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Walden University

College of Health Sciences

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Linda Zarrett

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Review Committee
Dr. Eric Anderson, Committee Chairperson, Health Services Faculty
Dr. Anna Valdez, Committee Member, Health Services Faculty
Dr. Geri Schmotzer, University Reviewer, Health Services Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2015

Abstract

Building Resiliency and Coping Effectiveness (BRACE): A Program for Military Families

by

Linda Zarrett

MSN, University of Cincinnati, 2012

BSN, Minnesota State University, Moorhead, 1985

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2015

Abstract

Veterans returning from combat report significant family strain and Post Traumatic Stress Symptoms (PTSS) yet have limited access to care resources. Family members, including children, report very similar symptoms to those of veterans and have yet fewer health care resources. The purpose of this project was to apply principles from existing research on post-traumatic stress and secondary trauma to providers as the basis for a curriculum for families of combat veterans with PTSS. The health beliefs model and Orem's self-care deficit theory were used to guide development of this curriculum. Long-term goals of this initiative are increased resiliency in families of combat veterans with PTSS, decreased family conflict, diminished incidence of secondary trauma in children, and reduced productivity losses and education losses in this population. The project was designed as the first stage of a long-term quality improvement initiative. Products of the project include a curriculum and plans for implementing and evaluating the curriculum. Products were developed in collaborative meetings with stakeholders, including the grant administrator, a social services representative, a military member, and a military family member. The curriculum was reviewed for content validity by sending sections to nurse scholars with relevant context expertise, after which revisions were made in accordance with feedback. Implementation and evaluation plans suggest use of a web-based program hosted by the Minnesota Association of Children's Mental Health. Increasing resources for combat veterans and their families has important implications for positive social change. This project may also address the reluctance of this population to engage in treatment by applying principles of military culture and concern for confidentiality, and may aid cost reduction through prevention of complications of secondary trauma.

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Dedication

This project is dedicated to my nephew, Luke Tillema, who served in Operation Iraqi Freedom, and was injured in combat. Also, to his wife, Marie Tillema, who supported him and helped him return to civilian life after serving in the military. Your family is a true inspiration and it is with great appreciation for your service to our country and your grace in dealing with the challenges of returning to civilian life that helped give inspiration for this program.

Acknowledgments

I would like to thank my family, especially my daughter, Diana, for her patient help with many household things, including caring for the pets, and numerous other things she has helped with around the house so that I could have the time to finish this project. Also, I am thankful for the many grammar lessons and reviews of drafts to help to refine this paper. It helps to have an English teacher in the family. My son, Dave, has shared his technological expertise, and he has also helped with various things that freed up time for me to complete this project.

In addition, I would like to thank my coworkers for listening to me and showing patience as I worked on this project and also for helping in the many ways they have. The faculty and my mentor, Dr. Stoerm Anderson, and Dr. Anna Valdez have also been very supportive.

I would also like to add a special thank you to one of my classmates, Nancy Stock, who has not only been very encouraging with words, but has helped with formatting problems that arose in drafting this proposal.

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Section 1: Nature of the Project

Introduction

This project involved developing a curriculum that includes resiliency-building skills for military families. I developed this project as a web-based program that is set in six modules. Each module can be taken in sequence or independently. I envisioned the project would have positive social change by helping a target population, military families, develop the necessary resiliency skills to better cope with living with a traumatized veteran. The project also supported social change for children by assisting parents to cope better, which, in turn, will help them parent more effectively and reduce stress and trauma to children in their families. The results intended were increased productivity, fewer visits to primary care, a higher quality of life, and reduced to cost to the health care system. The project involved curriculum development with stakeholders. Once the curriculum was once complete and approved, it was placed in a web-based format to reach unlimited participants, making it cost effective, easy to use, and freely available, and it was grant funded. The curriculum was developed using two theoretical models: the Health Beliefs Model (HBM) and Orem's self-care deficit theory

Background

More than 75% of the veterans who have returned from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) report significant conflict in the relationships with their spouses and family members (Cukor, Olden, Lee, & Difede, 2010). Often the trauma of having served in combat leaves the veteran with Post-traumatic Stress Symptoms (PTSS), or Post Traumatic Stress Disorder (PTSD). (These terms will be used interchangeably throughout the paper.) PTSD and PTSS include nightmares, flashbacks, depression, anxiety, misuse of chemicals, and often brain injuries (Cukor et al., 2010). These symptoms take a toll on the veteran, but they also affect the veteran's family who is often unprepared to deal with the realities of the returning veteran who has suffered severe psychologi-cal trauma (Cukor et al., 2010). At the same time, resources are few when it

comes to helping these families with evidence-based treatments for the stress and secondary trauma that they must suffer ("When S*** Rolls Downhill," n.d.).

Veterans who have returned with physical and emotional trauma have been recognized in the Healthy People 2020 initiative (2014). Healthy People 2020 aims to increase the availability and effectiveness of community-based preventive programs to enhance the quality of life for this population. Although not specifically identified, this goal should extend to families who live with veterans, as family members, too, are at risk for mental health problems such as compassion fatigue or secondary trauma (Ahmadi, Azampoor-Afshar, Karami, & Mokhtari, 2011). Unfortunately, very few specific resources exist for the family members living with veterans who suffer from PTSD ("When S*** Rolls Downhill," n.d.). Family members end up becoming the caregivers of the veteran, becoming hypervigilant in protecting the veteran from anything that might set them off (Ahmadi et al., 2011). Family members also end up carrying the entire load of household responsibilities (Ahmadi et al., 2011). All of these issues are difficult for family members, who become so stressed they develop secondary trauma from living with the veteran ("When S*** Rolls Downhill," n.d.).

Family members are often unprepared to deal with the psychological diagnosis of their loved one and the stigma, employment, and financial problems that are associated with it, and frequently they do not seek help from the community at large (O'Donnell, Begg, Lipson, & Elvander, 2011). In addition, although many in the public want to help veterans, they often know little about how to do it or about the human cost of deployment (Cozza, Haskins, & Lerner, 2013).

Although military families are resilient, secondary trauma can present significant challenges for them (Cozza, Haskins, & Lerner, 2013). Deployment of a family member, often a parent, to a combat zone leads to disruption to family routines, parental conflict, worry, and distress, which in turn increase the level of emotional and behavioral problems among the veteran's children (Cozza et al., 2013). A strong relationship exists between the mental health of the parents and the level of

adaptation among their children (Cozza et al., 2013). Further, stress and mental health problems lead to a greater likelihood of child maltreatment when a parent is deployed (Cozza et al., 2013). All of these factors create a great need for preventive programs. Presently, however, the only evidence-based programs for secondary trauma are targeted at professionals and first responders (O'Donnell, Begg, Lipson, & Elvander, 2011).

The target population for this project was the families of military veterans who experienced PTSD or combat trauma. The project involved the development of a curriculum that sought to educate participants on the issue of compassion fatigue and give some coping skills to the adult family members. It also included information about developing peer support, as well as videos with specific techniques to practice.

Problem Statement

Military family members support and live with veterans who have been in combat and have a PTSD diagnosis, yet no programs are community based and specific for this problem (O'Donnell, Begg, Lipson, & Elvander, 2011). The result is unnecessary family tension and conflict, which are preventable. (Cozza, Haskins, & Lerner, 2013).

Robust information is lacking with regard to how the children in these families cope with living in a family with a member who has PTSD (Chandra & London, 2013). This lack of information leaves practitioners with few evidence-based resources designed to intervene with the resultant problems (O'Donnell et al., 2011). Children living under stress can have problems in school and also in family relationships, and these problems can go undiagnosed or be misdiagnosed (Cozza et al., 2013). Stress can lead to long-term consequences for these children and society (Chandra & London, 2013). This project seeks to help children by building resiliency skills among parents, thereby allowing them to function better as parents.

Spouses and other family members who have combat veterans living with them also suffer from similar symptoms to the veteran ("When S*** Rolls Downhill," n.d.). Although studies and

research deal with secondary trauma for first responders and health care professionals, little evidence-based information exists to help the family members cope with aftermath of combat, who frequently feel like the person who left for war is not the same person who returns (O'Donnell et al., 2011). This can leave family members feeling isolated and alone to deal with the intense symptoms that result ("When S*** Rolls Downhill," n.d.).

In addition, a complicating factor in helping both the veteran with PTSD and the family members with secondary trauma is the military culture, which can present some unforeseen barriers to treatment. One such barrier is the stigma of having a mental health problem in a military context (Greene-Shortridge, Britt, & Castro, 2007). In addition to stigma, veterans have complicating problems that may prevent them from seeking help, such a lack of true confidentiality due to military rules and regulations, which specify that medical confidentiality is secondary to anything that may be considered a "medical necessity" (Engel, 2014). Lack of confidentiality hampers incentive to seek care, especially because of fears related to negative consequences of a mental health diagnosis (Townsend, 2014).

Some components of military culture may be difficult for civilians to understand, which complicates rendering meaningful help in a civilian setting. Some of these components include military rank structure, accepting services from a civilian, and the veteran's ability to transition from military society to civilian society (Hall, 2011). It is common for civilian providers to find themselves in the position of offering help yet finding it difficult to get troubled military members and their families into the clinic setting due to some of these barriers. Therefore, modifications to the existing treatments for secondary trauma in the context of first responders and health providers needed to be made to attract and keep this population engaged in the program (Lange, 2001). Education-based programs that emphasize prevention and building on the resiliency that is already present in this population offer a starting point ("When S*** Rolls Downhill," n.d.).

In summary, the problem that exists is the lack of evidence based programs that address trauma and secondary trauma in a civilian setting for military families with a returning combat veteran with PTSD. Any program that seeks to help this population must take the stigma and lack of confidentiality into account for the program to be successful. Preventive and education-based programs offer a starting point. While the family members desire this type of help, programs that address these issues should be mindful of the military culture to accomplish their goals. This project involved development of a curriculum for parents that was based on existing research in professional programs that address these problems.

Purpose Statement

The purpose of the proposed project was to develop a curriculum that will help to build resiliency in family members of combat veterans in effort to support them better and reduce lost work, ineffective parenting, and family conflict. Current literature regarding resiliency for secondary trauma in professionals was used as a baseline for transformation into a similar program for military families. No literature was identified that addressed community based resiliency building and secondary trauma for military families.

This curriculum will be executed after graduation and has been designed to be an educational and preventive program that will focus on building skills and understanding the stress response. The curriculum educates the veteran and family members about the nature of physical and psychological symptoms that occur when a soldier has experienced severe trauma from living in a life and death situation regularly in combat. Additionally, skills to deal with these symptoms will be taught with emphasis on skills that have been found helpful in the evidence, and also to reduce the negative symptoms and impact of living with a combat veteran with PTSD. By educating and building resiliency skills, preventing the need for more expensive care (e.g., hospitalization), lost time from work or school, and severe family conflict will be minimized, thus both improving the quality of life

for veterans' families and saving the costly treatments that occur when symptoms are not addressed early.

Program Goals and Objectives

This project focused on development of a curriculum that would center on education for prevention and minimization of symptoms that occur as a result of trauma and living with and caring for a military person who has experienced PTSD from combat. Education in the actual program will take place in six modules in one webinar, which can be stopped and then restarted at the convenience of the participant, and includes signs of trauma, and how it effects families, parenting changes and interventions under stress, crisis de-escalation and intervention for family members to reduce the conflict level in the home, yoga for stress reduction, and parent training information so that family members can learn how to develop peer support groups to help minimize the effects of trauma and secondary trauma. In so doing, the goal of the curricula was to develop modules that would help participants to build resiliency skills thereby preventing the more debilitating problems that can occur with secondary trauma. I developed implementation and evaluation plans, which are attached as Appendix B and C. Effectiveness could be measured by administration of a Short Form Quality of Life Questionnaire, which can address subjective report of hopefulness, coping ability, reduced conflict in relationships, and reduced lost work or school time. This can be embedded into the beginning of the webinar and one will be at the conclusion of the webinar, once the actual program is put into effect. The evaluation plan envisions a request for email follow up in 6 months after the program has been viewed and then again in 12 months in order to evaluate the effectiveness of the program. This is voluntary and will not be required in order to take the program. An anonymous evaluation tool will result in more comfort in candid responses. All of this will be completed after graduation from the Walden DNP program.

