

**RESEARCH**

# How eLearning Can Decrease Challenges of Informal Family Caregivers of Service Members & Veterans with Invisible Injuries

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While a considerable amount of literature has explored the caregiver population, limited research has explored the critical need of education and training for individuals who provide care to a service member or veteran who has incurred psychological injuries, such as Post-Traumatic Stress Disorder (PTSD), Traumatic Brain Injury (TBI), or other related psychological or cognitive injuries. Moreover, military veteran caregivers (MVC) of service-members or veterans with psychological injuries (SMV-PI) have been reported to sacrifice their health, careers, and well-being, to provide care to injured service members and veterans, yet have not received education or training. As a result, a decline in critical areas has been reported for this population. Additionally, research shows the MVC lacks the education and training needed to provide care, leaving the MVC with little to no understanding about how to provide care to a SMV-PI. The body of research is steadily growing about the need for caregivers to receive support for critical issues, such as the education and training necessary to care for soldiers returning from military conflicts with invisible wounds of war. This article will serve as a literature review to explore the MVC population: the demographics of this population; the social, emotional, physical, and mental health of this population; and its unique characteristics. Suggestions are provided for how eLearning, or how the acquisition of education and training through the delivery of a virtual curriculum, may aid and assist members of the MVC population in becoming better caregivers.

**Keywords:** military; veteran; caregivers; service members; eLearning; education

The need for family members to suddenly take on the job of caring for their loved ones injured in service has become a mounting concern and problem across America. An even more growing interest has been that these individuals have been tasked to take on responsibilities to provide care for an injured service member or veteran, after notification of a loved one's injury during military service (Patel, 2015; Ramchand et al., 2014; Van Houtven, Oddone, & Weinberger, 2010; Zernial, 2015). Researchers have reported that in the United States of America, 5.5 million family caregivers provided care to those who served (Ramchand et al., 2014). Mental or cognitive wounds, injuries, or illnesses that resulted from military service, or invisible wounds such as PTSD, TBI, and Depression have been prevalent among returning soldiers, with a myriad of cognitive and behaviorally unpredictable situations associated with mental and cognitive

behaviors (Delgado et al., 2018; Miller, Kabat, Henius, & Van Houtven, 2015; Patel, 2015; Ramchand et al., 2014; Tanielian et al., 2008). There is limited literature about training needs for this population and that address how to provide care to service members and veterans who return from military conflicts with invisible wounds of war, with only a paucity of reports that focus on education and training opportunities for the military caregiver population. Through in-depth exploration regarding this topic, it appears this report is among a few within the body of research that addresses the education and training needs of military caregivers of those with invisible wounds.

Studies have identified informal caregivers as spouses, parents, partners, friends, or neighbors who have a personal relationship with the wounded, ill, or injured service member or veteran and have provided care to an injured service member or veteran. Members of this population have been referred to as informal caregivers, family caregivers, military caregivers, or military veteran caregivers (Conard, Armstrong, & Young, 2017; Miller et al., 2015; Ramchand et al., 2014; Tanielian et al., 2013). In this article, these informal caregivers will be

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referred to as military veteran caregivers (MVC). The purpose of this article is to show the challenges faced by caregivers of injured, ill, or wounded service members and veterans, as well as to suggest how eLearning if delivered appropriately, can be a viable way to provide essential support to this population. While there is a growing body of literature that addresses the needs of this population, it can be determined that very few education and training opportunities are available for the military veteran caregiver population (Brickell et al., 2018; Ramchand et al., 2014).

Transformative Learning Theory, however, offers the idea that those affected by trauma can process the events, and progressively move toward recovery. Researchers have reported that adults learn about life events through experiential knowledge and, in the process, learn to make sense of events and how to adjust and adapt to the event's dynamics (Bean & Kroth, 2013; Kroth & Boverie, 2009). Likewise, a MVC needs to have access to formal and informal learning about how to understand and contend with new conditions and unpredictable behaviors (Goodson & Hall, 2019; Patel, 2015; Rubenson, 2011; Stevens et al., 2015). Moreover, MVCs need to receive guidance and support as he or she navigates through how to adjust to a routine way of life, so he or she can provide optimum care to a SMV-PI.

## **Transformative & Social Learning Theories**

### ***Social Learning***

Learning can be a social process of engagement for all participants who are actively working on similarly assigned activities. When peers are given opportunities to engage, collaborate, and communicate with one another in a formal or informal educational setting, this is also known as Social Learning (Bubb, Crawford, & McDonald, 2012; Horton, 2012). As MVCs share experiences, gain knowledge, and exchange successful caregiving techniques and strategies, while relating to another caregiver, they can become more informed of how to handle situations that occur as they live with a loved one diagnosed with a mental or cognitive disability. Other researchers demonstrated a decrease in caregiver burden when an active social learning component was part of a course for caregivers (Fowler, Haney, & Rutledge, 2014; Lorig et al., 2012).

