father is insulted, his manhood is insulted.
4. If a man is insulted, his manhood is insulted.

5. If a man's brother is insulted, his manhood is insulted.

Family & Community Bonds

1. It is important to spend time with the members of your family.
2. It is important for a man to be loyal to his family.
3. A man's family should be his number one priority.
4. It is important to interact with other members of your community.
5. It is a man's responsibility to respect his family.

Appendix C - Endorsed and Anticipated Stigma Inventory (Vogt et al., 2014)

Beliefs About Mental Illness

1. People with mental health problems cannot be counted on.
2. People with mental health problems often use their health problems as an excuse.
3. Most people with mental health problems are just faking their symptoms.
4. I don't feel comfortable around people with mental health problems.
5. It would be difficult to have a normal relationship with someone with mental health problems.
6. Most people with mental health problems are violent or dangerous.
7. People with mental health problems require too much attention.
8. People with mental health problems can't take care of themselves.

Beliefs About Mental Health Treatment

1. Medications for mental health problems are ineffective.
2. Mental health treatment just makes things worse.
3. Mental health providers don't really care about their patients.
4. Mental health treatment generally does not work.
5. Therapy/counseling does not really help for mental health problems.
6. People who seek mental health treatment are often required to undergo treatments they don't want.
7. Medications for mental health problems have too many negative side effects.
8. Mental health providers often make inaccurate assumptions about patients based on their group membership (e.g., race, sex, etc.).

Beliefs About Treatment Seeking

1. A problem would have to be really bad for me to be willing to seek mental health care.
2. I would feel uncomfortable talking about my problems with a mental health provider.
3. If I had a mental health problem, I would prefer to deal with it myself rather than to seek treatment.
4. Most mental health problems can be dealt with without seeking professional help.
5. Seeing a mental health provider would make me feel weak.
6. I would think less of myself if I were to seek mental health treatment.
7. If I were to seek mental health treatment, I would feel stupid for not being able to fix the problem on my own.

8. I wouldn’t want to share personal information with a mental health provider.

Concerns About Stigma From Loved Ones

If I had a mental health problem and friends and family knew about it, they would . . .

1. think less of me.
2. see me as weak.
3. feel uncomfortable around me.
4. not want to be around me.
5. think I was faking.
6. be afraid that I might be violent or dangerous.
7. think that I could not be trusted.
8. avoid talking to me.

Concerns About Stigma in the Workplace

If I had a mental health problem and people at work knew about it...

1. my coworkers would think I am not capable of doing my job.
2. people at work would not want to be around me.
3. my career/job options would be limited.
4. coworkers would feel uncomfortable around me.
5. a supervisor might give me less desirable work.
6. a supervisor might treat me unfairly.
7. people at work would think I was faking.
8. coworkers would avoid talking to me.

Appendix D - Study 1's Purple Heart Qualifications Opinion Essays & Response Items

Instructions: Please read the following opinion piece from a combat veteran and respond to the items below. For the purposes of this study, psychological injury refers to mental health condition resulting from one's military service. A common example of psychological injury in the military is post-traumatic stress disorder (PTSD) in which someone experiences a terrifying event (like a life-threatening event in combat) and suffers intense emotional and physical reactions as a result. Physical injury refers to impairments to the body or senses. Common examples of physical injuries in the military are limb amputations, deafness, or blindness.

Purple Heart qualifications have recently been debated. Traditionally, only members of the military who suffered physical injuries during combat would qualify for a Purple Heart, but some argue psychological injuries, like PTSD, should also qualify for a Purple Heart. I think Purple Hearts should continue to be awarded for physical injuries **but not / and also** for psychological injuries for two main reasons. First, psychological injuries are **not** as debilitating as physical injuries. Second, psychological injuries **do not** have clear symptoms that are required for a diagnosis. For these reasons, I believe psychological injuries should **not** qualify for a Purple Heart.

Attention Checks

- Did you read the previous passage carefully?
    - Yes/No
- The previous passage argued to _____ psychological injury in Purple Heart qualifications.
    - Include/Exclude

Response Items 1 (*Strongly Disagree*) to 9 (*Strongly Agree*)

- I agree with the opinion described above.
- The author's argument was convincing.

Appendix E - Study 1's Support for Psychological Injury in Military Honors Items

Instructions: Please rate your agreement with the following items using the scale provided below. For the purposes of this study, psychological injury refers to mental health conditions resulting from one's military service. A common example of psychological injury in the military is post-traumatic stress disorder (PTSD) in which someone experiences a terrifying event (like a life-threatening event in combat) and suffers intense emotional and physical reactions as a result. Physical injury refers to impairments to the body or senses. Common examples of physical injuries in the military are limb amputations, deafness, or blindness.