Guiding Practice and Research Questions

Having a theory to guide the development of the program help gave a better focus and guided the process better, thereby making it more effective (McEwin & Wills, 2011). For this project (developing the curricula), the primary theoretical basis was the Health Beliefs Model (HBM). The HBM has been used to help better understand and explain health related behaviors (Randolph, Fincham, & Radey, 2009). The four constructs of the HBM are perceived susceptibility to the problem, perceived severity of the problem, perceived benefits of the intervention, and perceived barriers to accomplishing the change addressed in the intervention.

The HBM was helpful in this population because it focuses on prevention. Military families are very resilient with the ability to self-regulate to meet the needs of most environmental challenges (Cozza et al., 2013). Building on the resiliency factors that are already present while addressing the perceived susceptibility and severity of the problem provides a sense of hope and better supports this population.

Orem's self-care deficit theory was also used (McEwin & Wills, 2011). Military personnel pride themselves in their self-sufficiency (Cozza et al., 2013). By addressing the needs of the military population in terms of strengthening their ability to cope and providing them with tools to maintain this self-sufficiency, the curriculum strives to be culturally appropriate. Orem's theory focuses on helping people to care for themselves (Seed & Torkelson, 2012). This theory is one that fits well with the military population as it builds on their self-sufficiency.

Significance of the Project

Veterans who have returned with physical and emotional trauma have been recognized in Healthy People 2020 initiative (2014). The goal in Healthy People 2020 initiative is to increase availability and effectiveness of community-based programs that are preventive in nature to enhance the quality of life for this population. Veterans' families also need to be supported as they often develop symptoms similar to those of the veteran (Ahmadi et al., 2011).

Reduction of gaps

The literature contains numerous studies about the effects of secondary trauma as relates to health care professionals and first responders, however, little is found regarding lay people and those who live with a combat veteran with PTSD (Herzog, Everson, & Whitworth, 2011). Additionally, military families have unique aspects or cultural features in their population that needed to be considered when developing the curriculum (Lange, 2001). By employing the use of a web-based program that uses a systematic approach leading to the health status of military families, this project will serve as a quality improvement program (U.S. Department of Health and Human Services Health Resources and Services Administration [HRSA], 2011).

ii. Implications for social change

The implications for social change include a number of factors. First, by addressing culturally specific needs of military families, a preventive education-based program can serve as a model for similar programs that will meet the needs of military families. Second, by addressing those people outside of healthcare professionals, the door is opened for recognition that secondary trauma exists in the general population. This promotes the premise that people's lives can be enhanced, and health care costs and complications can be minimized by addressing them at the preventive level.

iii. Policy Advancement

Recently Congress has passed, and the President has signed into law the Clay Hunt SAVact that seeks to reduce veteran suicide in part by developing community based peer support programs that would help military members cope with the aftermath of war. This project advances this policy by offering a curriculum for certification for parent peer support based on a national curriculum through the National Federation of Families. Family members can take this course and become certified peer support persons who can lead peer support groups.

iv. Contribution to Nursing Practice

The student has been one of the leaders in drafting the curriculum. The student did the research, presented it to the stakeholders, and made suggested modifications based on the recommendations of stakeholders. . The curriculum was drafted using nursing theory, specifically Orem's Self Care Deficit Theory, thus contributing to nursing practice.

Members of the military and their families have sacrificed greatly, giving the ultimate: their lives for the freedoms that we as a society enjoy. This program sought to give back a little to them in effort to better their lives post-deployment and help them to maintain the dignity and respect they deserve. Lastly, by developing a program geared at educating and preventing complications of secondary trauma, the stigma of mental illness can be reduced. Military families can serve as leaders in this effort.

Definition of Terms

Compassion fatigue is another word for secondary trauma and can be used interchangeably.

Posttraumatic Stress Symptoms (*PSS*) are those symptoms that result from having been exposed to either a life-threatening event or a terrifying experience, and include nightmares, flashbacks, avoiding things that remind the person of the trauma, unwanted memories that the person cannot forget despite trying to do so, angry outbursts, feeling of numbness.

Resilience is the ability of an individual to return to a mentally healthy state after having experienced a negative life event, in this case, combat experiences, including loss of fellow soldiers, bombs, witnessing or participating in killing another human being, and near death experiences of being exposed to life threatening situations in combat.

Secondary Trauma Symptoms are those symptoms that result from living with or having a close relationship with someone who is experiencing PTSD. The symptoms are very similar to those of the individual who has PTSD.

Stigma includes a number of beliefs that one has that are not based in fact, but rather on unfair and untrue information about mental illness.

Vicarious trauma is also another word that can be used interchangeably with secondary trauma.

Assumptions and Limitations

This project has several assumptions that include:

1. Although exposed to severely traumatic events and exposure to life threatening experiences, military members and their families have the capacity to develop resiliency skills that help them to adjust to the trauma of having been in combat.
2. The BRACE program can help this population to build on the resiliency skills that they already have in order to return to positive mental health.
3. The BRACE program, while funded through a grant, has the potential to train family members to provide support to other families in need and in so doing, can become self-sustaining based on evidence based principles.

Limitations, or things that decrease the ability of this project to be useful to other settings, include:

1. This program will be funded by a grant, and without the financial support, may not be feasible for any other purposes.
2. The pilot program will most likely involve a small rural community, and the details may not apply in the same way to a metropolitan community.
3. Although parent-to-parent support will be discussed with options for additional training, these support programs will not have the same educational features of this program, nor will they have the financial and professional resources that will be the hallmark of this program.
4. Author has a nephew who was an active military member in Iraq, but he lives in another state, and thus there has been no direct contact with him or his family throughout the development of the curriculum. No other biases exist.

Summary

In this section, I defined relevant terms and I provided an overview of the problem of secondary trauma in families of combat veterans with PTSD. The evidence was obtained from information about secondary trauma programs that have been developed for health care professionals, first responders, and

mental health professionals, as to date, little information or theory exists to support the family members of this population or other non-professional people. Goals of the project and curriculum along with the theoretical basis were identified along with a discussion of the significance of the project and implications for social change. Although it is hoped that this curriculum can serve as a model for additional programs, the program relies on grant money, and thus financial considerations for other programs will need to be considered if this is to occur.

Section 2: Review of Literature and Theoretical and Conceptual Framework

Introduction

Although many veterans return from combat with PTSD, family members have symptoms of secondary trauma that can go unnoticed. This project has targeted the family members of these combat veterans. I searched and reviewed the literature to determine best practices for treatment of secondary trauma, including present strategies that are in effect for first responders, health care professionals, and therapists. I identified several treatment strategies in the literature to form the basis of the curriculum, including neurobiology of trauma and stress, parenting changes post-deployment, crisis intervention and de-escalation, yoga, mindfulness, tapping, and development of peer support groups for ongoing resilience.

Treating the military population required knowledge about the military culture to create a relevant program, with special attention to cultural factors that could potentially create a barrier to treatment. This proposal addressed the state of the evidence for treating secondary trauma, similar programs that have been successful, the military culture and the potential barriers to treatment, and a theoretical basis for the program. This project is grant funded and a student worked on it to reduce costs.

Literature Search Strategy

I conducted the literature search using CINAHL, Medline, ProQuest, PubMed, and Ovid, and I prioritized publications from the last 5 years. To find articles relating to the military culture, I used Google to locate general information. I preferred articles that relate to OIF and OEF, with occasional articles older than 5 years if they had significant information about the nature of symptoms, the effect on children, or the military culture. Search terms I used included *secondary trauma*, *PTSD*, *military*, *veteran*, *military culture*, *resiliency*, *compassion fatigue*, and *vicarious trauma*.

Little research exists regarding this specific population, although numerous articles have addressed in the context of secondary trauma in professionals. I used those articles as the basis for

the program, but I also used articles specific to the military culture and I modified the materials available for professionals to meet the needs of the military family population.

Background and Context

When a veteran returns from combat with PTSD, family members who are close to him or her are vulnerable to developing the symptoms of traumatic stress in themselves (Ahmadi et al., 2011). This is known as secondary trauma, vicarious trauma, or compassion fatigue (Ahmadi et al., 2011). Family members live with the aftermath of combat, including the veteran's sleeplessness, dreams, forgetfulness, and flashbacks (Ahmadi et al., 2011). This takes its toll and can lead to chronic stress, depression, anxiety, and marital conflicts (Ahmadi et al., 2011). These are the same problems that the veteran has and they can develop as the result of having empathy with the veteran's PTSD (Ahmadi et al., 2011).

The intrusive thoughts and avoidance associated with PTSD in the veteran are difficult for the family members (Herzog et al., 2011). The result is that families become conflict oriented and rigid (Herzog et al., 2011). Some family members describe feeling they are always "walking on eggshells" and feel they no longer recognize the person suffering (Herzog et al., 2011). Because of the constant stress and strain, they begin to experience symptoms much like the veteran, even though they have not experienced combat themselves (Ahmadi et al., 2011). This set of symptoms is sometimes called secondary trauma, compassion fatigue, or vicarious trauma (Ahmadi et al., 2011). To understand the treatments, it is important to first know some of the physiologic changes that occur in trauma and stress.

Theoretical Framework

Health Beliefs Model

The Health Beliefs Model (HBM) was initiated in the 1950s and suggests that health is seen within a social context (McEwin & Wills, 2011). One of the premises of this model is that when people have reliable information, they are better able to make better decisions about their health

choices (McEwin & Wills, 2011). There are four basic constructs of this model (McEwin & Wills, 2011). First is the perceived severity of the problem (McEwin & Wills, 2011). The more serious the perceived threat, the more likely the individual is to engage in the recommended treatment (McEwin & Wills, 2011). Second is perceived susceptibility, or how likely the individual believes he or she is likely to get the illness or problem (McEwin & Wills, 2011). Third are perceived benefits of the intervention (McEwin & Wills, 2011). Finally, there are also perceived barriers to the intervention (McEwin & Wills, 2011). Benefits must outweigh the barriers for the individual to follow through with the program (McEwin & Wills, 2011).

The last two constructs are particularly important when considering the military population and military culture. Veterans may believe that the barrier of stigma outweighs any benefit of the therapy (Vogt, 2011). Self-stigma, or the veteran's internalization about negative beliefs about mental illness may complicate his or her willingness to seek care (Vogt, 2011). Self-sufficiency and honor, part of the culture of the military, may confound a veteran's ability to accept that they need help if getting help conflicts with these qualities (Hall, 2011). Therefore, framing interventions requires careful consideration, and building on resiliency and recognizing "distress" instead of "illness" may help bridge this barrier to treatment (Cozza et al., 2013).

Orem's Self-Care Deficit Theory

Orem's theory involves the assumption that people should be able to care for themselves (self-care) but at times will need the assistance of nursing to meet their needs (self-care deficit) (McEwin & Wills, 2011). There are five methods of helping the individual including doing for others, guiding, supporting, educating, and providing an environment that promotes development (McEwin & Wills, 2011). These are the nursing interventions that occur to help the individual restore the ability to care for themselves to the extent possible (McEwin & Wills, 2011). In psychiatry, self-care is often the end goal, and recovery from psychiatric illness will depend on the individual learning skills that allow them to return to a state of self-care (Seed & Torkelson, 2012).

In the military population, this theory seems to capture the essence of the need of veterans and families to maintain and improve self-sufficiency skills (Hall, 2011). Building on resiliency skills, identifying strengths, and education and prevention fit with the culture of this population. A program that supports, educates, guides, and provides an environment that allows for growth allows the veteran and their family to maintain the sense of self-sufficiency and honor, thus merging with their cultural needs (Hall, 2011). Incorporating the two theories was the foundation for the curriculum of the program.

Neurobiology of Trauma and Stress

Rasmussen and Bliss (2014) note that little attention has been paid to learning the negative impact of stress and trauma on the neurologic system. They further note that trauma has a direct impact on the brain function, and the first responder for traumatic experiences is the amygdala (Rasmussen & Bliss, 2014). Charney and Nestler (2005) describe the nature and function of the amygdala, which they describe as an almond shaped group of neurons in the temporal lobe of the brain that mediates conditioned and unconditioned fear. This group of neurons projects information to the other amygdala nuclei and other nuclei in the brain and forms a neural network of activity (Charney & Nestler, 2005). Information comes to this part of the brain through the other amygdala nuclei, the hippocampus, the thalamus, and the cerebral cortex, and it then mediates memory and reflex responses to make up the activity we know as emotional processing (Charney & Nestler, 2005).