### ***Transformative Learning***

Mezirow's Transformative Adult Learning Theory (Bean & Kroth, 2013; Kroth & Boverie, 2009; Mezirow, 1997) showed how adults learned about life events through experiential knowledge. In the process, they learned a) to make sense of what had occurred, b) the dynamics of what these events meant, and c) how to adapt to them (Rubenson, 2011). This theoretical framework supports the foundation for the development of an online curriculum that addresses a MVC's need to understand and contend with new conditions and unpredictable behaviors (Goodson, 2019; Patel, 2015; Stevens et al., 2015). eLearning with a social learning component can deliver education and training and provide the

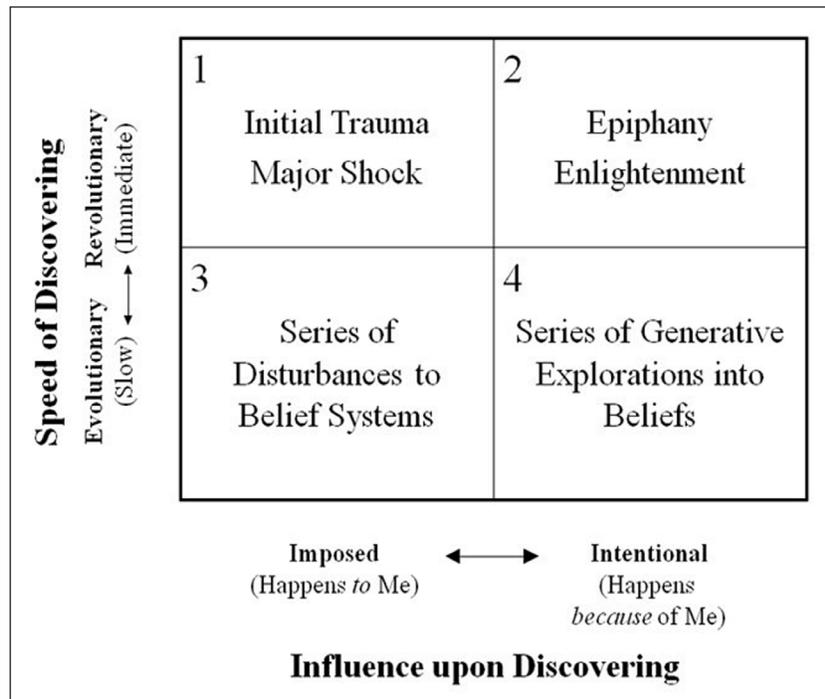
social community necessary for MVCs who are learning to handle diagnosed cognitive and mental health conditions of their loved ones who were injured while serving in the military. The sudden, traumatic injuries of service members that occur while engaged in military service could cause a sudden shift in loved ones' lives when the SMV-PI returns home from war. This sudden shift occurs when there is an unexpected need for others to provide ongoing care necessary to help the SMV-PI. The Integrative Discovery Model explains how Transformative Learning could be imposed, that is, an event could occur, regardless of whether we wanted it to or not, causing life-changing results. In another study, Bean and Kroth (2013) mentioned the significance of revolutionary or dramatic changes that occur in an instant as also being indicative of this model (Bean & Kroth, 2013; Kroth & Boverie, 2009). These theorists developed The Integrative Discovery Model, which is based on Mezirow's Transformative Adult Learning Theory. The Integrative Discovery Model is further illustrated in **Figure 1**.

MVCs can acquire new knowledge when sharing real-life experiences within an eLearning modality, provided there is an inclusion of social learning practices within the eLearning course. In one study conducted by P. R. Goodson (2019), military caregivers were asked to express preferred methods of interaction and preferred ways to communicate and collaborate. Each participant's response was given based upon his or her personal or known web-based experiences. The results of this study's analysis confirmed that the design of a formal eLearning program for caregivers could be useful if designed with social learning practices embedded within its curriculum. Further findings indicated that social learning could yield transformative learning when an eLearning platform is created that includes opportunities for social learning. This conclusion has also been suggested in other research studies (Fowler et al., 2014; Lorig et al., 2012).

### **The Effects of Invisible Injuries**

It is crucial to consider the significance of casualties that occurred as invisible injuries to service members during the OEF/OIF wars, to understand its effect on the MVC population. Researchers have documented that since September 11, 2001, more than two million soldiers have been deployed to Operation Iraqi Freedom (OIF - Iraq) and Operation Enduring Freedom (OEF - Afghanistan). At the time of writing, 26 percent of soldiers deployed to OEF/OIF returned home with a mental illness such as post-traumatic stress disorder (PTSD) as a result of combat experiences (Tanielian, Jaycox, Adamson, & Metscher, 2008).

Further studies reported that hundreds of thousands of soldiers suffered from a traumatic brain injury (TBI) either due to a military training accident during a deployment, or from combat exposures, such as IED blast waves (Brickell et al., 2018; Carlozzi et al., 2016; Conard et al., 2017; Delgado et al., 2018; Easom, Wang, K., Moore, Wang H., & Bauer, 2017; Saban et al., 2016; Stevens et al., 2015; Tanielian et al., 2008; Tanielian et al., 2013).



**Figure 1:** Integrative Discovery Model.

*Note:* Kroth and Boverie’s model (2009) illustrated the progression of an individual’s experience. It further showed a change from the initial trauma (Block One) through the acquisition of useful tools that are helpful in the process of transformation and progression toward positive change. From “Using the Discovering Model to Facilitate Transformational Learning and Career Development,” by Kroth, M. and Boverie, P., 2009, *MPAEA Journal of Adult Education*, 38(1), pp. 43–47. Copyright 2009 by Copyright Mountain Plains Adult Education Association. Reprinted with permission.

