

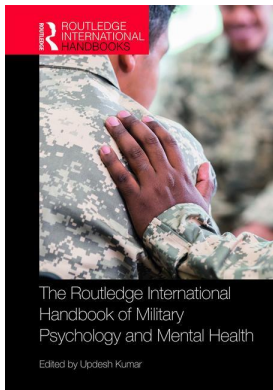
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Updesh Kumar

### **The physical bravery study**

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# 13

## THE PHYSICAL BRAVERY STUDY

### Findings and implications for small, innovative research studies with military/veteran populations

*Kristen J. Vescera, Jacie Brown, Catherine Hausman, and  
Bruce Bongar*

Increasingly, researchers are attempting to gain new understandings on serious problems such as suicide and self-destructive behaviors and trauma in military, veteran, and civilian populations. A promising area of research focuses not just on traditional risk factors but also on strengths and resilience. These concepts shift the conversation in line with the positive psychology movement, which asserts that focusing on personal strengths may have the potential to identify and increase awareness around values and qualities in the interest of a person and serve as protective factors (Peterson & Seligman, 2004). This chapter focuses on the concept of physical bravery as a potential strength that could reveal information about resilience, born and learned traits, and altruism. Studying physical bravery could lead to addressing problems of stigma around suicide and trauma not only with military and veteran populations but could be generalize to other populations and the civilian population in the United States as a whole.

Concerns about the rising rates of suicide completion are prevalent in the United States despite growing efforts in research and prevention (Centers for Disease Control [CDC], 2016). In 2016, the CDC found a 24% rise in suicide rates from 1999 to 2014, and rates are currently increasing. In this direction, such risks in the military and veteran population are increasing at an even more alarming rate. Current military and veteran populations make up about 1% of the overall population in the United States, with about 20 veterans completing suicide per day and the rate rising higher than overall national numbers (Department of Veterans Affairs, 2016). In 2016, the suicide rate for veterans was found to be 1.5 times greater than non-veterans after age and gender adjustments were made (Department of Veterans Affairs, 2018). Additionally, suicide deaths with veterans between the ages of 18 and 34 increased from 40.4 suicide completions per 100,000 in 2015 to 45 per 100,000 in 2016 (Department of Veterans Affairs, 2018).

While the VA is working toward gathering information on the number of veteran suicides, neither active nor reserve components have a streamlined suicide tracking system that captures concise data between all branches of currently serving service members. However, based on

quarterly Department of Defense (DoD) reports, there is still a significant amount of suicide completion within each active military branch. Overall, some of the most current known data shows that active component suicide rates alone increased from 254 to 273 service members from 2013 to 2014 (Franklin, 2015), and data from the United States Army have found that active-duty service members have a predominate high risk for suicide completion (Greene-Shortridge, Britt, & Castro, 2007; Rüsich, Corrigan, Todd, & Bodenhausen, 2010).

This elevated suicide risk in military and veterans could be potentially due to the adverse effects of trauma, including posttraumatic stress disorder (PTSD). Hoge, Auchterloine, and Milliken (2006) found that Operation Iraqi Freedom (OIF) veterans were diagnosed with PTSD after deployment at a rate between 12% and 20%. Further research by Ramchand and colleagues (2010) found that close to half of treatment-seeking veterans who served in the current Iraq and Afghanistan conflicts have a PTSD diagnosis. Other estimates suggest that up to half of treatment-seeking veterans of the Iraq and Afghanistan conflicts are diagnosed with PTSD (Ramchand et al., 2010). Suicide risk may also be influenced by veteran fear of stigma as a barrier to treatment-seeking behavior (Hoge et al., 2004). Thus, more work is needed to understand problems with suicide and trauma-based disorders in military and veteran populations.

Currently the Department of Veteran Affairs (VA) is using evidence-based protocols (EBPs) that include treatment interventions like prolonged exposure (PE) and cognitive processing therapy (CPT), as well as a nationwide suicide prevention protocol. PE is a treatment intervention that assists in teaching veterans and others who have suffered trauma to gradually face previously avoided traumatic memories, emotions, and situations (Foa, Hembree, & Rothbaum, 2007). CPT is a more directed form of cognitive behavioral therapy (CBT) in which it is used to specifically treat PTSD or other trauma-related disorders (Resick, Monson, & Chard, 2017). CPT is used to challenge the maladaptive beliefs that a person can develop as a result of trauma (Resick, Monson, & Chard, 2017). Essentially, the administration of CPT and PE focuses on reducing symptoms that veterans are currently facing. While these treatments are effective for the majority of patients, many with PTSD will not benefit from these treatments, either due to a lack of access (this could be due to not seeking treatment due to stigma or difficulty navigating the VA system) or a lack of response to the treatments (i.e., symptoms are not reduced).