Another part of the amygdala, the bed nuclei of the stria terminalis (BNST), projects impulses to the hypothalamus and brain stem, which then prompts a chain of actions that follow (Charney & Nestler, 2005). The hypothalamus and brain stem mediate the muscular actions that help to categorize emotional processing (Charney & Nestler, 2005). The hypothalamus, once activated, triggers the sympathetic part of the autonomic nervous system (Charney & Nestler, 2005). This

starts a neuro-endocrine reaction that will increase the heart rate, blood pressure, and defensive reactions (Charney & Nestler, 2005).

Another part of the brain that is influenced by the hypothalamus is the limbic system, or the system that includes the hypothalamus, amygdala, hippocampus, and cortex, among other structures (Rasmussen & Bliss, 2014). The limbic system allows for a bypass of the thought processes in the cortex to allow for emergency responses (Rasmussen & Bliss, 2014). Rational responses to the stressor become less likely (Rasmussen & Bliss, 2014). Other responses that are common with limbic arousal are hyperarousal, irritability, anger, and avoidance (Rasmussen & Bliss, 2014).

Rasmussen and Bliss (2014) note one additional area of the brain associated with trauma responses: the hippocampus. This area is important in memory and information processing, and as noted by the authors, is influenced by two stress hormones: norepinephrine and cortisol (Rasmussen & Bliss, 2014). Norepinephrine is described as the shorter-acting hormone that makes memories seem much more intense (Rasmussen & Bliss, 2014). The authors note that too much of it leads to improper functioning of the hippocampus, leading to inaccurate evaluation and improper storage of the memories (Rasmussen & Bliss, 2014). These memories become stored as body sensations and visual images in the form of nightmares and flashbacks (Rasmussen & Bliss, 2014).

A major “stress regulator” in the body is the Hypothalamus-Pituitary-Adrenal Axis (HPA) (Rasmussen & Bliss, 2014). This is described by Smith and Vale (2006). In the hypothalamus, there are neurons in part of the Paraventricular Nucleas (PVN) that secrete the main regulator of the HPA: the corticotropin-releasing factor (CRF) (Smith & Vale, 2006). CRF then stimulates the release of adrenocortictropic hormone (ACTH) from the Pituitary Gland (Rasmussen & Bliss, 2014). The Pituitary Gland then stimulates the Adrenal Gland to release Cortisol, a glucocorticorticoid that helps to regulate metabolic, cardiovascular, immune, and behavioral responses (Rasmussen & Bliss, 2014). This is one of the major regulating factors of the HPA axis, which works through a negative feedback system (Smith & Vale, 2006).

While some cortisol is protective, Rasmussen and Bliss (2014) note that too much cortisol can lead to the nervous system becoming sensitized to threatening events. This lead then leads to kindling, or a more intense and quicker response to the perceived threat (Rasmussen & Bliss, 2014). While increases in cortisol may improve the emotional relationship of memories, it can also lead to an over-generalization of negative experiences (even in non-threatening situations) (Rasmussen & Bliss, 2014). This causes changes in the cognitive schema (how we perceive ourselves, others and the world) (Rasmussen & Bliss, 2014). Also, too much cortisol activity can result in suppression of cortisol which can lead to dissociation and numbing of responses that keep the stressful event out of conscious awareness (Rasmussen & Bliss, 2014). Without conscious access, negative events are not processed correctly, and this can result in intrusive thoughts or mental pictures (Rasmussen & Bliss, 2014).

It is important to understand the connection between Primary Trauma and Secondary trauma. Rasmussen and Bliss (2014) describe Primary Trauma as witnessing or experiencing the actual event that is life threatening or horrifying. Secondary Trauma is what happens when an individual is empathetically engaged with a trauma victim and their experience (Rasmussen & Bliss, 2014). This can include witnessing events or their re-enactment, cognitive empathy (understanding the meaning of the experience of the victim), and affective empathy (actually feeling the pain of the other person) (Rasmussen & Bliss, 2014). While previously unidentified, the Diagnostic Statistic Manual, fifth edition (DSM-V) has now added criteria that allows for trauma to be either direct or through the experience of stories of traumatic events, and accordingly adds secondary trauma (American Psychiatric Association [APA], 2013).

An example of Secondary Trauma given by Rasmussen and Bliss (2014) is when someone listens to the story of a trauma victim, he or she imagines what that experience was like. The caretaker becomes empathetically engaged with the trauma story, the same neuro-biological processes are activated in the caretaker that are present in the trauma victim (Rasmussen & Bliss,

2014). The ability to understand the thoughts, emotions, and sensations of others by stimulating them in ourselves is known as the Mirror Neuron System (Iacoboni, 2009). With this, the part of our brain that is activated by our own emotions becomes active when we see another person feeling the same sensation or emotion (Iocoboni, 2009). Therefore, the symptoms of secondary trauma are the same as those of the person who experienced the initial trauma (APA, 2013).

Background and Context

This project involved translation of the research involving secondary trauma in professionals into a curriculum for military families. The intended population was the military families of veterans who returned and had developed PTSD. The project was grant funded and involved development of the curriculum through an inter-disciplinary collaborative effort including the student, the grant administrator, members of the military and key family members identified through Beyond the Yellow Ribbon support groups in Minnesota. The project of curriculum development took place through the Minnesota Association of Children's Mental Health, which is a non-profit organization that supports education and advocacy for families with children with mental health problems. This project fit well within their framework as it sought to build parental resiliency, thus supporting caregivers of children in these families and preventing mental health problems in their children.

State and Federal Contexts

In July of 2014, legislation was introduced to help reduce the number of suicides in the returning veteran population (Clay Hunt SAV, 2015). This legislation envisioned the development of community peer support, certified through national level programs that could address veteran support at the community level. The curriculum includes a portion in the final week that allows for overview of the curriculum used at the Minnesota Association of Children's Mental Health for developing and certification of parents as peer support leaders in their communities based on the model used in the National Federation of Families (2014). Therefore, this project is consistent with both state and federal needs and vision.

Role of the Student

The student was the project leader. The student has no direct connection with the topic. The topic was determined based on grant availability through the Minnesota Association of Children's Mental Health. The student has a nephew who was a military member and served in Iraq, but has not had any direct contact with him as he lives in another state. The project involved development of a curriculum for military families, and thus no data was collected during the course of preparation of the curriculum.

Review of the Literature

Although many resources are available for returning veterans facing the aftermath of trauma, and there are resources for families during the deployment period, as previously mentioned, there are very few specific resources exist for the family members living with veterans who suffer with PTSD (When S*** Rolls Downhill, n.d.). These family members often end up becoming the caregivers of the veteran, becoming hyper-vigilant in protecting the veteran from anything that might set them off ("When S*** Rolls Downhill," n.d.). Family members also end up carrying the entire load of household responsibilities, but seldom get much in the way of support or help from the veteran (Cozza, Haskins, & Lerner, 2013). In fact, most often these family members are screamed at and berated by the person they are helping (Cozza et al., 2013). All of this takes its toll on family members, who become so stressed they develop secondary trauma from living with the vet (Cozza et al., 2013).

More than 75% of the veterans who have returned from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) report significant conflict in the relationships with their spouses and family members (Cukor, Olden, Lee, & Difede, 2010). Yet many of the things that are strengths for soldiers on the battlefield can be challenges for them when dealing with the aftermath of being in a state of constant alert and in fear of death (Cukor, Olden, Lee, & Difede, 2010). Some of these

difficulties come from the training and life realities of military life, herein referred to as the military culture (Engel, 2014).

Military Culture

All of us experience the world from the perspective of culture (Hall, 2011). Some of the things that influence or make up culture are language, behavior codes, what is considered to be behavioral norms, our belief systems, how we dress, and various rituals that may be followed (Hall, 2011). In order to competently care for someone, we need to be aware of our own behavior, values, and biases, and know our own limitations (Hall, 2011). We must also seek to understand the worldview of others without judging them, as well as develop strategies or ways of dealing with people whose cultures differ from our own (Hall, 2011). Being in the military involves all of the aspects of culture, so it is essential to understand the differences in order to make a treatment relevant and appealing to the military family (Hall, 2011).

People join the military for a number of reasons. Some of these include having had a family member or members in the military, the benefits that one receives from being in the military, identifying with being a warrior, or as an escape (Hall, 2011). Military families have some commonalities that constitute their culture (Hall, 2011). Due to the nature of the position, there are separations and reunions of family members, frequent moves and relocations, and disconnection from mainstream civilian life (Hall, 2011). In the military, the mission is first and families are expected to adjust to the rigid and regimented lifestyle and conform (Hall, 2011). Although the military system offers some security, which helps meet the needs of the family, there is a lack of control over their pay, promotions, and benefits (Hall, 2011). There is also the effect of rank, as the military culture is hierarchical in nature (Hall, 2011). No other cultural group has to deal with as many of these factors as the military (Hall, 2011).

Military structure is authoritarian in nature (Hall, 2011). There are clear rules and very little room for variance from them (Hall, 2011). Questioning authority is frowned upon (Hall, 2011). This

can create problems in family life, especially as children enter the teen years and seek to become individuals (Hall, 2011). This can create a rebellion against the rigid lifestyle as teens may become involved with civilian teens, who do not have the stringent environment at home that military teens endure (Hall, 2011).

Frequent moves leads to isolation and alienation (Hall, 2011). Sometimes the children will enter civilian schools; however, they are still quite aware of the fact that they are different (Hall, 2011). Because of the constant relocation, there may be a reluctance to develop close friendships, knowing that they will move, there is a reluctance to be vulnerable (Hall, 2011). In addition to this, the class system is one of rank, and it is based on dominance and submission (Hall, 2011). Rank perpetuates isolation, as officers are not supposed to be friendly with non-commissioned officers, so even within the military population there may be little support, especially when looking at crossing rank (Hall, 2011).

All of these things add dimension to the understanding of what types of things will be feasible for this population. Without these considerations, a program is likely to either fail or be minimally effective. One frequent problem that therapists encounter with the military families is a sense of distrust of mental health professionals as well as the strong sense of self-sufficiency (Hall, 2011). While this serves the soldier or warrior well, it becomes a barrier in that the military members and families are reluctant to seek help, particularly from civilians (Hall, 2011). Accordingly, having a military member or liaison serve as a consultant to help tailor the program to meet the needs of this culture is an important factor in program success (Hodges & Videto, 2011).

Treatment for Compassion Fatigue in the Context of the Military Culture

Secondary Trauma Syndrome, or STS, is similar in effect to PTSD (Ahmadi et al., 2010). Because of this, many of the therapies that reduce anxiety and depression are helpful (Herzog et al., 2010). Some of these include trauma focused cognitive behavioral therapy (TF-CBT), play therapy

for young children, and family empowerment models (Cukor et al., 2010). There is a need to have more studies with this population (Cukor et al., 2010).

Operation BRAVE families (OBF) is a program that was developed by the child and adolescent psychiatry department of the Walter Reed National Military Medical Center (Smith, Chun, Michael, & Schneider, 2013). This is a preventive outreach program builds on resiliency and empowerment of the military family (Smith et al., 2013). The staff partners with the family to determine its needs engage the family in the process, and remains connected with the family to serve as a support (Smith et al., 2013). This program emphasizes learning the needs of the individual family and structuring the interventions accordingly (Smith et al., 2013). It is designed for preclinical engagement to prevent many of the problems that stress the family (Smith et al., 2013).

Families are identified as a wounded soldier is being transferred to the hospital (Smith et al., 2013). The staff of OBF makes arrangements to meet the family and the wounded soldier in order to do the assessment (Smith et al., 2013). From there, the concerns are identified, and a plan is developed (Smith et al., 2013). The case study within the report of OBF notes that one intervention in the beginning involved having a social worker meet with the family to help share information to a 3 year old child about the injuries in an age appropriate manner without giving too much information (Smith et al., 2013). Additionally, early identification of support for the family is part of the program, and routes the family members to sources of support early in the process and thereby builds on preventive factors (Smith et al., 2013).

O’Donnell et al. (2011) identified the need for programs that support education, treatment, and resiliency programs for military families to prevent psychological symptoms or minimize them. Children and families often become indirect victims of combat stress with a direct correlation between the number of months a soldier is deployed and the level of depression that exists in family members (O’Donnell, Begg, Lipson, & Elvander, 2011). Some of the recommended interventions include exercise programs, psycho-education, and play based strategies for communicating

information to young children (O'Donnell et al., 2011). These strategies can be used to structure a program that meets the needs of this population.