A SMV-PI’s need for care sparked this phenomenon’s need for MVCs to receive the knowledge and skills necessary to provide adequate care to this population (NAC, 2010; Ramchand et al., 2014). Researchers further determined that these veterans or service members required long-term and often indefinite support from a family member or caregiver (Carlozzi et al., 2016; Easom et al., 2017; Griffin et al., 2017; Tanielian et al., 2008; Van Houtven et al., 2012). In addition to the new set of requirements that must be learned by the SMV-PI, there is a distinct and unique set of new tasks that their MVC must also learn. Carlozzi et al. (2016) conducted a study that explained how stress and anxiety could occur from deployments, an unexpected injury, and the dramatic changes in roles in the family unit. Roles and power dynamics in the family unit shift to where the uninjured spouse is required to take on the primary part within the home, which suggests that the training needs of an informal caregiver who is a spouse would look different from the training needs of a caregiver who is a parent. Other examples are role-shifts from “military spouse” to “military caregiver” or from parent to that of a nurturer. This role-shift in the family unit often causes grief and loss as the service member is no longer capable of what he/she used to do or be. As a result, roles within the family unit change, and the family experiences a loss of identity; and, all this usually happens within an instant (Michelle Obama, personal communication, May

15, 2015; Patel, 2015; Stevens et al., 2015). This change, which many times occurs overnight, causes many individuals to inherit a role that requires him or her to endure many demanding and challenging tasks. These demands and challenges could include, executing plans of care given by health care providers, navigating and advocating for healthcare and benefits, providing case management, coordinating medical care, and suppressing personal negative reactions to avoid anti-social or stressful situations (NAC, 2010; Tanielian et al., 2013).

Researchers suggested that most informal caregivers of those diagnosed with PTSD or TBI were spouses and had an emotional attachment to the individual who was wounded, ill, or injured (Carlozzi et al., 2016; NAC, 2010; Stevens et al., 2015). Other researchers have also reported that training needs for Post 9/11 caregivers, those who care for a wounded, ill or injured service member who served after September 11, 2001, have very different training needs from caregivers of Pre-9/11 veterans, that is, those who care for individuals who served before September 11, 2001 (Miller et al., 2015); Ramchand et al. 2014). What is significant to note is that scholars have increasingly suggested the importance of caregivers receiving the education and training necessary to care for and cope with these cognitive and mental diagnoses (Brickell et al., 2018; Carlozzi et al., 2016; Stevens et al., 2015). To understand a MVCs need for education,

training, and support, it is critical to recognize the characteristics and needs of this population.

### **Military and Veteran Caregivers**

In the seminal study by Ramchand et al. (2014), MVCs were defined as any individual who provides care to an injured, ill, or wounded service member or veteran. Many other research studies have identified informal caregivers as spouses, parents, partners, friends, or neighbors who have a personal relationship with the wounded, ill, or injured service member or veteran, and provide care to one who has been disabled (Conard et al., 2017; Miller et al., 2015; Ramchand et al., 2014; Tanielian et al., 2013). Researchers of various studies referred to these individuals as informal caregivers, military caregivers, military veteran caregivers and family caregivers (Bride & Figley, 2009; Conard et al., 2017; Miller et al., 2015; Ramchand et al., 2014).

Researchers also identified many MVCs as informal caregivers, that is, individuals who had not received professional or formal training to provide adequate care (Patel, 2015; Ramchand et al., 2014; Van Houtven et al., 2010). Sensitive and varying degrees of mental and cognitive injuries require different levels of care for those with mental and cognitive disabilities. Researchers concluded that all MVCs who provided care for anyone with a psychological or cognitive injury required formal education and training regardless of the degree of care required by the care recipient (Dausch & Saliman, 2009; NAC, 2010; Ramchand et al., 2014; Stevens et al., 2015). Further studies revealed that individuals with the role to care for injured, ill, or wounded service members, and with no formal training, or idea of what to do to provide adequate care, may also experience significant emotional and physical health challenges which include caregiver burden (Easom et al., 2017; Griffin et al., 2017; Griffiths et al., 2010; Lorig et al., 2012; NAC, 2010; Nichols, Martindale-Adams, Burns, Zuber, & Graney, 2016; Patel, 2015; Ramchand et al., 2014).

Numerous researchers affirmed that MVCs did experience positive feelings of accomplishment, strength, and openness to the veteran or service member who was receiving care and support. Participants in these research studies further expressed that despite having to take on the involuntary and unintentional role of caregiver, they felt fulfillment, an intrinsic satisfaction, and pride to provide care to those who had served their country (Bride & Figley, 2009; Conard et al., 2017; Griffin et al., 2017; Patel, 2015). Other researchers reported that caregivers expressed satisfaction in having opportunities to learn more about the disability, what behaviors looked like, and what to expect (Shim, Barroso, Gilliss, & Davis, 2013).