Research on acts of physical bravery has the potential to reveal information regarding biological factors, military training, resilience, and other protective factors. Physical bravery is a construct of interest for several key reasons. First, by examining physical bravery as a strength, researchers have the potential to contribute to the literature on suicide prevention efforts while avoiding the negative stigma that can be a barrier for working with both military and veteran populations (Hoge et al., 2004). Next, physical bravery could be particularly relevant to the concept of military culture as the PBS was designed around the military and veteran populations' potential interest on this topic. Because the military uses training that makes service members prone to overcome fear and help others, such as remaining calm in the face of distress (Bryan, Jennings, Jobs, & Bradley, 2012), there seem to be cultural underpinnings of later mental health challenges upon reintegration to civilian life. The ability to suppress emotions and avoid certain experiences during training and deployment may put the veteran at risk for suicidal behaviors and other trauma-related mental health issues (Bryan et al., 2012). This understanding could help provide cultural competence in military populations that can assist both clinically and in research. Last, understanding innate and learned traits of physical bravery can inform the military's selection methods of future service members as well as ongoing training to create a more mentally fit military force. Kugel (2014) suggested that those who receive sufficient training may be more likely to act in a brave manner.

## **Construct definitions**

Variability has been found in literature between related constructs to bravery such as “courage” and “heroism.” Noting that there are differences in definitions, meaning, and measurement may help researchers avoid confusion and establish clear definitions and distinguishing characteristics to these constructs.

### ***Courage***

Rate, Clarke, Lindsay, and Sternberg (2007) encountered 29 different definitions of courage and were ultimately unable to delineate a clear operational definition of courage as a construct. They ultimately identified three factors that define courage to include “self-sacrifice/risk for others,” “non-physical/social-oriented acts for noble ends,” and “self-focused perseverance despite fear” (p. 89). Simply stated, Asarian (1981) theoretically defined courage as an intentional and laborious behavior in the face of conflict and fear. His writing explored courage through a lens of holding onto one’s values in the face of struggle. Asarian’s (1981) work, however, sometimes used the word “hero” while describing courageous people, and while some believe that heroism and courage are interchangeable, others infer that courage and heroism are related but different and should be distinguished appropriately (Weinstein, 2012). Alternatively, Kugel (2014) simply described courage as a persistence in action despite fear or threat to life. This definition alone does not necessitate that the courageous act is done to aid another person as it had above. For the present chapter, however, Kugel’s definition is used in order to parsimoniously understand the concept of physical bravery.

### ***Heroism***

Pury and Lopez (2010) stated that heroism is one of the highest levels of courage as heroism requires action despite risk and without understandable personal gain (Franco, Blau, & Zimbardo, 2011). As a community, we normally do not think of the average person as a “hero.” An act of heroism is defined as putting someone else’s safety and well-being above one’s own (Black, 2015). This action to help separates the definition of courage from heroism in this chapter. The major distinction between the construct of heroism and physical bravery as it is described in this chapter is that heroism denotes an involvement of a conscious thought process, whereas individuals who act physically brave in a specific event may or may not take conscious efforts to risk their lives for another. Further, heroism is an overall higher level and complex tendency than acting physically brave during a specific event (Franco et al., 2011; Weinstein, 2012). Therefore, heroism can involve large amounts of courageous and brave acts (Hummel, 2018).

For example, in 2018, Virgil Smith was recognized by the White House for receiving the “Young Hero Award” (Ordinary Americans Are, 2018). This award was granted due to his brave actions in saving 17 of his neighbors stranded after Hurricane Katrina with only the use of his air mattress. If this was a conscious effort, this may be an example of heroism, but there are things that happen every day that can warrant an act of bravery, even from the most “typical” civilian. The previous year (2017), Katelyn Ibarra was granted the “Young Hero Award” for performing first-aid to car accident victims before first responders arrived (Ordinary Americans Are, 2017). Although these acts are outstanding examples of young people going above and beyond, their behavior could be seen as reckless and not necessarily conscious. Aristotle theorized that bravery may be the gear that connects fear and recklessness (Pury & Lopez, 2010).

### *The hero complex*

Some researchers have reported thinking that instead of this reckless type of act being that of “selfless bravery,” it is out of that individual’s “hero complex.” In other words, the negative definition of recklessness conceals their genuine intentions (Pury & Lopez, 2010). Others have said that a brave act puts the individual in the spotlight to be regarded as important and selfless instead of the act actually being selfless. When we think of service members, we normally think of the hero whose job it is to act and actually be brave. As previously mentioned, service members are not the only ones who perform acts of physical bravery. Even if it is done for selfish reasons and not as a selfless act, it could still be considered an act of bravery. The only person who would know the motives behind the act is the person performing the act or anyone they decide to tell. What we can objectively see is the act itself. Readers may find themselves reflecting on whether the motives behind the act of bravery matter.

### *Altruistic suicide*

In respect to the topic of heroism, altruistic suicide may be considered heroism despite the risk to one’s life. In Weinstein’s (2012) study, participants reported that they experienced fear during heroic events. Altruistic suicide can be described as intentionally pursuing an act that results in the end of life for purposes of helping other individuals, groups, or society as a whole (Stack, 2004). There is an apparent link in the ideas that these individuals could be acting to save someone else despite consciously understanding that they could die and the intention behind suicide in which a person consciously understands that they may die (Bongar & Sullivan, 2013). In 1897, Emile Durkheim was the first to define altruistic suicide and described that altruistic and heroic acts as well as terrorist acts are under the umbrella of altruistic suicide. Differentiation may be necessary when looking at either act’s value upon society (lauded or condemned, respectively; Leenaars, 2004). This would understandably make this concept vague and potentially controversial (Leenaars, 2004).