The need to emphasize prevention and draw on the resiliency factors as a system of care is a resounding theme of the type of interventions that fit well with the military population (Cozza et al., 2013). While military families are generally very resilient, with the ability to self-regulate, combat veterans are at great risk of developing mental health problems, they do not relate well to an "illness model" (Cozza et al., 2013). Therefore, framing problems as "distress" instead of "mental illness" is a critical part of reaching this population.

Neurological basis for psychopharmacology as a protective factor in trauma and stress

According to Melvin (2015), prolonged stress often is comorbid with depression. Tamasi et al. (2014) note that for some time depression has been linked to a depletion of two of the brain's neurotransmitters: serotonin and noradrenaline. The authors go on to say that more recently, this has been found to be only part of the problem, and the changes that can occur with the brain are actually much more complicated (Tamasi et al., 2014). Grey matter volume changes also occur in the brain with depression, as does neuronal organization (Tamasi et al., 2014). There have also been changes in electrophysiology in the brain as well as changes in the receptor pharmacology that are impaired (Tamasi et al., 2014). These changes represent the basis for pharmacologic treatment in some cases of trauma and secondary trauma (Tamasi et al., 2014).

Tamasi et al. (2014) describe a study that outlines the effect of pharmacologic therapy on the neurological system. This study used the Serotonin Norepinephrine Reuptake Inhibitor (SNRI) Venlafaxine (Tamasi et al., 2014). Some of the findings suggest reasons to be hopeful in the development of new synapses in the brain, which ultimately leads to better availability of the neurotransmitters, Serotonin and Norepinephrine (Tamasi et al., 2014). When Venlafaxine was used, researchers found a gradual adaptation to enhanced monoaminergic neurotransmission (Tamasi et al., 2014). Eventually, this led to the development of new connections as well as better neuroplasticity

(ability of the brain to develop new pathways as the result of medication, behavior changes, and emotions) (Tamasi et al., 2014). The synaptogenesis (new synapse formation) that is often not seen in major depression may be reversible with long-term antidepressant treatment, according to the findings of this study (Tamasi et al., 2014). Antidepressants have also been found to protect against a diminishing hippocampus, often seen in depression (Epp, Beasley, & Galea, 2013).

As to other physical symptoms of PTSD, there are pharmacotherapies that help with symptom control, such as prazosin for nightmares, and sertraline for anxiety and depression (Cukor et al., 2010). Keller (2012) discussed using prazosin for treating nightmares. In patients with PTSD, there is an increase in the level of norepinephrine in cerebral spinal fluid (Keller, 2012). This leads to increased PTSD symptoms, which then increases the central nervous system noradrenergic state (Keller, 2012). The result is a disruption in REM sleep which leads to nightmares (Keller, 2012). Prazosin is a liquid soluble a1-adrenergic receptor antagonist that crosses the blood brain barrier (Keller, 2012). There it reduces the sympathetic outflow in the brain (Keller, 2012). Managing nightmares can help those who struggle with PTSD or STS calm some of the sympathetic nervous system activation.

Parenting in Post trauma Military Family Life

The ADAPT program is based out of the University of Minnesota and is a joint project with the Reserve Units and National Guard units of the military (“ADAPT,” 2015). This project looks at parent resources for military families where one of the parents has been deployed (“ADAPT,” 2015). Many challenges come with the return from deployment, and ADAPT (2015) helps with reintegration of the deployed family member back into the family system. One of the researchers discusses how the deployed family member returns to a system that has had to learn to function without them ("ADAPT," 2015). This means when they return, they feel that they are not included in the parenting of the children, making it difficult to return to family cohesiveness ("ADAPT," 2015). Some participants have not yet finished this program, however, it has evidentiary support and has

been effective for those who have been involved in it ("ADAPT," 2015). Although this does not specifically address the issue of secondary trauma and the effect on the child, there are other evidence based programs that have evolved to address this.

Myrick and Green (2013) describe a form of play-based treatment for parents where a child has been abused. In their study, the researchers discussed how the non-offending parent is often has their needs minimized by professionals and sometimes even themselves (Myrick & Green, 2013). These parents are described as feeling guilty and fearing that the child will be permanently psychologically changed (Myrick & Green, 2013). Although living with a traumatized veteran does not necessarily translate into abuse, the method of therapy for the children is one evidence-based form of helping the traumatized child and the non-deployed parent identify their reactions and learn to cope with them (Myrick & Green, 2013).

Parents must learn to co-parent again when the veteran has PTSD, but the families must also learn to cope with caring for the deployed veteran (Rothschield, 2006). This has its roots in secondary trauma, as the veteran's family will often witness the traumatic symptoms, such as flashbacks, nightmares, depression, and sometimes substance abuse (Substance Abuse and Mental Health Services Association [SAMHSA], 2015). The veterans need community-based help, but so, too, do their families (SAMHSA, 2015).

Crisis Intervention

When a veteran returns from combat and their sympathetic nervous system is activated, a crisis can escalate quickly if there are not ways to de-escalate the crisis (Price & Baker, 2012). Price and Baker (2012) discuss a series of interventions and personal skills that personal skills that were consistent in a literature search done to help nurses learn how to manage a crisis. While this article was directed at professionals, the material is well-suited for training the non-deployed parent how to de-escalate the crisis and avoid further disruption or even violence (Price & Baker, 2012). Price and

Baker (2012) discussed seven themes that were involved in de-escalating a crisis. Three of these skills were termed "staff skills" or interpersonal skills, and the remaining 4 were process-based skills (Price & Baker, 2012). These skills can be taught to non-professionals to help them manage a family crisis, such as one that is brought about by nightmares, flashbacks, and other indicia of trauma.

"Staff skills" included characteristics of effective de-escalators, maintaining personal control and the appearance of being calm in the face of aggression, and verbal and non-verbal skills that were helpful in de-escalating the crisis (Price & Baker, 2012). Additionally, the authors note that personal characteristics that were helpful were honesty, offering support, being non-judgmental, and appearing confident without appearing arrogant (Price & Baker, 2012). Expressing concern for the patient in an empathetic, non-authoritative manner also helped to calm the patient (Price & Baker, 2012). The authors further note that using a calm voice with active body language helped, as did avoiding fixed eye contact on the agitated patient (Price & Baker, 2012).

In addition to the skills of the staff, there were some forms of the process that were found to be helpful according to Price and Baker (2012). The first one of these is the ability to form a bond with the patient that would establish a feeling of mutual regard with a focus on shared problem solving (Price & Baker, 2012). The staff member would offer alternatives to aggression that would allow the patient to retain some autonomy (Price & Baker, 2012). Interestingly, early intervention was not always seen as a positive means of de-escalation, as noted that it can sometimes lead to making the problem worse (Price & Baker, 2012). Effective processes require that conditions are safe for de-escalation (Price & Baker, 2012). Lastly, in trying to de-escalate, there needs to be a balance of support and control, with attention given to the balance of being supportive and boundary setting (Price & Baker, 2012).

Although these strategies were specific to staff, similar principles have been recommended to train families of those with a serious mental illness (Stobi & Tromski-Klinghshirn, 2009). Families with a member diagnosed with borderline personality disorder often find themselves in the midst of

crisis (Stobi & Tromski-Klinghshirn, 2009). In addition to boosting resources and offering group support, crisis management skills are helpful with families who have member diagnosed with borderline personality (Stobi & Tromski-Klinghshirn, 2009)

A prevention program that helps military families should have an educational program that can teach family members the triggers for a crisis as well as productive ways to manage them without putting themselves in harm's way (Stobi & Tromski-Klinghshirn, 2009). Some of this will rely on teaching these family members mindfulness techniques that help them to focus on the evidence-based strategies that have been proven to work with others (Stobi & Tromski-Klinghshirn, 2009). Crisis intervention techniques will be an important module in the BRACE program.

Yoga and Tapping

There are some self-initiated forms of relief from anxiety that can be used with Secondary Trauma, such as yoga and tapping. Yoga can involve meditation in addition to the poses (Chung, Brooks, Rai, Balk, & Rai, 2012). The study discussed in Chung et al., (2012) involved 67 people who participated in the meditation group and 62 in the control group. Comparisons were made as to the quality of life, anxiety, and blood pressure control (Chung et al., 2012). The researchers found that the meditation group had a significant improvement in the quality of life, anxiety, and blood pressure as compared to the control group (Chung et al., 2012).

In another study, participants were in a yoga class one day per week for one hour for a total of 12 weeks (Yoshihara, Hiramoto, Oka, Kubo, & Sudo, 2014). In this study the researchers compared subjective symptoms, such as tension, anxiety, anger, hostility, fatigue and confusion in the Profile of Mood State (POMS) and the Symptom checklist-90-revised (SCL-90-R) (Yoshihara et al., 2014). They also measured urinary biomarkers such as 8-hydroxydeoxyguanosine (8-OHdG), biopyrrin, and cortisol before and after the yoga intervention (Yoshihara et al., 2014). Subjective reports indicated improvement in the mood, however, urinary biomarkers were not changed, and in the case of 8-OHdG, a significant increase was found (Yoshihara et al., 2014). The researchers

concluded that yoga did improve the subjective problems associated with anxiety (Yoshihara et al., 2014). Thus, they concluded that yoga was effective in reducing subjective experience of those participating (Yoshihara et al., 2014). No explanation was given regarding the increase in 8-OHdG (Yoshihara et al., 2014).

Feinstein (2012) studied the efficacy of using accupoint and stimulation (tapping) as applied to several psychological disorders. In an earlier article, he studied the combination of brief psychological exposure with manual stimulation at various acupressure points (Feinstein, 2012). In that early study, he found that tapping specific accupoints during an imagined exposure to a stressor rapidly reduced trauma responses and memories (Feinstein, 2010).

He later conducted a literature search that included randomized control studies (RCTs) regarding efficacy of tapping as a means to treat psychological disorders (Feinstein, 2012). Tapping was used in many forms of anxiety in the article, including PTSD, as well as non-anxiety related problems such as fibromyalgia (Feinstein, 2012). In the RTCs, all subjects reports significant changes for the better in post-test evaluations (Feinstein, 2012). He concluded that tapping was an efficacious way to treat anxiety (Feinstein, 2012). Yoga and tapping skills help moderate the effects of stress and anxiety and are important skills for building resiliency.

Community-Oriented Peer Support

On July 10, 2014, Representative Timothy Walz (D-MN-1) introduced legislation in the United States House of Representatives (H.R. 5059, 2013-2014.). One of the provisions of this bill is that there would be pilot programs of community outreach, which would focus on development of a community oriented veteran peer support network (H.R. 5059, 2013-2014.). This program would work on developing peer support training guidelines, developing a network of veteran peer support counselors, and conducting training of peer support counselors. The need for community support is identified as a key factor in suicide prevention of veterans, and peer support offers locally trained peers to be available to veterans (H.R. 5059, 2013-2014).

In supporting families, though not specifically identified in this act, The National Federation of Families for Children's Mental health, a national family-run organization, has developed programs that provide national certification for parent support providers aimed at developing a community-based peer support network with high standards of ethical and professional standards with trained providers (National Federation of Families for Children's Mental Health, 2014). In Minnesota, the Minnesota Association of Children's Mental Health (MACMH) has developed a program at the state level that uses the National Federation of Families format and certification process to train parent peer support providers by offering them certification training (Minnesota Association of Children's Mental Health, n.d.). This program offers parents an opportunity to help other parents become stronger and work through the many challenges of having a child with mental illness (Minnesota Association of Children's Mental Health, n.d.). Peer support has also been recognized as a protective factor (Sun & Hui, 2007). BRACE introduces this subject and offers information for becoming a certified family peer specialist.

This research formed the basis of the curriculum for this intended program, which will take place after graduation. The student served as project leader, and did a thorough literature search. The literature is summarized above with the key components for the curriculum and design, outlined in section 3. While the literature was specific to professionals, the student also reviewed relevant literature on military culture, rules, strengths, and barriers in order to present the stakeholders with key pieces of information that would address this specific population.

Summary

This search involved research on secondary trauma and PTSD. Secondary trauma, or compassion fatigue presents with the same symptoms as PTSD and can leave families with complications that they are ill equipped to manage. While military families are generally resilient, the strain of living with a veteran with PTSD can take its toll. The literature has emphasized the need

for programs to address this issue, however, there are barriers that exist when it comes to engaging the military members and their families.