Several studies have shown how many who care for those with cognitive disabilities endure stressful days of uncertain and often unpredictable behavior patterns (Carlozzi et al., 2016; Mansfield, Schaper, Yanagida, & Rosen, 2014; Patel, 2015). These caregivers must also deal with the stress of another type of uncertainty. That is, they realize that there

may never be an end-date for the unpredictable behaviors associated with these mental or cognitive conditions (Conard et al., 2017). This realization also creates an undue burden of stress on caregivers. Shim et al. (2013) reported that MVCs must face undue mental stress and learn how to live with these behaviors and learn how to cope with these behaviors through acceptance and sharing resources. This further could contribute to the decrease of caregiver burden and stress. These conclusions were further corroborated in other studies (Carlozzi et al., 2016; Conard et al., 2017; Griffin et al., 2017; Mansfield et al., 2014; Saban et al., 2016; Shim et al., 2013).

Being a MVC of a SMV-PI is life-altering and life-changing, and often comes with a prolonged and undetermined future. Further, some researchers shared that many military veteran caregivers have been providing care for five to ten years or longer (Carlozzi et al., 2016; Conard et al., 2017; NAC, 2010; Tanielian et al., 2013). Paradoxically, MVCs have reported significant negative health outcomes that weighed on their own social, emotional, mental and physical well-being (Carlozzi et al., 2016; Griffin et al., 2017; NAC, 2010; Ramchand et al., 2014; Saban et al., 2016). Researchers further documented that MVCs were susceptible to stress and depression due to the burden on the caregiver and the shift in family roles, where the military caregiver assumed more familial responsibilities (Conard et al., 2017; Carlozzi et al., 2016; Griffin et al., 2017; Patel, 2015).

### **Characteristics of Military Veteran Caregivers**

Military veteran caregivers, or those who provide support for wounded, ill, or injured service members or veterans may be related, or not related to the service member or veteran. However, over 50 percent of MVCs are reported to be a family member of the injured, ill, or wounded service member or veteran (Ramchand et al., 2014; Williamson, 2014). Investigators further reported that military caregivers were vital in the service member or veteran's recovery from war (Miller et al., 2015; Patel, 2015; Ramchand et al., 2014).

It was reported in a recent study that over thirty percent of veterans and service members of both Pre 9/11 and Post 9/11 suffered from a TBI; sixty-seven percent suffered from PTSD; and, seventy-two percent suffered from major depressive disorder (Ramchand et al., 2014, p. 48, Table 2.5). These numbers suggested that a large number of military veteran caregivers provided care to someone with a mental or cognitive illness. Researchers further documented that of the 5.5 million individuals that provide care to a SMV-PI, 1.1 million are caregivers of service members and veterans from the Post 9/11 war era. Many of them were affected by signature "invisible" wounds from the latest war conflicts of Iraq or Afghanistan, identified as PTSD and TBI (Delgado et al., 2018; Miller et al., 2015; 2018; Patel, 2015; Ramchand et al., 2014; Tanielian et al., 2008).

Researchers also indicated that there was a pressing need for caregiver education to relieve the magnitude of stress on individuals that provide care for those with invisible

combat wounds. Ramchand et al. (2014) conducted a study with MVCs between the ages of 18 to 81 and found most individuals among this population were between 31 to 54 years of age. MVCs represented most ethnic groups, with 68 percent White, 12 percent Black, 12 percent Hispanic, five percent Other, and one percent Non-Hispanic. Both men and women make up this population, with most made up of female spouses (Conard et al., 2017; Miller et al., 2015; Patel, 2015; Ramchand et al., 2014). Significant differences were identified among America's MVCs, with the standard demographics of Post 9/11 MVCs as younger, employed, and not being connected to a support network, although Carlozzi et al. (2016) reported participants of this study as typically over the age of 30, with a majority being spouses. However, many researchers found that caregiver support provided by a spouse looked and felt differently than caregiver support provided by parents. And the type of care provided by the caregiver (i.e. spouse or parent) also influenced the care provided to the veteran (Carlozzi et al., 2016; Patel, 2015; Ramchand et al., 2014).

Researchers of one study (Williamson, 2014) mentioned a goal to evaluate the Caregivers and Veterans Omnibus Health Services Act of 2010 which was signed into existence by President Obama in May 2010 (Miller et al., 2015; Patel, 2015; Van Houtven et al., 2012; Williamson, 2014). Researchers of these studies identified significant components of this program, such as the financial stipend provided to caregivers of severely injured veterans who served in OEF or OIF and education and training provided to the informal military caregiver. They also indicated a further intention to evaluate the support and needs of education, training, and other programs for informal military caregivers (Miller et al., 2015; Van Houtven et al., 2012). The Caregivers and Veterans Omnibus Health Services Act of 2010 provided for these formal modes of instruction to informal MVCs which included telephone support, web-based support, peer support, and a dedicated caregiver support line (Miller et al., 2015; Patel, 2015; Ramchand et al., 2014). During these education and training offerings by Veteran Affairs, it was up to each caregiver to decide the mode of training and delivery of instruction. Bride and Figley (2009) labeled the phenomenon *secondary stress disorder* as those who care for those with exposure to traumatic events, and that suffer from adverse behaviors associated with PTSD. Bride and Figley (2009) further suggested that this is a condition experienced by family members and caregivers who provide support to individuals diagnosed with traumatic conditions. Further details follow and more investigation of this phenomenon is warranted.