### *Physical bravery*

When a layperson thinks of bravery, he or she may think of fictional superheroes (e.g., Superman and Wonder Woman) that have been portrayed in comic books and action movies. Others may consider those in the military forms of tangible heroes that are glorified by the media. In actuality, the United States Armed Forces provide the country with the protection it requires to function as a free nation. As of November 2018, there are 1,281,900 active-duty service members in the United States military (Defense Manpower Data Center, 2018). However, no two service members normally share the same military career or life history. They also have had differing reasons that have factored into their decision of enlisting into the military (Hummel, 2018). Most, if not all, of these men and women may have been put into a situation where they have had to make the choice of putting themselves in harm’s way in order to protect someone else, whether that is another service member or a civilian.

Weinstein (2012) described heroism, courage, and bravery through differing action levels. In this case, heroism is the most difficult accomplishment and is glorified like the superheroes noted above, while courage and bravery follow respectively. Conceptualizing through this lens, bravery can be viewed as incorporating less altruism and risk-taking than heroism. There are differences in types of bravery, however: physical and moral (Hummel, 2018). Hummel (2018) stated that physical bravery includes objective experience or risk of physical harm to the person conducting a brave act, while moral bravery involves other objective risks like job loss, imprisonment, or other consequences.

Because of the overabundance of definitions for courage, heroism, and bravery already discussed, Hummel's (2018) definition for physical bravery will be used as it relates most specifically to the Physical Bravery Survey (PBS) discussed below. As with all constructs with different definitions, the caveat to this definition may be inconsistent with descriptions in other literature. Therefore, the definition used throughout this chapter distinguishes physical bravery as an action in which one saves the life of another while freely risking his or her life (Hummel, 2018). Physical bravery in this chapter is regarded under specific situations that individuals have experienced.

### **Physical bravery as an innate trait**

Researchers have not definitively found whether physical bravery is a learned or innate (genetic) trait. According to current research, there does not seem to be a scientific test to identify the presence of this specific trait within an individual. For example, if a family member has shown to actively engage in physical bravery, it may not automatically indicate that their children will also perform a brave act. However, it has been shown throughout research that certain characteristics can be heredity. An example of this is alcoholism, as alcoholism itself cannot be passed down through generations, but the addictive gene has been shown to be passed on to an alcoholic's children (Pombo, Ferreira, Bicho, & Levy, 2017). This does not guarantee that the child will become addicted to anything related to alcohol or any other substance, just that they are at greater risk for developing a dependency.

### **Training and physical bravery as a learned behavior**

Military service members are well trained and have unique abilities like keeping calm in the face of pain that others may not (Bryan, et al. 2012). The military partakes in extensive and rigorous training in order to be able to perform at their best if they were to ever encounter combat situations. For example, the strenuous training military personnel go through prepares them for high-stress, intense situations are unmatched in many other civil servant positions. Also, many authorities see the United States military in ways that demonstrate a high level of duty and patriotism. This training may make service members especially likely to be able to overcome fear and help others who are in peril. As Kugel (2014) pointed out, those who receive ample training may be more likely to act courageously. Because military receive special training, they may be a population especially likely to act bravely. Thus, examining physical bravery in this population is especially timely and relevant.

However, elements of military training are not just relevant for combat scenarios. For example, in 2009, Chelsey Sullenberger (Sully) landed his airplane safely in the Hudson River after both engines were disabled. Thanks to Sully, all 155 souls on board survived the "crash" (Sullenberger, 2018). It should be considered whether Sully's act of bravery was due either to his Air Force training or another factor. Many civilians have a sense of duty and patriotism but never receive the training to prepare them for dangerous situations. At most, if civilians work for a large corporation, they are provided with training that attempts to prepare them for a "active shooter" scenario. However, civilians have shown that they too can perform acts of physical bravery without the rigorous training of the military. Filjak and Pavlina (2000) posit that bravery can be instilled in military personnel through training, motivation, and leadership and can occur under certain specific circumstances. This chapter supports the concept of bravery as a learned characteristic over innate, which is consistent with the stance of Kugel (2014) yet contrasts with findings in studies from both Hummel (2018) and Weinstein (2012) that training was not necessarily related to reported experiences of acting bravely.

In particular, Weinstein (2012) found a higher frequency of having done heroic acts reported by undergraduates than for military cadets. In this study, training did not appear related to having committed heroic acts (Weinstein, 2012). In studies by both Hummel (2018) and Kugel (2014) on active-duty military and veterans, participants were more likely to state the personal belief that physical courage is learned and not innate. For Hummel (2018), participants appeared to believe that training was influential, whereas the actual experience of training was not significantly associated with likelihood to have acted bravely. In contrast, in the study by Kugel (2014), participants who reported more than two acts of physical courage also indicated greater influence of instinct, level of training, and sense of duty in the likelihood to commit a heroic act than those who did fewer courageous acts.