1 (*Strongly Disagree*) to 9 (*Strongly Agree*)

1. It is appropriate for the military to honor psychological injuries.
2. The military should bestow honors to service members who suffer psychological injuries as a result of their service.
3. I would respect a member of the military who received an award for a psychological injury sustained during combat.
4. "Shedding blood" should be an essential qualification for any military honor.**
5. The military should NOT honor service members' emotional distress.**

Appendix F - Social Desirability Scale-17 (Stöber, 2001)

Instructions
Below you will find a list of statements. Please read each statement carefully and decide if that statement describes you or not. If it describes you, check the word "true"; if not, check the word "false".

Items

1. I sometimes litter.
2. I always admit my mistakes openly and face the potential negative consequences.
3. In traffic I am always polite and considerate of others.
4. I always accept others' opinions, even when they don't agree with my own.
5. I take out my bad moods on others now and then.
6. There has been an occasion when I took advantage of someone else.
7. In conversations I always listen attentively and let others finish their sentences.
8. I never hesitate to help someone in case of emergency.
9. When I have made a promise, I keep it--no ifs, ands or buts.
10. I occasionally speak badly of others behind their back.
11. I would never live off other people.
12. I always stay friendly and courteous with other people, even when I am stressed out.
13. During arguments I always stay objective and matter-of-fact.
14. There has been at least one occasion when I failed to return an item that I borrowed.
15. I always eat a healthy diet.
16. Sometimes I only help because I expect something in return.

Note: Answer categories are "true" (1) and "false" (0). Items 1, 5, 6, 10, 14, and 16 are reverse keyed.

Appendix G - Study 2's Allocations & Allocation Response Items

Instructions: Please read the descriptions of two veterans organizations and record your hypothetical donation using the scale provided below. For the purposes of this study, psychological injury refers to mental health conditions resulting from one's military service. A common example of psychological injury in the military is post-traumatic stress disorder (PTSD) in which someone experiences a terrifying event (like a life-threatening event in combat) and suffers intense emotional and physical reactions as a result. Physical injury refers to impairments to the body or senses. Common examples of physical injuries in the military are limb amputations, deafness, or blindness.

Organization Information

One organization helps veterans who suffered psychological injuries during their service (e.g., post-traumatic stress disorder; depression). Specifically, donations to this organization help coordinate mental healthcare and recovery (e.g., counseling, antidepressant medication) as well as reintegration back to civilian life, like finding jobs.

Another organization helps veterans who suffered physical injuries during their service (e.g., amputations, deafness). Specifically, donations to this organization help coordinate physical healthcare and recovery (e.g., physical therapy, pain medication) as well as reintegration back to civilian life, like finding jobs.

Allocations

If you had $1,000 to donate to these organizations, how would you donate the money?

- Organization for Veterans with Physical Injuries $_____
- Organization for Veterans with Psychological Injuries $_____

Note: Participants could not advance until their responses summed to $1,000.

Attention Check

Did you make your donation decision thoughtfully?

- Yes/No

Allocation Response Items

My donation decision was based on the… 1 (*Strongly Disagree*) to 9 (*Strongly Agree*)

- cost of treating these injuries.
- frequency of these injuries in the military.
- likelihood of recovering from these injuries.
- relative quality of life.

In your opinion, which injury is…-4 (*Psychological Injuries*) to +4 (*Physical Injuries*)

- more expensive to treat?
- more frequent in the military?
- easier to recover from?
- easier to live with?

Appendix H - Study 2's Support for Psychological Injury in Veterans Organizations

Instructions: Please rate your agreement with the following items using the scale provided below. For the purposes of this study, psychological injury refers to mental health conditions resulting from one's military service. A common example of psychological injury in the military is post-traumatic stress disorder (PTSD) in which someone experiences a terrifying event (like a life-threatening event in combat) and suffers intense emotional and physical reactions as a result. Physical injury refers to impairments to the body or senses. Common examples of physical injuries in the military are limb amputations, deafness, or blindness.

1 (*Strongly Disagree*) to 9 (*Strongly Agree*)

1. Organizations that support veterans with psychological injuries serve an important cause.
2. Organizations that support veterans with psychological injuries deserve more funding than they already get.
3. Organizations that support veterans with psychological injuries deserve more public awareness than they already have.
4. I would donate to an organization that supports veterans with psychological injuries.
5. I would share the mission statement of an organization that supports veterans with psychological injuries on my personal social media pages.