### **General health and well-being**

In addition to the many studies on a MVC's lack of social involvement within the community and family, researchers have suggested that members within this population face many mental and physical health challenges (Carlozzi et al., 2016; Lorig et al., 2012; Mansfield et al., 2014; NAC,

2010; Ramchand et al., 2014; Saban et al., 2016; Tanielian et al. 2013). In these studies, MVCs have reported concern for their feelings of grief and loss of what the SMV-PI could no longer provide due to injury and grief over the loss of what he or she could no longer do personally due to their new role of providing care to SMV-PI. In these studies, MVCs also expressed anger at the lack of support or the inability to receive proper support or healthcare for themselves or the SMV-PI. Participants in these studies also reported financial challenges, lack of ability to continue their vocational path due to caregiving duties, the need to assume the primary responsibility of any socializing, and caregiver strain. Many caregivers in these studies also reported their need to receive psychological care for depression, anxiety, and hypervigilance. They admitted to suppressing other emotions that stemmed from caring for a SMV-PI. Researchers found that these situations could be alleviated if social support, education and training, and peer support were available to the military caregiver (Bride & Figley, 2009; Carlozzi et al., 2016; Griffin et al., 2017; NAC, 2010; Saban et al. 2016; Shim et al., 2013; Tanielian et al., 2013).

### **Emotional health**

The stress of a long deployment takes its toll on family members (Institute of Medicine, 2013). However, when the family member returns home injured, added stress is presented into an already stressful re-entry situation. Family members have had to deal with an uncertain future (Carlozzi et al., 2016; Conard et al., 2017; Mansfield et al., 2014; NAC, 2010; Patel, 2015). The finances and familial health temporarily tasked to the military spouse during the deployment of the family member could suddenly and abruptly become a permanent responsibility, primarily due to the unpredictable injury of the military member. Furthermore, the life of the family is changed forever (Van Houtven et al., 2012). These negative stressors were magnified when the MVC has to cope with polytrauma – a condition which results when the service member or veteran is diagnosed with a TBI, in addition to other multiple injuries (Griffin et al., 2017; Perla, Jackson, Hopkins, Daggett, & Van Horn, 2013; Saban et al., 2016; Stevens et al., 2015; Van Houtven et al., 2012). Researchers also found that one prevalent reason the military caregiver experienced symptoms of depression and stress, was due to the unpredictable responsibilities of caregiving that changed from day to day (Miller et al., 2015; Patel, 2015).

As stated earlier, Bride and Figley (2009) identified that others who provide care for those with exposure to traumatic events had been known to suffer from negative behaviors similar to the adverse effects shown by those with PTSD. They identified this condition as secondary stress disorder. Researchers in multiple studies (Bride & Figley, 2009; Institute of Medicine, 2013; Tanielian et al., 2013) have addressed that the emotional health of MVCs could stem from the emotional stress and secondary traumatic stress (STS) that is among the military veteran caregiver

population. Further investigation of this condition could be beneficial to the military caregiver population, as well as those who provide support to family members and caregivers of individuals diagnosed with traumatic conditions (Bridge & Figley, 2009).

MVCs deserve to know how to handle negative stressors and behaviors associated with wounds of war. Another challenge, however, is caregivers also report issues with keeping up with their self-care, including diet and exercise. Researchers have suggested in many studies that caregivers are challenged to remain vigilant of their medical care and wellbeing, which also needs to be addressed by healthcare and governmental and policy changes (Carlozzi et al., 2016; Griffin et al. 2017; Saban et al., 2016; Tanielian et al., 2013; Van Houtven et al., 2012).

### **Physical health**

Many researchers reported that military caregivers encountered an increased likelihood of experiencing physical ailments such as hypertension, sleep disorders, and skeletal and back pain (Carlozzi et al., 2016; Conard et al., 2017; Lorig et al., 2012; Mansfield et al., 2014; NAC, 2010; Saban et al., 2016; Tanielian et al., 2013). Furthermore, the MVC population often reported neglecting the preventive care necessary for ongoing good mental health, which resulted in poor or fair health conditions and a lower quality of life (Carlozzi et al. 2016; NAC, 2010). These findings have been further documented by these researchers as well as others when they discussed that due to a military caregiver's daily tasks and responsibilities, self-care was often neglected. Consequently, the caregiver has been challenged to get adequate nutrition, exercise and sleep; and, often the basics such as scheduling personal regular dental and medical appointments were neglected (Carlozzi et al., 2016; Conard et al., 2017; Mansfield et al., 2014; NAC, 2010; Ramchand et al., 2014; Saban et al., 2016; Tanielian et al., 2013).

### **Financial health**

MVCs have expressed dissatisfaction in how becoming a caregiver has affected their ability to find good-paying work. Many are appreciative of the caregiver stipend provided under the Caregivers and Veterans Omnibus Health Services Act of 2010. However, researchers are still evaluating how adequate the monthly financial stipend is for the needs of families within the military veteran caregiver population. They have further explored the financial situations of this population and found that there was still a significant financial strain on them, because of the need to leave well-paying jobs or take lower-paying jobs to meet their caregiving duties and responsibilities (Miller et al., 2015; Van Houtven et al., 2012).