Military culture plays a key role in seeking help for health care issues. Mental illness is often associated with negative stigma in the military population, which complicates their willingness to seek out and engage in treatment. Part of this may be related to the sense of needing to be self-sufficient, and that admitting weaknesses may diminish the honor that comes with self-sufficiency. A program that will target this population needs to be mindful of these factors.

Various evidence-based treatments were explored. Parenting support through either the ADAPT program or a similar program help to bridge transitions from deployment to integrated family. Crisis intervention programs were discussed with one that specifically targeted teaching crisis intervention to lay people. Yoga and tapping literature exists that demonstrates its effectiveness in reducing symptoms of stress and anxiety. The need for peer support was explored, as well, with pending legislation aimed at developing new pilot programs to train people to help other people in ethical and professional ways. Programs already in existence were identified that may meet the criteria for this pilot project, should the legislation pass.

Two theories were discussed as relates to this program. The HBM is helpful in structuring a treatment program, in that it outlines the underlying theory that will guide the development of the program. The main consideration is that the benefits must not be outweighed by the barriers. If stigma and self-care deficits are too great a barrier, the military individual will not engage in treatment. Use of the HBM as modified with Orem's Self Care Deficit Theory will address some of these concerns, and in turn, improve engagement. Use of a strategy that is educational and preventive will address the needs of this population while remaining sensitive to potential barriers.

Section 3: Approach

Introduction

In this section, I outline the curriculum's basis, structure, and rationale. In addition, I discuss methods and the plan for determining effectiveness. A timeline is incorporated into the various areas, so that project development can be understood on a linear basis. For this project, I envisioned a curriculum with six modules in one web-based program that can be taken on demand. The program, once completed, will be embedded on the website for the Minnesota Association of Children's Mental Health. Participants will be encouraged to take each module in sequence, but it will be possible to take them individually or in a different sequence. New information will be presented in each module, but it will be designed to build on the previous module's information and is tailored to the military culture in that it builds on resiliency and respects the need to support self-sufficiency and honor.

The steps I took to develop this curriculum were as follows:

1. Invite and assemble a team of interdisciplinary stakeholders.
2. Present and review the state of the literature and evidence on best practices for this population and problem.
3. Plan and develop the curricula and content of the program, using experts in the various areas to guide the content.
    a. Undertake content validation of the program.
    b. Develop an implementation plan.
    c. Develop an evaluation plan.

Program Design

This project involved developing a curriculum for a program that will take place after the student has graduated. The curriculum was divided into six modules that could be done either in person or as part of a web-based program that would allow for wider dissemination and easy use.

The curriculum was developed using research that was identified for professionals and translated into a curriculum for military families though incorporation of key aspects of military culture, as well as key barriers found in the military population. Because the program will take place after graduation, no data was collected.

Project Team

Stakeholder Involvement

In the past few decades, planning and funding of programs has shifted to requirements for accountability, measuring results, and a cost-benefit analysis requiring increased scrutiny (Kettner, Moroney, & Martin, 2013). Accordingly, the focus is now on what happens in a community as a result of the services instead of what services are provided (Kettner, Moroney, & Martin, 2013). There has been an additional focus on special populations and their needs, requiring an outcome-oriented approach (Kettner et al., 2013). Also, efficiency and effectiveness are important factors in programs (Kettner et al., 2013). Because analyzing a community is needed, it is important to involve community stakeholders early in the design and implementation of programs (Kettner et al., 2013).

Collaboration with stakeholders during curriculum development allowed for bridging the gap between the evidence in the research and implementing or executing the program (Henderson, Sword, Niccols, & Dobbins, 2014). This process, sometimes referred to as integrated knowledge translation (iKT), is important in developing strategies that are important and feasible to the stakeholders (Henderson, Sword, Niccols, & Dobbins, 2014). Stakeholder involvement started with project development initiation and included the ability to influence aspects of the project (Henderson et al., 2014).

Community stakeholders gave the program life and helped to keep it moving forward. In the case of military families, stakeholder involvement was even more important, as many military families that outside believe people do not truly know what they have experienced (When S*** Rolls Downhill, n.d). To build resiliency, the curriculum needed to be relevant and address their specific

concerns. It was also imperative to understand the military culture, as failure to do so would have resulted in barriers to the success of the program (Hall, 2011). In addition, stakeholder collaboration led to a more robust form of integrated knowledge translation (Henderson et al., 2014).

Stakeholder Identification

According to Hodges and Videto (2011), stakeholders generally fall into three categories: program operations personnel, those served by the program, and those able to use the evaluation results. In this program, the people involved in the operation of the program included the clinical organization and grant manager (Minnesota Association of Children's Mental Health), the presenting speakers, and the community members who represented the population to be served. The last group envisioned that there may be leadership committees of groups such as Beyond the Yellow Ribbon, Veterans' groups, social services, and county officials in other counties if the program is to be used for a specific county. Having a veteran consult and discuss the program was a foundational piece of the design in this program, and it helped to synthesize research about the military culture with actual fact and impact. People who will be served by the project include military veterans and family members. Evaluation results may be useful to other family members and also to social services organizations. Evaluation will not take place until after graduation, although the plan for it is included.

Facilitating Stakeholder Involvement

In order to facilitate stakeholder involvement, one of the key core groups, the military community was approached early in the process. A meeting with the leadership committee of the Beyond the Yellow Ribbon group on August 5, 2014, helped to outline the program goals and ask for their support and input. Presentation of the mission, goals, and objectives was clarified. There was time for input from the committee as well as a time for questions. This group then took the matter under advisement, and they determined that it was a program that they would support. They were a key liaison to the population that is targeted.

The Team of Stakeholders

This project involves a curriculum for a web-based project. Therefore, assembling stakeholders needed to take into consideration the factors that would be needed in order to embed the program on the website. Community members (military members) were identified as key stakeholders that would be impacted by the program. Also, the social services was represented as one of the key speakers had significant input into various parts of this program. Lastly, curriculum was developed with the assistance and guidance of the grant administrator as resources that would expend money required the approval of the grant administrator. The Minnesota Association of Children's Mental Health was represented by the grant administrator.

Presentation of the Evidence

The student presented literature with ample opportunity for the stakeholders to discuss and determine what kinds of things were important for the program in their community. This literature was from the literature review in this proposal, but also added requested literature from the stakeholders.

Institutional Review Board Approval

With any project involving live subjects, ethical considerations are important. The student has submitted the paperwork and documents necessary for the IRB, and the IRB gave approval for this project.

Program Design

Curriculum Development

Along with the stakeholders, the student and grant administrator, as well as the stakeholder team helped to develop content for the curriculum. This content was reviewed by others, either stakeholder experts, or outside experts, to insure content validity.

Philosophical foundation is important in designing programs (Hodges & Videto, 2011). In this case, one of the key aspects of program design will involve integration of the evidence with

military culture in order to make it relevant and effective. A number of military members helped to better integrate the evidence with modifications that are sensitive to the military culture by sharing concerns of military members and also other barriers that are intrinsic to the nature of being in the military. When members of the military helped with modifications for the program, the program was determined to best be delivered through a web-based program, which would allow for anonymity and thus, reduced concern for confidentiality. This curriculum was developed initially as a 6-week, in person program, and the curricula could be used in that way in the future. However, part of what was learned in the process was that the diagnosis of a mental health problem might lead to certain negative consequences, thus preventing military families from participating for fear they or their veteran family member may receive these negative consequences. Accordingly, due to feedback from the stakeholders, the plan was changed to develop a curriculum for a six module course that would be web-based. The sessions in the curriculum were developed to have five modules incorporated as follows:

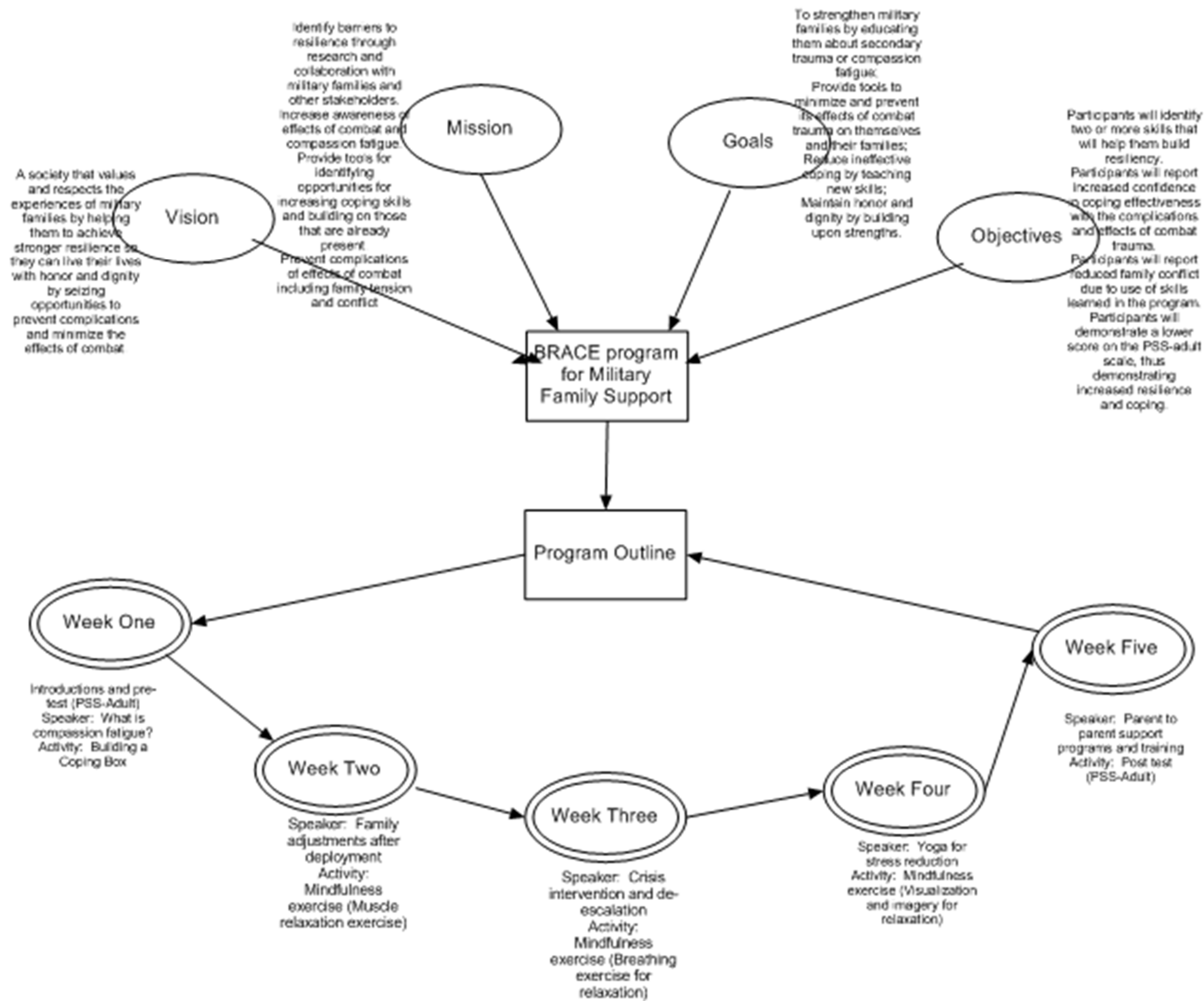

Figure 1. Diagram of the goals and program outline discussed with stakeholders.

Following the development of the curriculum, each major module was submitted for feedback from the content experts. Once reviewed, revisions were made and the content updated and reviewed with key stakeholders. One additional module was added in the beginning to introduce the program and give an overview of it.

Program Implementation and Evaluation

Implementation Plan

The student developed an implementation plan for this project and is attached as Appendix B. The target date for implementation is after completed of the DNP Project, tentatively by Fall, 2015. The resulting program will be recorded and uploaded and embedded to the Minnesota Association of Children's Mental Health website.

Evaluation Plan

Evaluation will be done after the program is implemented. For purposes of the DNP project, an evaluation plan was developed and is attached as Appendix C. Effectiveness of the intervention will be addressed following implementation by an evaluation that addresses such things as relevance of the information, perceived usefulness of the information, and other factors that have been identified as useful in evaluating effectiveness. One such tool is the SF-37, which is a short form of the Quality of Life survey. This will be embedded at the start of the program, and opportunities to do a post test will be at the end of the program, as well as 6 months after completion and 12 months after completion.