It is possible that those who are in the military for longer, given that they are continuing their training and have a strong sense of duty, are likely to rise to leadership positions given their exemplification of courage. Also, considering the inconsistent findings regarding training, it could be that training is necessary to have the capability to act bravely in certain situations (i.e., for military personnel), yet it may be the person's innate characteristics (i.e., personality factors) that determine whether the training will be implemented in a real-world, real-time situation. Thus, it is entirely possible that *both* innate and learned aspects are involved with physical bravery. At this time, the relationship between training and the likelihood to act bravely remains unclear and warrants further study. The relationship between training, leadership, and physical bravery needs to be examined, particularly to discern any inconsistencies between peoples' beliefs and actuality.

There may be a relationship between a person's tendency to be resilient and their likelihood of having more training or of being in a leadership role. Freedman (2004) found that training and comradery were related to resilience in 9/11 first responders. These first responders were able to act efficiently and in accordance with their training without experiencing psychological numbing. A sense of comradery was noted as key in these moments. Freedman (2004) further commented that these individuals demonstrated significant resilience in the face of an extreme situation.

### Physical bravery and resilience

The Merriam-Webster Collegiate Dictionary defines resilience as the ability to overcome hardship when faced with extreme adversity (Mish, 2012). Hardship in this instance most often refers to a past traumatic event. The development of resiliency within individuals and how resiliency can serve as a protective factor against some mental disorders has gained attention within the academic community following publicized mass public shootings and large-scale school shootings. Following a traumatic event, an individual attempts to make sense of what the experience was and how it has affected them as a person. During this time, the individual who has experienced trauma is also trying to effectively provide themselves with barriers against the adverse effects of the traumatic experience. Some similar personality characteristics are found in people who have demonstrated resiliency (Hummel, 2018). For example, the level of social support can greatly influence a person's attainable level of resiliency (Hummel, 2018).

Communities can experience trauma in a similar matter to that of an individual (i.e., a sexual assault victim). The military in itself is a tight-knit community, and communities have been shown to have their own way of building resiliency. One of the ways is to confide in and support one another through such traumas while alienating the people around them who "do not belong" to that particular community (Day, Lawson, & Burge, 2017). A more well-known phenomenon related to this topic is the concepts of "thin blue line" or "blue curtain of silence" related to law enforcement. Though this behavior is portrayed more by military and paramilitary groups, this type of behavior is not mutually exclusive to those communities that are faced with daily threats

of trauma. When the Virginia Tech shooting occurred, students who sought campus counseling instead of reaching out for mental help outside of the community showed a larger decrease in symptoms (Day et al., 2017). It was hypothesized that those mental health providers who also went through the same trauma were better providers for those students (Day et al., 2017). A research study has shown that those in law enforcement and the military who reach out for support from their comrades and receive it are more likely to develop resiliency and a healthier overall emotional state. There is currently research being designed to gain more evidence of community resilience (Bonanno, Romero, & Klein, 2015). More research is needed in the interest on this population (and similar populations; first responders, police officers, firefighters, etc.) that has historically exhibited distrust and resistance to seeking mental health.

In a study conducted by Kimhi, Eshel, Leykin, & Lahad (2017), researchers measured the resiliency of Jewish Israeli nationals who experienced terror attacks. Results from this study showed that a sense of coherence was one of the best predictors of community resiliency (Kimhi et al., 2017). The military in itself has their own code of honor and at some points their own language. Banding together in times of crisis could change the course of their mental health. There is also a stigma associated with seeking mental health professionals within this tight-knit community. Unfortunately, in more severe cases of depression and PTSD, seeking help from fellow comrades is sometimes not enough to support them long term.

Physical bravery has been hypothesized to act as strength against individual suicidal ideation and mental health disorders. Some researchers believe the greater the number of physical bravery acts a person has committed, the less likely they are to attempt or complete suicide. However, the current research does not currently strongly support this hypothesis. The research is not available, yet if it is not being studied or being considered as a topic of study, it will be in the future. In addition, physical bravery itself is still in the infancy of research development. As a science, physical bravery needs to have a more concrete foundation before then branching out to include other areas of interest such as physical bravery and how it can impact suicidal ideation. Implications for measurement of physical bravery should be identified and discussed more fully to continue professional discussion in the field.

### **Measuring physical bravery**

Physical bravery within military, police, and first responder populations has historically been difficult to measure due to the closed social culture that these populations normally exhibit. In 2012, in lieu of this gap in research, the Clinical Crises and Emergencies research group at Palo Alto University created the PBS as a tool to evaluate physical bravery within these populations as well the civilian populations as a partial control (Hummel, 2018). A comprehensive literature review and consultations with authorities in the field was conducted to maximize face and content validity. In Hummel's (2018) study, the PBS consisted of qualitative- and quantitative-related questions from participants who engaged in physically brave acts and consisted of 47 items (includes a range of items, namely Likert-scale, multiple choice option, and open-ended response-types). The survey takes about 20–25 minutes for full completion.

The PBS aims to understand the different demographics that can impact an individual's decision to perform an act of physical bravery. Also, it focuses on the endorsement of different characteristics of bravery (i.e., training, heritability, etc.) and how these demographics and characteristics could influence one another in performing an act of physical bravery. Samples of the six-point Likert-type (from 1 - strongly disagree to 6 - strongly agree) questions asked within the PBS are: "during my childhood, I had role models (parents or others) who showed brave behavior," "do you believe that people who risk their own physical safety to save others are born that way or life makes



them that way?” “In the situation where I was the most physically at risk and I was attempting to save another human being/s from harm or possible death; I believe that my behavior was due to: Instincts, Training, Experience, Duty, Fear of repercussions, Protect or save someone I deeply cared for; Concern for another human being; Peer pressure or a group momentum towards action.” The latter questions asked for participants to individually rate each factor (Hummel, 2018).