Although financial safety provisions had been established for SMV-PI returning from war (i.e., VA disability and pensions), family members did not have the same consideration. Due to their need to resign from responsible and well-paying positions to take on care duties and responsibilities which conflicted with their employment

situations, many MVCs and their families experienced a devastating decrease in income (Van Houtven et al., 2012). Researchers found that many in the MVC population felt limited in their flexibility to pursue outside full-time work, and as a result experienced economic challenges due to the inability to net the larger amount he or she had been accustomed to earning before being tasked with the responsibility of assuming the military caregiver role (Carlozzi et al., 2016; Conard et al. 2017; Lorig et al., 2012; NAC, 2010). Other studies revealed lessened household income, which had affected opportunities to further educational or vocational goals (Carlozzi et al., 2016; NAC, 2010; Ramchand et al., 2014; Saban et al., 2016; Tanielian et al., 2013). Researchers also reported military caregiver frustration at the devastating decrease of income, social security benefits, health insurance benefits, or other benefits (Conard et al., 2017; Tanielian et al., 2013; Van Houtven et al., 2012). As a result of these changed financial circumstances due to the need to resign, take early retirement, or decrease employment, to provide unpaid caregiving support to a veteran or service member, the total financial profile of a family unit was often changed. Often MVCs have had to deplete savings or retirement pensions, sell property or cars, take out home equity loans and second mortgages, or take cash advances and use available credit to care for the veteran (Conard et al. 2017; Van Houtven et al., 2012).

### **Social health**

Another mounting concern was the social health within the military veteran caregiver population. There has been a growing concern that after assuming the MVC role, many of those individuals have become isolated from friends and family and have been unable to maintain significant healthy relationships. Many MVCs reported spending less time with family and friends – both intentionally and sometimes unintentionally. They further attested to not being understood by friends or relatives that had not experienced military caregiving personally. They, therefore, chose to evade conversations with those who “may not get it.” Also, MVCs require time to grieve; many are still in the grieving process and do not care to discuss the veteran or service member with anyone (Carlozzi et al., 2016; NAC, 2010; Tanielian et al., 2013).

Researchers reported significant social isolation among military caregivers as a result of the enormous change that had affected the social, relational, and familial systems within military caregiver families (Ramchand et al., 2014; Tanielian et al., 2013). Several studies reported emotional stress and strained marriages of those with a veteran diagnosed with PTSD and TBI (Carlozzi et al., 2016; Griffin et al., 2017; NAC, 2010). Investigators also reported increased marital strain and higher divorce rates among couples experiencing the anxiety of caregiving coupled with recovery from injuries sustained during military service. MVCs also reported decreased physical intimacy and often expressed frustration at being made to “feel more like a nurse instead

of the spouse" (NAC, 2010). Many other researchers supported the finding that relational quality decreased among spouses (Conard et al., 2017; Mansfield et al., 2014; NAC, 2010; Nichols et al., 2016; Ramchand et al., 2014).

### **Unique tasks and responsibilities**

Military veteran caregivers have many unique characteristics. One unique characteristic is the need to remain watchful and to note changed behaviors in the service member or veteran. Many times, behaviors related to an invisible injury will present itself after the service member, or veteran has returned from the war, which marks this action as essential and one of the exceptional characteristics of the MVC population (Conard et al., 2017; Patel, 2015; Tanielian et al., 2013). Military caregivers of those with invisible wounds of war have had to learn to cope with many unpredictable behaviors. These behaviors include forgetfulness, poor judgment, depression, hypervigilance, nightmares, flashbacks, anger, anxiousness, communication difficulties, and lack of concentration and focus (Miller et al., 2015; Patel, 2015; Tanielian et al., 2008). For them, it is a daily challenge to learn how to adjust to the behaviors associated with these mental and cognitive injuries that stemmed from war.

Stevens et al. (2015) presented findings of informal military caregivers who provided care for individuals diagnosed with injuries that include TBI and polytraumatic injuries. Researchers of this TBI study concluded that training might not be as helpful for caregivers of individuals who required a significant amount of assistance related to Activities of Daily Living (ADLs). Researchers further suggested that most of those individuals had professional home health care workers that came into the home to perform ADL assistance, which negated the need for an informal caregiver to learn these skills. Several studies outlined the tasks that military caregivers performed and mentioned the variation of the tasks performed based on the injury of the service member or veteran. Some of these tasks were in nature ADLs, that is, the individual required assistance in performing essential human functions such as bathing, dressing, feeding, and toileting. Other tasks that regulate functional duties are commonly referred to as instrumental activities of daily living (IADLs), which means the individual requires assistance in performing daily tasks such as cooking, cleaning, accompaniment to medical appointments, support with emotional and trigger regulators that are associated with TBI and PTSD, and medication management (Carlozzi et al., 2016; Griffin et al., 2017; NAC, 2010; Patel, 2015; Phelan et al., 2011; Ramchand et al., 2014; Saban et al., 2016; Tanielian et al., 2013; Van Houtven et al., 2012).