Program evaluation planning was done using the logic model (Kettner et al., 2013). This was in cooperation with the grant facility and depended on their means of evaluation in addition to this form. The logic model has three main components: inputs, outputs, and outcomes (Kettner et al., 2013). This model has been used in community programs as it can be placed in a visual presentation that shows the relationship between these components (Hulton, 2007). Part of the evaluation plan

included targeting potential outcomes for the program, once it is implemented. See Figure 2 for the logic model evaluation plan.

In this section, I described the process by which implementation and evaluation plans were developed for the program for building resiliency and coping effectiveness for military families. The project involved development of the curriculum for the program, which will be implemented after the DNP program is complete. The implementation and evaluation plans were developed and are included here. Section 4 will address the project results.

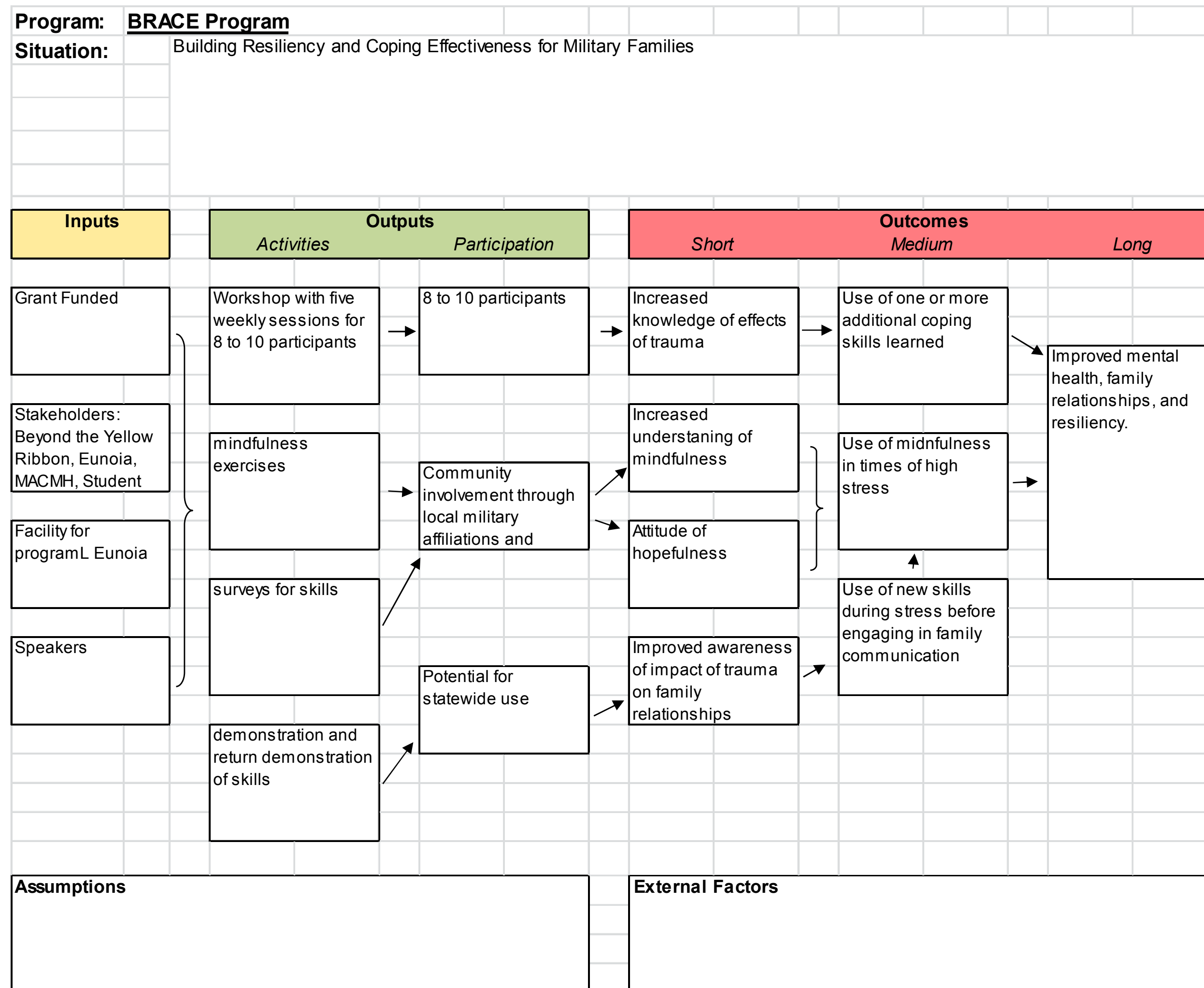

Figure 2: Logic Model with evaluation and outcomes.

Section 4: Findings, Discussion, and Implications

Introduction

The problem I addressed in this project involved the lack of available resources for military families who have a veteran return from combat with PTSD and other medical problems. Many programs have been developed that address secondary trauma in health care professionals and first responders, but few that address secondary trauma in this population, or other lay populations. This project focused on developing curriculum that would help address this problem and prevent more debilitating complications of secondary trauma.

The curriculum was developed with cultural factors specific to the military population in mind and the unique problems faced when a military member seeks mental health assistance. These problems include lack of meaningful confidentiality that allows for fully treating problems and preventing more serious and disabling consequences of trauma. In this section, I discuss the project products, implications, strengths, and limitations, and I provide an analysis of self.

Discussion of Project Products

BRACE Program Curriculum

The project involved developing the curriculum for a web-based program, BRACE (Building Resilience and Coping Effectiveness). It was designed to help families who struggle with the effects of living with a family member who has suffered from PTSD. Although no similar programs or similar programs were found, this program used evidence-based and informed methods that have been used for health care professionals and first responders, and it incorporated them with the unique aspects of military culture and unique challenges in mind.

This project was informed by a couple of events. First, in a meeting, one of the military members discussed that although the program was effective, it is difficult to get military members

through the doors, as they fear reprisal for admitting to mental health problems. This was consistent with the information that I had from therapists, many of whom had tried to help and set up appointments with this population, but I could not seem to engage them. This information was the basis for the switch to a web-based program that would be anonymous in nature to reach the maximum number of participants. This created a unique difficulty in obtaining evaluative materials. It also presented difficulty with regard to the validity and applicability of evaluation materials to the general military population, because it was unknown who would respond and whether those who chose not to respond would have the same opinions.

Second, last fall, legislation was introduced to U.S. Congress to help prevent veteran-related suicides. Known now as the Clay Hunt SAV Act, which was signed into law this winter, a provision was made that encourages community-based peer support. While BRACE intended to have a component that would allow for the development of peer specialists who could help support others in similar situations, this act now makes that module not only relevant, but a key aspect of the legislation, which could mean future funding opportunities.

The introduction to the program involves the overview of the program and provides participants with a brief description of eligibility, program goals, objectives, and goals. The structure involves a web-based, on-demand program that will be embedded in the Minnesota Association of Children's Mental Health website. A web-based anonymous design was selected based on feedback from the military stakeholders indicating that one of the barriers in obtaining help is the lack of confidentiality and the negative consequences that occur when a military member obtains a psychiatric diagnosis. The program could have a pretest at the beginning of the web program, along with an opportunity to leave an email address to follow up in 6 months after completion of the program and in 1 year after the first evaluation (18 months post completion). The evaluations are not required, but they will be encouraged in effort to help others who may benefit from the program.

Modules envision speakers for the various sections, and the curriculum was drafted with assistance from the speakers. Refer to Appendix A.

Curriculum Modules

The curriculum modules were developed based on evidence-based forms of treatment that reduce the negative symptoms of stress. The program introduction included a short description of the overall educational program and the advantages of leaving an email for follow up, though it is not required. Six modules were developed organizing content that makes it ideal to take each module in sequence in order to achieve the best results. The six modules include materials that were taken from similar programs for professionals and first responders. Each module allows for reflection by suggesting participants keep a journal. This is done to help them determine which things seem to work for them and which did not. These are also anonymous and solely for the personal assistance of the participant. Refer to Appendix C.

Implementation Plan

The implementation plan was a secondary product of the project. The stakeholder team recognized that family members of combat veterans with PTSD develop secondary trauma symptoms, which are similar to those suffered by the veteran. Although the Veteran's Administration has developed some programs for the veteran, little support exists for these family members, so this program seeks to bridge that gap. The plan initially envisioned a face-to-face program in communities, however, several barriers were discussed that changed the recommended format to a web-based program. One of these barriers had to do with the military culture, and the problem of rank on having community members all participate together. The concern was that lower ranking members would not fully participate in the presence of higher ranking members.

The other two concerns were previously discussed and include stigma and the concern for negative reprisal from the military for disclosing a mental health problem, as well as the concern for the lack of true confidentiality in the military for therapists. Although this program does not involve

therapy and is education-focused, those who may seek to participate may fear that it is a form of therapy and therefore, a lack of confidentiality would compromise the number of people who might participate.

Some groundwork is still necessary to operationalize the program. Although the curriculum modules had been developed, guest speakers still need to be arranged, and curriculum transferred to a digital platform. The stakeholder team determined a late summer or early fall implementation was the goal. The grant administrator will be responsible to secure funding sources to sustain the program. Ongoing administrative assistance will be necessary related to budget, program details for upload and embedding.

Fortunately, a significant portion of the project was developed by the DNP student/ project facilitator without cost to the institution. The program documents will be kept with Minnesota Association of Children's Mental Health, and this will allow for ease of evaluation for the grantor. Curriculum will be modified and/or updated depending on feedback from participants. Focused learning opportunities in the form of video instruction and journaling will guide progression through the curriculum modules. The implementation plan is referenced in Appendix B.

Evaluation Plan

An evaluation plan was another secondary product of the project. The project provides voluntary opportunities to monitor progress, evaluate outcomes, and measure impact. A pretest of the SF-36 could be offered to obtain baseline information for comparison to see if the program has helped to improve quality of life factors. Each module offers one skill that can be practiced and a journal is recommended in order to have individuals track progress. Video demonstration will be available and accordingly, the program can be paused, rewound, as frequently as the participant desires in order to obtain the skills from the modules. Email addresses will be requested, but not required, in the hope that a couple of follow up evaluations in the form of the SF-36 can be obtained for program evaluation and potential modification. Refer to the evaluation plan in Appendix C.

Implications

Translation of evidence is supported by the *Essentials of Doctoral Education for Advanced Practice (*ANCC, 2006). Problems for military families can be disabling and reduce the quality of life for those who do not have access to resiliency-building methods. As a DNP prepared nurse, the use of evidence-based material from other programs for professionals and first responders offers the challenge to develop a similar program for the military population. Essential II focuses on systems leadership for quality improvement. The DNP curriculum prepared this student to recognize problems and translate evidence from one area for use in another. The capstone project is the end product of the DNP program allowing the graduate to document evidence of learning.

The project highlighted in this paper provided an opportunity for the DNP student to translate evidence into practice by developing a program that can meet the needs of the military population. Military families have unique problems and challenges that can be a barrier getting help. The programs that have been used in the professional arena can be modified and used by this population. This project has afforded the student to become a leader in the area of program development by going through the stages of stakeholder identification, meetings and affording key stakeholders the opportunity to add input and make the program more relevant and useful to this unique population.

Implementation plans included curriculum development, development of the web-based program consisting of six modules, and review of the evaluation materials to further revise the program and make it more helpful to the target population.

Policy

Policy supports the need for peer-based community support for military members and their families. The Clay Hunt SAV Act specifically addresses the need for peer support and offers a directive for the development of these programs. BRACE offers a program that addresses this specific issue, and because Module 6 offers information for becoming certified in a program based

on a nationally recognized program (National Federation of Families), it is consistent with current national policy.

Practice

Practice implications include placing nursing at the forefront of development of evidence based programs that support key populations that need support. Development of evidence-based programs also supports best practice in these programs and allows for development of leadership ability and skills.

Research

Research also supports the BRACE program. Although many of the current programs for secondary trauma are for professionals and first responders, secondary trauma is gaining recognition, as it is now included in the fifth edition of the Diagnostic and Statistical Manual (DSM-V). Using evidence-based techniques that have been successful for professionals and first responders allows for the opportunity for military families to build resiliency by using the skills that have been found to be successful. This opens the door for many other populations that also experience secondary trauma to have materials developed with their population and culture in mind.