Some results of the PBS have shown that there are no significant differences in the number of acts of physical bravery when comparing active-duty military to a civilian population (Hummel, 2018). These results may seem surprising due to military personnel being perceived to perform more brave acts than the average person.

Everyday people like Virgil Smith, who have no affiliation or training with the military, perform acts of physical bravery. Researchers found that there are many different individual factors that can influence a person's decision on whether to commit an act of physical bravery. For example, based on the PBS administered to veterans and active-duty service members, higher levels of adventurousness, humor, and cognitive flexibility have been found in people who reportedly exhibit acts of physical bravery (Hummel, 2018). In another study conducted by Rachman (1990), results showed that self-confidence was a characteristic that was high in individuals who committed acts of physical bravery, although Hummel (2018) found in her analysis that self-confidence was not a factor. The major difference in these studies was the population studied. Hummel (2018) hypothesized that self-confidence was not a significant contributing factor in military personnel who committed physical bravery acts due to the similar personalities that military and paramilitary personnel tend to exhibit.

### **Challenges in research methodology with military populations**

There is a dearth of information regarding research methodology on certain topics for those studying military populations. Aspects such as how to go about building relationships for access to participants, developing military culture-sensitive survey items, and other considerations are critical to consider for this line of research. Further, these issues may be particularly challenging to navigate for smaller (i.e., outside of major VA- or DoD-funded research) researchers to navigate. Yet, it is these same types of researchers, with fresh perspectives, that may provide crucial innovation for the field. The present section aims to lay out the key considerations for new research groups seeking to develop research projects with military and veteran populations. External factors, like collecting data within the military structure, may be just as salient as internal factors such as service member mental health stigma.

#### ***External factors***

There are multiple challenges in initiating the collection of data for research. The National Research Council (2014) found that the plethora of demographic survey data collected under the DoD is not maintained to be conducive for outside research programs. This issue with availability of DoD data for outside researchers may be due to several problems. First, that demographic information collected at the start of a service member's career is not extensive. Second, there is a lack of data preservation to include a lack of a central storage system in which various amounts of demographic are not consolidated in a clear and concise manner. Last, there are unclear procedures for ease of use for data requests from outside agencies (National Research Council, 2014). Further, this Council suggests that a gold standard for research with this population is longitudinal research that follows individuals throughout their military careers.

In 2011, the DoD Health Related Behavior Survey was conducted as the largest data collection at the time for all five branches of the military; the Army, Navy, Marine Corps, Air Force, and Coast Guard (Barlas, Higgins, Pflieger, & Diecker, 2013). A web-based format was used for the first time with this population and showed several benefits, including reduced research costs and a broadened range of respondents across the United States beyond specific military bases. This was also found to decrease the burden on the unit leadership of these locations. A shortened and condensed questionnaire along with considerations for sample design and incorporation of assessment for health issues also influenced an overall DoD and Coast Guard response rate of 22% and 37%, respectively (n = 39,877; Barlas, Higgins, Pflieger, & Diecker, 2013).

These surveys above have proven successful when thinking about largely funded projects. For independent researchers, however, it may be more difficult to understand the “red tape” to navigate the data collection process. Past researchers have shown to be creative when targeting military and veteran populations. For example, Warner, Appenzeller, Mullen, Warner, and Grieger (2008)’s methodology for collecting data from deploying Army soldiers involved obtaining approval from a unit’s Brigade and Division commanders as well as an approved institutional review board prior to participation in the survey. Alternatively, Bryan et al., (2015) and Currier, Holland, and Malott (2015) recruited students across colleges in the United States that had a current or prior military service status through the use of Student Veteran Coordinators. These examples highlight some factors to consider when designing an independent research study that does not involve national sampling as noted above.

### ***Internal factors***

Greene-Shortridge, et al. (2007) found evidence that the general public generally hold negative stereotypes toward those with psychological problems, which then leads to discriminations and internalization of these negative beliefs by the individual. Further, they found that because military members feel as though their unit holds them accountable for their psychological problems (like the rest of the population), treatment seeking is largely inhibited both in public and governmental domains due to stigma. Taken further, the phenomenon “healthy soldier effect” (p. 99) was coined in earlier wars to describe the difference in suicide rates between veterans and the overall civilian population (Kang et al., 2015).

Before recent wars in Iraq and Afghanistan, this concept was based on the assumption that recently separated active-duty military members were healthier than the general public based on initial entry requirements and access to care during and after military service. The increase in recent numbers is inconsistent with this effect (Kang et al., 2015). In consideration of physical bravery as a strength, contributions to literature regarding suicide completion and efforts to avoid stigma may be positively impacted by this construct.