### **The Effectiveness of Formal Web-Based Training**

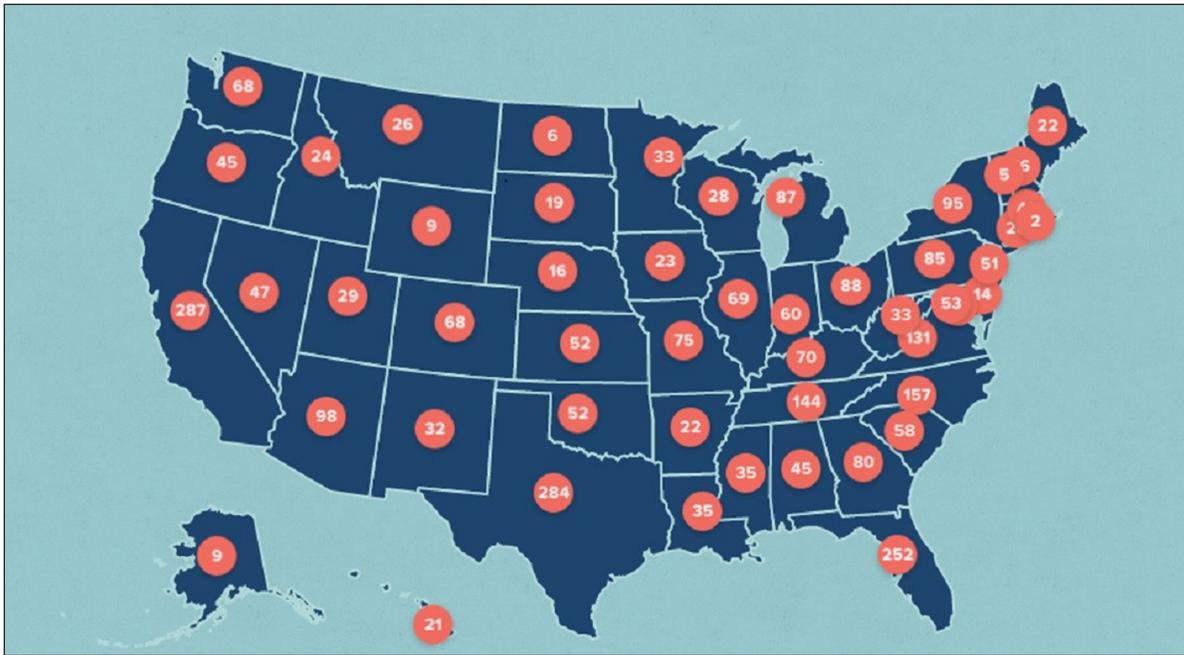
Many critical areas of concern, including the need for formal education and training for the MVC population, have been identified in several studies, including a pivotal research study conducted by Ramchand et al. (2014). Educational information about such conditions as TBI and PTSD are eas-

ily accessible to military caregivers through social media and websites. However, Ramchand et al. (2014) recommended that formally developed programs, to include online training, webinars, and other formal courseware that could be programmatic, should be explored for the MVC population to learn how to become better caregivers. Many other studies have also revealed gaps in training and determined that training for caregivers of veterans or service members with mental health issues would be beneficial, also supporting the development of formal web-based support to the underserved community of military caregivers, (Brickell et al., 2018; Lorig et al., 2012; Miller et al., 2015; Patel, 2015; Ramchand et al., 2014; Stevens et al., 2015).

Additional studies tested web-based, skill-building training for caregivers of those with TBI and polytraumatic injuries (Lorig et al., 2012; Stevens et al., 2015) with more investigators recommending future formal education and training programs to a) lessen the stress, isolation, and caregiver burnout that MVCs had reported experiencing as a result of having duties that they did not understand how to perform; b) reduce negative effects that caregivers experienced as a result of not knowing how to help their loved ones; and, c) provide the alternative for veterans to remain in their homes as compared to being institutionalized in a nursing home (Bass et al., 2012; Brickell et al., 2018; Easom et al., 2017; Griffiths et al., 2010; Lorig et al., 2012; Nichols, et al., 2016; Stevens et al., 2015; Van Houtven et al., 2010).

**Figure 2** represents a map of the number of military caregivers that have self-identified in each geographical region. This map is known as the Hidden Heroes Interactive Map. It is updated daily to represent the number of military caregivers who have raised their hands to identify as someone who provides care to a wounded, ill, or injured service member or veteran. The Hidden Heroes campaign was launched by the Elizabeth Dole Foundation to offer a premier online community for the military caregiver population (Elizabeth Dole Foundation, 2016). To generate real numbers that show geographic locations of military caregivers across America, any military caregiver can access this website and annotate the state where he or she resides. The illustration displayed in **Figure 2**, the Hidden Heroes Cities Interactive Military Caregiver Map, illustrates a summary total of the self-reported military caregiver population, listed geographically by state. Thus, it suggests the necessity for web-based training. Since this writing, this interactive map has been populated with more MVCs who have raised their hands and self-identified as individuals who provide support to a wounded, ill, or injured service member of a veteran. The delivery of accessible caregiver support to the population of MVCs that reside in rural and urban locations has been reported by many researchers as a constant challenge (Ramchand et al., 2014).