Social Change

Military families have been an important part of this society because they support their family members who have offered to give their lives so that we can remain a free country. It is fitting that they should also be supported. Although many of the evidence-based programs are presently used for professionals and first responders, application to the specific population and culture of the military opens the door for support for other populations that also need these skills, such as foster families. Developing a culturally specific program based on evidence-based information moves help from professionals only to the lay population.

Strengths and Limitations of the Project

The strengths of this program include use of evidence-based strategies for implementing skills to build resiliency in a population that really needs the support. Through translation of evidence-based strategies used for professionals to their use with the military population, a culturally sensitive program has been developed to meet the needs of this population. Techniques used in this program are based on neuro-physiology and neuro-chemistry, as well as proven techniques that help to moderate crises. Peer support is now at the heart of nationally based legislation through the Clay Hunt SAV Act.

Limitations include the fact that the program will not be implemented during the student's tenure at the university. Because the program needs to be anonymous and the evaluation must be completely voluntary due to the concerns for reprisal if mental illness is identified and the lack of true confidentiality in the military, the evaluative results will not be able to generalized.

Recommendations for future projects may include targeting legislators to help change the rules for military personnel so that they cannot be the victim of negative reprisal. One such way would be to educate them in the advances in psychiatry and the evidence-based therapies and diagnostic evaluations to help them better understand the nature of these disorders. This may be a start, however, with limited resources, a barrier may be that even if there are the best of intentions, the resources may be limited in such a way that funding this type of change may be some distance down the road.

Analysis of Self

Pursuing doctoral level education has been an adventure. First, the information in the didactic courses expanded my knowledge base and ability to understand systems better. I have been a nurse for a long time and also hold a Juris Doctorate degree. I have written many legal briefs, including appellate briefs, and I liken the project to the appellate brief process. It is specific and precise, and every detail is important.

In the area of the project, at times I have referred to it as my white whale as it has seemed at times that I would never get done. I think one of the key things that I have learned is that it helps to have good friends and support people, particularly other students in this class. Being a rather independent type of person, the biggest lesson was to learn to let others help a little. I am not used to that, as I am often working independently. Though I have collaborated with other health professionals, this program has really helped me to value that in ways I have not done before. There is a time to be independent and there is a time to seek help. The latter has always been a challenge for me, as I have had to be self-sufficient and independent not only in my career, but also as a single mother who essentially raised two kids on her own. I have had to fight not only my own battles, but theirs as well, and there has not always, or even sometimes been anyone else who would do it. So this has been a growth experience.

My organizational skills have improved. I have also learned the value of working with the financial people, who seem to always have this down pat. Although I have often thought of myself as patient and persistent, this has driven me to new levels which I don’t think I knew existed before this project. The DNP credential will be helpful in my work as a nursing professor, as well as improving my abilities as a practitioner and systems leader. This project has allowed me to grow not only professionally, but also personally.

Summary

This project was developed for the purpose of providing a program for supporting the families of combat veterans with PTSD. These families have supported the veteran, and although a number of programs that are available to the veteran, few were found for family members of the veterans. These family members end up with symptoms very similar to the ones the veteran may have, yet there has not been a program that would help them to address them.

This project was based on a literature review, and this included literature to support all aspects of the program. From the neuro-biology and neuro-chemistry that occurs with trauma to the

skills needed to better decrease emotional tension and outburst in crisis and manage the problems in one, each aspect of this project has been designed based on evidence.

The modules were also designed with aspects of the military culture in mind, these principles could be modified and adapted to use in other cultures and populations. Although it was initially intended to be a face-to-face program, the modification to a web-based program that could be taken on demand became an apparent necessity once it was understood that the family members and veterans feared reprisal, stigma, and there was not real confidentiality. Thus the implementation plan was adjusted to make this a web-based program. The evaluation was done with the difficulty in mind that not everyone will participate in the evaluation, and thus results are probably only useful for this particular program.

Section 5 will address a scholarly paper that I intend to be submitted for publication.

Section 5: Scholarly Product

BRACE: A Program for Building Resiliency and Coping Effectiveness in Military Families

Linda Zarrett

Walden University

Dr. Stoerm Anderson

April 29, 2015

Veterans returning from combat report significant family strain and Post Traumatic Stress Symptoms (PTSS) yet have limited access to care resources. Family members, including children, report very similar symptoms to those of veterans and have yet fewer health care resources. The purpose of this project was to apply principles from existing research on post-traumatic stress and secondary trauma to providers as the basis for a curriculum for families of combat veterans with PTSS. The health beliefs model and Orem's self-care deficit theory were used to guide development of this curriculum. Long-term goals of this initiative are increased resiliency in families of combat veterans with PTSS, decreased family conflict, diminished incidence of secondary trauma in children, and reduced productivity losses and education losses in this population. The project was designed as the first stage of a long-term quality improvement initiative. Products of the project include a curriculum and plans for implementing and evaluating the curriculum. Products were developed in collaborative meetings with stakeholders, including the grant administrator, a social services representative, a military member, and a military family member. The curriculum was reviewed for content validity by sending sections to nurse scholars with relevant context expertise, after which revisions were made in accordance with feedback. Implementation and evaluation plans suggest use of a web-based program hosted by the Minnesota Association of Children's Mental Health. Increasing resources for combat veterans and their families has important implications for positive social change. This project may also address the reluctance of this population to engage in treatment by applying principles of military culture and concern for confidentiality, and may aid cost reduction through prevention of complications of secondary trauma.

BRACE: A Program for Building Resiliency and Coping Effectiveness in Military Families

Background and Purpose

Military families often end up witnessing many of the after-effects of war on their loved ones (Smith, Chun, Michael, & Schneider, 2013). This includes flashbacks, nightmares, and the memories of many of the things they witnessed (Smith et al., 2013). Although limited community-based resources exist that help the veterans themselves, even fewer exist to help the families cope with these often unexpected consequences of living with a veteran with PTSD ("When S*** Rolls Downhill," n.d.). Smith et al. (2013) described one such program, and it was designed to identify and treat families of veterans that return with war trauma, and it is based out of Walter Reed Hospital. This program takes veterans who have had war-related physical problems (Smith et al., 2013). Social workers and staff do early assessment and intervention with the family members for mental health problems (Smith et al., 2013). Although this program addresses problems when there are known war traumas, the veterans who return without physical injuries are not as easily identified. No community-based programs were found to help the families cope with some of the problems that arise once the veteran is back in his or her hometown ("When S*** Rolls Downhill," n.d.).

Purpose

The project for the DNP degree involved developing and drafting the curriculum for a program that could address the families of traumatized veterans. The purpose of this program is to use evidence-based information that has been designed for professionals and transform it into a program for lay people, military families in particular. In so doing, it sought to improve care of military families and prevent more serious problems within the family unit. The literature search resulted in the discovery of a number of programs that exist to support professionals and first responders with secondary trauma, but only the program in Smith et al. (2013) addressed secondary trauma in the military population. That program was hospital-based and used physical injuries as a

basis for identifying potential secondary trauma in families (Smith et al., 2013). That program was used in addition to secondary trauma programs for professionals to develop a curriculum for this project was designed for a community based program. The information from these programs, along with the information in the literature about cultural barriers in the military population was transformed into a six-module, web-based program that is intended to meet the needs of military families.

The curriculum envisions a quality improvement program that is intended to be educational and preventive in nature. Its goals are to improve the quality of care for military families by adding information and providing resources to help them cope with the difficulties of living with a traumatized veteran. The military population has several barriers which could potentially prevent them from seeking care and thus cultural aspects of this population needed to be considered (Hall, 2011). Some of these barriers include the stigma that exists in the military regarding mental illness (Vogt, 2011), the potential penalties and negative consequences for being identified with a mental illness (Engels 2014), and the need for self-sufficiency (Hall, 2011). Without addressing these problems, the program would likely fail. This curriculum envisions a program that will be placed on the web page of the Minnesota Association of Children's Mental Health, and it can be used freely without cost as it is grant funded.

Theoretical Guides

Two guiding theories for the program were chosen to aid in addressing the strengths and barriers in this population: the Health Beliefs Model (HBM) and Orem's self care deficit theory (McEwin & Wills, 2011). The main premise of the HBM is that when people have good information, they are better able to make better decisions about their health choices (McEwin & Wills, 2011). There are four basic constructs of this mode according to McEwin and Wills. First is the perceived severity of the problem: the more serious the perceived threat, the more likely the

individual is to engage in the recommended treatment (McEwin & Wills, 2011). Second is perceived susceptibility, or how likely the individual believes they are likely to get the illness or problem (McEwin & Wills, 2011). Third is perceived benefits of the intervention (McEwin & Wills, 2011). Finally, there are perceived barriers to the intervention, and the benefits must outweigh the barriers in order for the individual to follow through with the program (McEwin & Wills, 2011). The last two constructs are particularly important when considering the military population and military culture. If the negative consequences for seeking help outweigh the benefits of getting help, help will not be sought.

Relevant Literature

Veterans may believe that the barrier of stigma outweighs any benefit of the therapy (Greene-Shortridge, Britt, & Castro, 2007) (Vogt, 2011). Self-stigma, or the veteran's internalization about negative beliefs about mental illness may complicate their willingness to seek care (Vogt, 2011). Self-sufficiency and honor, part of the culture of being in the military, may confound a veteran's ability to accept that they need help if getting help conflicts with these qualities (Hall, 2011). Also, the threat of negative consequences for having an identified mental health problem presented a major barrier that needed to be addressed. Because of the fear of negative consequences, a web-based educational program was determined to be the medium for delivery as it offers anonymity. Other parts of the curricula required careful consideration: building on resiliency and recognizing "distress" as opposed to "illness" were important factors that sought to bridge this barrier to treatment (Cozza et al., 2013).

Orem's theory involves the assumption that people should be able to care for themselves (self-care) but at times will need the assistance of nursing in order to meet their needs (self-care deficit) (McEwin & Wills, 2011). According to the authors, there are five methods of helping the individual including doing for others, guiding, supporting, educating, and providing an environment

that promotes development. These are the nursing interventions that help the individual restore the ability to care for themselves to the extent possible. In psychiatry, self-care is often the end goal, and recovery from psychiatric illness will depend on individual learning skills that allow them to return to a state of self-care (Seed & Torkelson, 2012).

This theory captures the essence of the need of veterans and families to maintain and improve on self-sufficiency skills (Hall, 2011). Building on resiliency skills, identifying strengths and building on them, along with education and prevention fit with the culture of this population (Hall, 2011). A program that supports, educates, guides, and provides an environment that allows for growth allows the veteran and their family to maintain the sense of self-sufficiency and honor, thus merging with their cultural needs (Hall, 2011). One of the important considerations for this curriculum was incorporation of the self-sufficiency needs of this population.

Program Design and Setting

This project involved designing and drafting a curriculum for a preventive, educational program for military families (BRACE, or Building Resilience and Coping Effectiveness). BRACE was designed to reduce symptoms of PTSD, manage the symptoms present, and prevent these symptoms from developing into the more disabling symptoms that can interfere with life activities and relationships. The core of this curriculum is 6 webinar modules that will cover topics that will help to build resiliency in military families to and teach methods to cope with the difficulties encountered when living with someone with PTSD.

In order to develop this program and design it, existing literature for both military-based and non-military-based similar programs was used as the basis for the modules. The literature contained a number of evidence-based methods for building resiliency to cope with secondary trauma for professionals, and this was the foundation for the curricula for BRACE. The literature was reviewed with the team of stakeholders. From there, key aspects of the curriculum were determined. Once the curriculum was drafted and approved by the stakeholders, each segment was sent for content

validation to experts in the respective areas. When returned, it was again revised and updated with the stakeholders.

The BRACE curriculum was developed, however, the program is still in the formative stages and speakers still need to be identified. Webinars will discuss different aspects of secondary trauma and will teach skills that are helpful in reducing stress and anxiety, as well as explain parenting changes and challenges, stress reducing skills such as yoga and breathing, along with crisis management methods. The final module will introduce the participants to an opportunity to become a certified parent peer support person through a locally based derivative of the program that has been developed nationally through the National Federation of Families (National Federation of Families for Children's Mental Health, 2014).

The curriculum was developed so that each module of the program could be taken without taking any other module. The program will not cost participants anything as it is financed by a grant, and the target audience is the military family members. Module 1 is an introductory module that is designed to give an overview of the program, as well as the objectives of each module. A brief summary will be discussed so that the participant can select any further modules that they believe are important to their situation.