### ***Implications***

As noted above, within military populations, the strain of combat and other potentially traumatic situations tends to be quite prevalent. Physical bravery has just started being investigated with respect to potential implications regarding the mental health and overall mindset of our military, as well as civilians who have engaged in acts of selfless bravery. Higher levels of resiliency have been present in military personnel that were measured as more likely to engage in physical bravery (Hummel, 2018). In similar terms, it has been shown that the more physical bravery acts a person has committed, the higher their resiliency. This could mean resiliency acts as a

protective factor in not developing severe mental health concerns, including but not limited to major depressive disorder (MDD) and PTSD. Both diagnoses on average tend to carry an elevated mortality rate.

As mental health professionals, we do not want to imply that people who have been through trauma do not need to see licensed mental health professionals. PTSD treatment alone costs the United States \$2029 per person, much of which goes to the treatment of service members (Painter, Fortney, Austen, & Pyne, 2017). Physical bravery has the potential to act as a protective factor against severe suicidal ideation, and possibly help military men and women feel more comfortable coming forward about their experiences. This could challenge (1) the stigma of reaching out for help, (2) arguments against the stigma that they are weak to ask for help, and (3) against the stigma that no one can help except for those who have experienced the same type of traumas. Cigrang et al. (2017) studied different treatments that have the potential to decrease PTSD symptom severity while also limiting the stigma surrounded by seeking mental help. Participants were active-duty military and randomized to either receive Prolonged Exposure for Primary Care (PE-PC) as an immediate intervention or were put into a delayed treatment control condition (Cigrang et al., 2017). PE-PC consists of four 30-minute sessions; instead of referring to these sessions as mental health treatment, they are referred to as primary care appointments, therefore decreasing the outward stigma associated with receiving professional mental health (Cigrang et al., 2017). Researchers found using PE-PC resulted in a larger reduction of PTSD symptoms than the delayed control intervention (Cigrang et al., 2017). This treatment, coupled with strength-based approaches, could be helpful to further bridge the gap between stigma and treatment-seeking behavior.

PE-PC appears to be an effective intervention once troops have returned stateside, but there is little evidence on its effectiveness with actively deployed military personnel. In combat environments, there are not always mental health professionals available, nor are there primary care professionals. Research has shown that suicidal ideation peaked at deployment month 2, 6, and 12 (Warner et al., 2011). In 2007, suicide rates for deployed military were 24/100,000 (Warner et al., 2011). That may seem low, but the active-duty military population had the lowest suicide rates until 2004, when they started to grow 4–5 times over a relatively short number of years. In response, the military implemented suicide prevention training throughout initial military training as well as continuing annual training sessions (Warner et al., 2011). These new trainings included developing positive life coping skills, help-seeking behavior, and raising awareness (Warner et al., 2011). Since the implementation, the annual suicide rate has dropped from 24/100,000 to 16/100,000 (Warner et al., 2011). It appears that the suicidal prevention program that focused on strength-based approaches may decrease rates of suicide in a combat environment. It is suggested that promoting training in physical bravery may further assist resilience for these service members.

Over 50% of Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans have described reintegration back into civilian life as a hardship (Pease, Billera, & Gerard, 2016). When discussing military personnel's reintegration back into civilian life, it is hard to know what they have experienced if you yourself have not had the same experience. However, this does not mean as mental health professionals that we give up on helping these individuals. The military culture is one that unintentionally can install a core belief that seeking help makes them look weak and/or vulnerable (Pease et al., 2016). Through this belief, they then view themselves as a burden to those around them (Pease, Billera, & Gerard, 2016). This can include their family and friends when they return home. Returning military may have difficulties connecting with their families and friends initially due to culture shock (Pease, Billera, & Gerard, 2016). Mental health professionals' awareness of these potential issues is the first step in maintaining the therapeutic

alliance with a veteran seeking treatment (Pease, Billera, & Gerard, 2016). Here, awareness of innate and learned physical bravery characteristics may provide helpful insights to clinicians and service members as they reintegrate in their home environments.

## Conclusion

The PBS survey was initially developed for the measurement and analysis of physical bravery within military populations and civilians. Since physical bravery is a relatively new and under-researched phenomenon, the potential growth for this topic has can be exponential. Similar to studies discussed previously, it would be beneficial to know how service members measure and portray physical bravery while still in combat zones. While this type of research may be difficult to obtain, it would be beneficial to learn if there is a significant difference in perceptions of physical bravery being a learned or innate trait based on the environment where the participant is given the PBS.

Recently, researchers have been steering the research in a new direction to include more than military populations and community college students. These populations include law enforcement, emergency medical services (EMS), firefighters, and other first responders. These particular populations have been chosen as possible future subject groups to further the research due to the increased probability that they will be in the unique position of routinely risking their own lives to protect and save another's (Eyre, 2017). These occupations tend to attract a certain personality type, and there could be similarities correlated between the type of person who commits brave acts and the type of person who goes into these occupational fields. For example, police officers and firefighters tend to exhibit higher scores in excitement-seeking than a normative population (Salters-Pedneault, Ruef, & Orr, 2010). Therefore, these questions that aim to understand physical bravery with the military and veterans as well as other populations are especially warranted for future research.