Dausch and Saliman (2009) mention the advantages that eLearning and distance education mediums have for the delivery of formal training to MVCs. Research shows that eLearning eliminates the divide and limitation to learning, and thus provides a way for those who have a common need



**Figure 2:** Hidden Heroes Military Caregiver Map.

*Note:* This interactive map illustrates the number of military caregivers in each state across the U.S.A. This map is updated regularly as individuals across America register on this public website and self-identify as military caregivers. Retrieved from [www.hiddenheroes.org/map](http://www.hiddenheroes.org/map). Reproduced with permission, 2019.

for training of a particular concept to connect with peers despite geographic location and despite mobility challenges (Dausch & Saliman, 2009). Researchers have explained the challenge for caregivers to leave their care recipients to get self-care, attend to their personal medical needs, or to get any training or support (Griffiths et al., 2010; Lorig et al., 2012). This challenge is particularly essential for MVCs of a SVM-PI who is homebound and needs to regulate his or her emotional triggers, driving deficits, concentration, and cognitive issues to overcome (Patel, 2015; Van Houtven et al., 2010). Due to accessibility challenges, it is also essential to provide military caregivers the opportunity to receive in their homes training programs that teach them caregiver support, problem-solving strategies and real-world behavioral intervention strategies (Easom et al., 2017; Miller et al., 2015; Nichols et al., 2016).

Web-based support via an eLearning delivery of a curriculum is one way that the MVC population can receive support remotely. Also, some researchers have reported the effective delivery of education remotely using different platforms including the telephone, online platforms, and mobile devices (Bubb et al., 2012; Easom et al., 2017; Fowler et al., 2014; Hattink et al., 2015; Lorig et al., 2012; Nichols et al., 2016; Sili et al., 2015; Zernial, 2015). Ramchand et al. (2014) showed that the number of formalized instruction programs available to the MVC population, was limited to only 11 organizations. The findings from this study helped determine needs and recommendations for the military caregiver population that provide care to SMV-PI. Results from this study also positively contributed to the design

and development of online training for the military caregiver population. Some non-profits, such as The Elizabeth Dole Foundation's Hidden Heroes Community, Texas A & M, and PsychArmor are among organizations that currently provide online training for military caregivers (About United Health, 2016; PR Newswire, 2015; Psych Armor Institute, 2016; Rodewald, 2017; Texas A & M, 2018). For example, the Elizabeth Dole Foundation has developed education and training support through online live meeting opportunities for members of the Hidden Heroes Community (Rodewald, 2017). Another example of support is from PsychArmor and USAA. They have partnered to provide virtual training to the military caregiver community (PsychArmor Institute, 2016), which the Business Wire reporter mentioned in 2016 as the first of its kind. Blue Star Families also partnered with United HealthCare to provide MVCs with an online and interactive training program that provides education and support using virtual reality and avatar features (About United Health, 2016). These are among the organizations that are currently offering online education and training for this population.

### Summary

In response to prior studies and recommendations, P. R. Goodson (2019) conducted a study that called on MVCs of SMV-PI to describe modules, components, and features that would be useful to include within an eLearning training program for this population. Significant outcomes from this study included the finding to incorporate the essential element of social learning practices within the design of an eLearning curriculum for MVCs, and further, that the inclu-

sion of social learning practices would most likely produce transformational learning among participants. Participants in this study expressed the need to have access to informational module topics that outlined self-care techniques, best materials to share with those new to the caregiving role, best ways to communicate with a medical team, and methods of treatment for invisible injuries (Goodson & Hall, 2019; P. R. Goodson, 2019).

Other studies have been conducted that considered feedback from military caregivers on how their situation changed and if they felt a need for additional caregiver training, as well as what future content the caregiver wished to have included within a training program. Investigators of several other studies reported the MVC's articulation of how a carefully designed training program would benefit their population (Lorig et al., 2012; NAC, 2010; Williamson, 2008; Williamson, 2014). These results revealed suggestions to develop modules about financial and legal issues, self-care techniques, as well as how formal training with the intervention of a professional or expert would be beneficial to the military caregiver population (Lorig et al., 2012; NAC, 2010; Nichols et al., 2016; Ramchand et al. 2014; Stevens et al., 2015).

Researchers (Miller et al., 2015) found that over 30,000 caregivers had received education and training nationwide through a virtual platform, telephone, and other methods via the VA Caregiver program. Stevens et al. (2015) questioned whether training alone could reduce caregiver burden and depression, especially for those who will be military caregivers for the rest of their lives. Some researchers expressed the intent to develop a training program in the future and mentioned that this possibility remained under evaluation due to the complexity involved in creating curricula that addressed the specialized training needs of military caregivers who supported individuals with TBI or PTSD (Miller et al., 2015; Stevens et al., 2015). And, to corroborate this point, spouses of SMV-PI may have different training needs than parents of SMV-PI, which makes the development and design of an effective curriculum a time-consuming task.

Future recommendations are to encourage more eLearning programs to be developed and made accessible to military caregivers across the United States of America. Federal, state, and local programs, and more nonprofits, are also encouraged to develop or redesign existing eLearning programs that offer support to the MVC population. Finally, eLearning developers of virtual platforms for MVCs are encouraged to include social learning practices within the eLearning curriculum, to increase levels of engagement and feedback; thus, producing transformational eLearning opportunities for MVCs who participate in virtual learning activities.

### Competing Interests

The author has no competing interests to declare. Northcentral University's Internal Review Board approved the entire research study.

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