## References

- Asarian, R. D. (1981). *The psychology of courage: A human scientific investigation*. Ph.D. dissertation, Duquesne University, United States – Pennsylvania. Retrieved from Dissertations & Theses: Full Text. (Publication No. AAT 8121943).
- Barlas, F. M., Higgins, W. B., Pflieger, J. C., & Dieker, K. (2013). *2011 Health Related Behaviors Survey of Active Duty Military Personnel*. Retrieved from <https://apps.dtic.mil/dtic/tr/fulltext/u2/a582287.pdf>
- Black, L. (2015). *Are heroes born or made? An analysis of heroic behavior based on U.S. military personnel and veterans*. (Unpublished doctoral dissertation). Pacific Graduate School of Psychology, Palo Alto University, Palo Alto, CA.
- Bonanno, G. A., Romero, S. A., & Klein, S. I. (2015). The temporal elements of psychological resilience: An integrative framework for the study of individuals, families, and communities. *Psychological Inquiry*, 26(2), 139–169.
- Bongar, B., & Sullivan, G. (2013). *The Suicidal Patient: Clinical and Legal Standards of Care* (3rd ed.). Washington, D.C.: American Psychological Association.
- Bryan, C. J., Jennings, K. W., Jobes, D. A., & Bradley, J. C. (2012). Understanding and preventing military suicide. *Archives of Suicide Research*, 16(2), 95–110.
- Bryan, C. J., Roberge, E., Bryan, A. O., Ray-Sannerud, B., Morrow, C. E., & Etienne, N. (2015). Guilt as a mediator of the relationship between depression and posttraumatic stress with suicide ideation in two samples of military personnel and veterans. *International Journal of Cognitive Therapy*, 8(2), 143–155.
- Centers for Disease Control and Prevention (CDC). (2016). *Increase in suicide in the United States, 1999–2014*. Retrieved from <http://www.cdc.gov/nchs/products/databriefs/db241.htm>
- Cigrang, J. A., Rauch, S. A., Mintz, J., Brundige, A. R., Mitchell, J. A., Najera, E., ... Peterson, A. L. (2017). Moving effective treatment for posttraumatic stress disorder to primary care: A randomized controlled trial with active duty military. *Families, Systems & Health*, 35(4), 450–462.

- Currier, J. M., Holland, J. M., & Malott, J. (2015). Moral injury, meaning making, and mental health in returning veterans. *Journal of Clinical Psychology, 71*(3), 229–240.
- Day, K. W., Lawson, G., & Burge, P. (2017). Clinicians' experiences of shared trauma after the shootings at Virginia Tech. *Journal of Counseling & Development, 95*(3), 269–278.
- Defense Manpower Data Center (2018). Retrieved from <https://www.dmdc.osd.mil/appj/dwp/index.jsp>
- Department of Veterans Affairs, Office of Mental Health and Suicide Prevention (2018). *VA national suicide data report 2005–2016*. Retrieved from [https://www.mentalhealth.va.gov/docs/data-sheets/OMHSP\\_National\\_Suicide\\_Data\\_Report\\_2005-2016\\_508.pdf](https://www.mentalhealth.va.gov/docs/data-sheets/OMHSP_National_Suicide_Data_Report_2005-2016_508.pdf)
- Department of Veterans Affairs, Office of Suicide Prevention (2016). *Suicide among veterans and other Americans 2001–2014*. Retrieved from <https://www.mentalhealth.va.gov/docs/2016suicidedatareport.pdf>
- Eyre, A. (2017). The making of a hero: An exploration of heroism in disasters and implications for the emergency services. In P. Murphy and K. Greehalgh (Eds.), *Fire and Rescue Services: Leadership and management perspectives* (pp. 113–129). Cham, Switzerland: Springer International publishing.
- Filjak, T., & Pavlina, Ž. (2000). Psychological Model of Soldier Bravery. Office of Naval Research International Field Office, Grant N00014-00-1-1086, 108.
- Foa, E. B., Hembree, E. A., & Rothbaum, B. O. (2007). *Prolonged Exposure Therapy for PTSD: Therapist Guide: Emotional Processing of Traumatic Experiences*. New York: Oxford University Press.
- Franco, Z. E., Blau, K., & Zimbardo, P. G. (2011). Heroism: A conceptual analysis and differentiation between heroic action and altruism. *Review of General Psychology, 15*(2), 99–113.
- Franklin, K. (2015). *Department of Defense quarterly suicide report calendar 2015 2nd quarter*. Retrieved from Defense Suicide Prevention Office website: <http://www.dspo.mil/Portals/113/Documents/DoD%20Quarterly%20Suicide%20Report%20CY2015%20Q2.pdf>.
- Freedman, T. G. 2004. Voices of 9/11 first responders: Patterns of collective resilience. *Clinical Social Work Journal, 32*(4), 377–393.
- Greene- Shortridge, T. M., Britt, T. W., & Castro, C. A. (2007). The stigma of mental health problems in the military. *Military Medicine, 172*(2), 157–161.
- Hoge, C. W., Auchterlonie, J. L., & Milliken, C. S. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *Journal of the American Medical Association, 295*(9), 1023–1032.
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *The New England Journal of Medicine, 351*(1), 13–22.
- Hummel, K. L. (2018). *Physical Bravery among United States Special Operations Unit Members. Dissertation Abstracts International: Section B: The Sciences and Engineering. ProQuest Information & Learning*. Retrieved from <https://paloaltou.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2018-34220-007>
- Kang, H. K., Bullman, T. A., Smolenski, D. J., Skopp, N. A., Gahm, G. A., & Reger, M. A. (2015). Suicide risk among 1.3 million veterans who were on active duty during the Iraq and Afghanistan wars. *Annals of Epidemiology, 25*(2), 96–100.
- Kimhi, S., Eshel, Y., Leykin, D. & Lahad, M. (2017). Individual, community, and national resilience in peace time and in the face of terror: A longitudinal study. *Journal of Loss and Trauma, 22*(8), 698–713.
- Kugel, U. (2014). *Physical courage among military personnel and veterans*. (Unpublished doctoral dissertation). Pacific Graduate School of Psychology, Palo Alto University, Palo Alto, CA.
- Leenaars, A. A. (2004). Altruistic suicide: A few reflections. *Archives of Suicide Research, 8*(1), 1–7.
- Mish, F. C. (2012). *Resilience*. In *Merriam-Webster's Collegiate Dictionary*. Springfield, MA: Merriam-Webster.
- National Research Council. (2014). *The Context of Military Environments: An Agenda for Basic Research on Social and Organizational Factors Relevant to Small Units*. Washington, DC: The National Academies Press.
- Ordinary Americans Are. (2017). Retrieved from <https://themedalofhonor.com/citizen-honors>
- Ordinary Americans Are. (2018). Retrieved from <https://themedalofhonor.com/citizen-honors>
- Painter, J. T., Fortney, J. C., Austen, M. A., & Pyne, J. M. (2017). Cost-effectiveness of telemedicine-based collaborative care for posttraumatic stress disorder. *Psychiatric Services, 68*(11), 1157–1163.
- Pease, J. L., Billera, M., & Gerard, G. (2016). Military culture and the transition to civilian life: Suicide risk and other considerations. *Social Work, 61*(1), 83–86.
- Peterson, C., & Seligman, M. E. P. (2004). *Character Strengths and Virtues: A Handbook and Classification*. Oxford: Oxford University Press.
- Pombo, S., Ferreira, J., Bicho, M., & Levy, P. Q. (2017). Is there a genetic support for the Cloninger (type I/ II) clinical classification of alcohol addiction? *Psychiatry Research, 258*, 621–623.

- Pury, C. L. S., & Lopez, S. J. (2010). *The Psychology of Courage: Modern Research on an Ancient Virtue*. Washington, D.C: American Psychological Association.
- Rachman, S. J. (1990). *Fear and Courage*, 2nd Ed. New York: W. H. Freeman and Company.
- Ramchand, R., Schell, T. L., Karney, B. R., Osoila, K. C., Burns, R. M., & Caldarone, L. B. (2010). Disparate prevalence estimates of PTSD among service members who served in Iraq and Afghanistan: Possible explanations. *Journal of Traumatic Stress, 23*(1), 59–68.
- Rate, C. R., Clarke, J. A., Lindsay, D. R., & Sternberg, R. J. (2007). Implicit theories of courage. *The Journal of Positive Psychology, 2*(2), 80–98.
- Resick, P. A., Monson, C. M., & Chard, K. M. (2017). *Cognitive Processing Therapy for PTSD: A Comprehensive Manual*. New York, N.Y.: The Guilford Press.
- Rüsch, N., Corrigan, P. W., Todd, A. R., & Bodenhausen, G. V. (2010). Implicit self-stigma in people with mental illness. *The Journal of Nervous and Mental Disease, 198*(2), 150–153.
- Salters-Pedneault, K., Ruef, A. M., & Orr, S. P. (2010). Personality and psychophysiological profiles of police officer and firefighter recruits. *Personality and Individual Differences, 49*(3), 210–215.
- Stack, S. (2004). Emile Durkheim and altruistic suicide. *Archives of Suicide Research, 8*(1), 9–22.
- Sullenberger, C. B. (2018). *We saved 155 lives on the Hudson. Now let's vote for leaders who'll protect us all*. Retrieved from [https://www.washingtonpost.com/opinions/we-saved-155-lives-on-the-hudson-now-lets-vote-for-leaders-wholl-protect-us-all/2018/10/29/554fd0e6-d87c-11e8-a10f-b51546b10756\\_story.html?noredirect=on&utm\\_term=.68f83a5c48e9](https://www.washingtonpost.com/opinions/we-saved-155-lives-on-the-hudson-now-lets-vote-for-leaders-wholl-protect-us-all/2018/10/29/554fd0e6-d87c-11e8-a10f-b51546b10756_story.html?noredirect=on&utm_term=.68f83a5c48e9)
- Warner, C. H., Appenzeller, G. N., Mullen, K., Warner, C. M., & Grieger, T. (2008). Soldier attitudes toward mental health screening and seeking care upon return from combat. *Military Medicine, 173*(6), 563–569.
- Warner, C. H., Appenzeller, G. N., Parker, J. R., Warner, C., Diebold, C. J., & Grieger, T. (2011). Suicide prevention in a deployed military unit. *Psychiatry: Interpersonal & Biological Processes, 74*(2), 127–141.
- Weinstein, H. (2012). *Beyond courage: The psychology of heroism*. (Unpublished doctoral dissertation). Pacific Graduate School of Psychology, Palo Alto University, Palo Alto, CA.