Module 2 is intended to give information about the nature of secondary trauma, including the neurological and psychological changes that occur in trauma. Rasmussen & Bliss (2014) note that little attention has been paid to learning the negative impact of stress and trauma on the neurologic system. Secondary trauma happens when an individual is empathetically engaged with a trauma victim and their experience (Rasmussen & Bliss, 2014). This can include witnessing events or their re-enactment, cognitive empathy (understanding the meaning of the experience of the victim), and affective empathy (actually feeling the pain of the other person) (Rasmussen & Bliss, 2014). Female veterans may have even more unique issues, as if they report rape, they may be diagnosed with a personality disorder and risk loss of benefits (Townsend, 2014).

Understanding what happens physically is intended to give hope to the family members who may feel that what is happening to them does not make sense. Basic information will be given to help the participants find avenues for symptom relief if the suffer some of the same symptoms as their family member, including medications for symptom control (Stahl, 2008).

Module 3 is geared at understanding parenting changes that occur. The intended speaker is one from the ADAPT program through the University of Minnesota. The ADAPT project is based out of the University of Minnesota and is a joint project with the Reserve Units and National Guard units of the military ("ADAPT," 2015). ADAPT looks at parent resources for military families where one of the parents has been deployed. Many challenges come with reintegrating the deployed family member back into the family system (“ADAPT,” 2015). ADAPT offers strategies to deal with these parenting changes in a positive way (“ADAPT,” 2015). Parents must learn to co-parent again, but the families must also learn to cope with caring for the deployed veteran (Rothschield, 2006). This module will address these problems.

Module 4 involves crisis identification, intervention, and de-escalation. Many times a family member with PTSD and an activated sympathetic nervous system may be easily triggered into anger, which can escalate into a crisis if not addressed in productive ways (Price & Baker, 2012). Families will benefit from understanding not only the neurobiological basis of PTSD, but also how some of the physical components may make it easier for the PTSD individual to become more irritable and angry (Price & Baker, 2012). Learning how to identify an escalation in anger, and then how to intervene calmly to de-escalate and prevent this from becoming a larger problem is the subject of this module. Giving family members information and tools should help to prevent problems (Harris, 1991).

There are many tools that can be used by family members to minimize the effects of stress and trauma, including yoga (Chung, Brooks, Rai, Balk, & Rai, 2012), tapping (Feinstein, 2010), and others. Module 5 will introduce participants to a few of these, as well as describe their evidence-

based help for stress and trauma symptoms. Yoga has been connected with better serotonin response and thus can reduce anxiety (Yoshihara, Hiramoto, Oka, Kubo, & Sudo, 2014). Tapping has been associated with relief of anxiety in randomized control trials (Feinstein, 2012). Tapping is a form of acupressure, and has been found to be effective in management of anxiety (Feinstein, 2012). Module 5 introduces a number of self-initiated skills that will help family members build resilience and cope better with the stress of living with a PTSD veteran (Cozza et al., 2013).

Recently the Clay Hunt SAV Act was introduced and passed in the House and Senate, and signed by President Obama to help prevent veteran suicide (H.R. 5059, 2013-2014.). This Bill has a provision that seeks to develop peer support at the community level (H.R. 5059, 2013-2014.). The requirements for the peer to peer groups are that they have certification through a nationally based program (H.R. 5059, 2013-2014.). Module 6 provides an introduction to the Family Catalyst program for certification that is available through the Minnesota Association of Children's Mental Health ("Family Catalyst Program," 2015). This program is a local version that has used the material from the National Federation of Families to set up training modules to help lay people develop skills to become a peer support person through certification (National Federation of Families for Children's Mental Health, 2014). Because it has been developed through the NFF, it meets the criteria in the Clay Hunt SAV Act (H.R. 5059, 2013-2014.). Module 6 will be offer the ability to learn how to support other family members with mental health problems by offering initial information about the program and its benefits and an opportunity to get involved in this if interested.

The 6 modules do not need to be taken in order, and neither do they need to all be taken. Participants can choose to view all or a few, or even just 1 or 2 of the modules. The modules are introductory and serve as a place to become familiar with these skills. If participants find the skills helpful, they will seek resources that can direct them to appropriate places for more information. The setting for taking these modules is anywhere that there is internet access. They can be viewed individually or with a group of people. Because a web based program offers flexibility, the

participant has complete control over whether they tell anyone, thus addressing the need for privacy, especially in military families. This also addresses a major barrier to seeking help: fear of negative consequences for being diagnosed with a mental health problem (Engel, 2014).

Products of the Project

The project developed a curriculum using of the Logic Model to determine what outputs or results are desired. See Figure 1 below.

Program: **BRACE Program**
Situation: Building Resiliency and Coping Effectiveness for Military Families

Inputs	Outputs: *Activities*	Outputs: *Participation*	Outcomes: *Short*	Outcomes: *Medium*	Outcomes: *Long*
Grant Funded	Workshop with five weekly sessions for 8 to 10 participants	8 to 10 participants	Increased knowledge of effects of trauma	Use of one or more additional coping skills learned	Improved mental health, family relationships, and resiliency.
Stakeholders: Beyond the Yellow Ribbon, Eunoia, MACMH, Student	mindfulness exercises	Community involvement through local military affiliations and	Increased understaning of mindfulness	Use of midnfulness in times of high stress	
Facility for programL Eunoia	surveys for skills	Potential for statewide use	Attitude of hopefulness	Use of new skills during stress before engaging in family communication	
Speakers	demonstration and return demonstration of skills		Improved awareness of impact of trauma on family relationships		

Assumptions

External Factors

Figure 1: Logic model with evaluation and outcomes.

This program may use a number of evaluative measures. When the program is ready to move forward, evaluation will be addressed with the stakeholders. A number of possible evaluative tools are explored here as suggestions for stakeholder discussion and decision-making. First is the tracking of number of people who view the modules. This will be done using an IT person at the MACMH site in order to determine the interest and participation numbers in the program. If there are numerous hits, it may be worthwhile to see if there needs to be additional options for access, such as You Tube.

Another evaluation tool that could be used is the Quality of Life Questionnaire (short version). This tool measures the subjective report of quality of life in a number of domains ("WHOQOL," 2015).

Because the program will be by electronic means, an additional questionnaire could be developed to help determine whether there will be a need to modify for audio or visual quality, and also whether the program met the goals of the participants. Results of the program will be obtained once the program is put into effect, likely in the summer of 2015.

Interpretation and Implications

Because this program is still in the developmental stages, and it will not be implemented until the summer of 2015, interpretation and implications cannot be addressed at this time. Once the results are obtained, this will be an important part of the project, and it will likely be part of an evaluation for the grant money that is being used to fund it.

Summary and Conclusions

The project involved designing a curriculum to help families of military veterans develop understanding and skills to deal with the day-to-day difficulties that occur when they have a veteran who has returned with PTSD. The program will be based on this curriculum, but is still in the formative stages until after the curriculum has been approved and the degree requirements have been met. The curriculum modules will be disseminated by means of a series of webinars. These webinars

will be based on evidence-based material that has been proven useful in other areas, particularly in secondary trauma as applied to the helping professions. While no particular evidence-based programs were found that address this problem in military families, evidence from the professional programs was used and translated to achieve the goal and social implication of improving the lives of military families and closing the gap in the literature and practice between the professional population with secondary trauma and the military population. This is an important group of people to reach, as they have some innate resiliency, and therefore, they have the capacity to build on these traits as well as prevent more serious forms of secondary trauma.

In conclusion, the curriculum for this project has been developed with the needs of family members of the veterans with PTSD in mind. It was developed as a preventive, educational curriculum using research from similar programs that have been developed for professionals. As such, use of the two guiding theories, HBM and Orem's Self-Care Deficit theory, was helpful in developing the curriculum. One of the key barriers is that of fear of negative consequences for the veteran and likely their family members if they have an identified mental health problem, so anonymity and an educational format are the hallmarks of the program in order to address this barrier. The modules can be taken in sequence or out of sequence and will not cost anything. They will be embedded on the website for the Minnesota Association for Children's Mental Health. By addressing and teaching skills to build resiliency, secondary trauma symptoms are targeted and the outcomes of improved mental health and improved family relations should be met.

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Appendix A: Curriculum

BRACE: A Program for Building Resilience and Coping Effectiveness in Military Families

Program Overview

Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) resulted in numerous veterans returning with PTSD, Brain Injury, and other types of physical injuries. While families are happy to have the veteran return home alive, they often are not prepared for the aftermath of the effects of combat and resulting PTSD. These family those members have supported the veteran, often alone and in isolation due to limited programs for family members.

BRACE was designed with these family members in mind. BRACE is a program consisting of 6 modules. It is recommended that they be taken in sequence for the best results, however, that is not necessary. The program will be one webinar, however, it is possible to stop the webinar and return, as well as jump ahead. This program will be embedded on the website for the Minnesota Association for Children's Mental Health (MACMH). Because it is funded through a grant, there will be no cost to the participant. Ideally, participants will view one segment weekly, which allows for time for reflection and practice of the techniques. The program is not designed to be a substitute for individual counseling or psychiatric care if needed, but rather as a supplement to it. It is also intended to be a resiliency building program, educational in design, that seeks to close the gap between programs for professionals with secondary trauma and the lack of these programs for lay individuals, particularly in this case, families of military veterans. While designed for military families, it is open to the public.

MACMH is a non-profit organization that helps family members who have a child with a mental illness through education, advocacy, and support. It is based in downtown St. Paul. MACMH has various programs, one of which will be used in this program: Family Peer Specialist program. This program offers an opportunity for family members to become certified as a specialist through a program that has as its basis a nationally recognized format including a sequence of modules. BRACE will introduce this program as an option for interested participants to continue to support themselves and others by becoming certified in this area.

Program Eligibility:

Anyone is able to participate, however, the program is designed for family members of combat veterans with PTSD.

Program Goals

- To educate family members of combat veterans about the effects of living with a person who has PTSD (also known as secondary trauma).
- To prevent complications of secondary trauma
- To minimize or mitigate present effects of secondary trauma
- To close the gap in evidence and improve the availability of programs for veterans' families who have symptoms of secondary trauma and/or a reduced quality of life.
- To prevent or mitigate mental health problems in the children of these families.

Program Leadership- TBA

Linda Zarrett, DNP-c, PMHCNS-BC, psychiatry

Deb Cavitt, Program Adminstrator, MACMH

Organizational Culture

Mission- Promote positive mental health to all children, adolescents and their families with a mental illness.

Vision- Improving the lives of family members, children and adolescents with mental illness through education, advocacy, and support.

Program Development and Design

The curriculum includes didactic instruction for family members of veterans through a web based program that has 6 modules. It is recommended that the participant take each module in sequence as the modules build on information that is given in the early modules. There is one program link on the MACMH website but the program is designed to be stopped and restarted after each module.

Course Structure:

- Didactic in digital format for flexible learning
- Pre-test at the beginning of the program that addresses quality of life factors.
- 6 independent modules
- Video materials for practicing the techniques learned
- Recommendation for a journal to help identify helpful techniques and also to track progress.

Program Faculty- TBA

Program Content

Web-based program on demand. Educationally focused and allows for stop and start with the ability to bookmark where participant left off.

Program Evaluation

- Quality of Life Simple Form, given at the beginning of the module and upon completion of the program.
- Email signup (optional) for follow up short form evaluations at 6 months post completion and 12 months post completion.
- Stakeholder evaluation (MACMH &Beyond the Yellow Ribbon)

Program Content

The program integrates evidence-based interventions for professionals who have had symptoms of secondary trauma with the military culture and the needs of the family members of combat veterans with PTSD.

Module 1: BRACE introduction and overview of the course

Families of returning veterans are faced with many challenges, including reintegrating the returning parent, lack of social support in the civilian world, and being confronted with the aftermath and after-effects of war on their loved one. This module will introduce the individual to the various components of the BRACE program, which is intended to help military families build resiliency skills, as well as introduce one breathing skill that can be used to reduce stress.

Module Materials:

1. Fugett, K. (2012), Secondary PTSD, retrieved from

militaryfamily.com/2012/3/20/secondary-ptsd

2. Military Family (n.d.), Triggers, retrieved from

   militaryfamiliy.com/wp-content/MF_Downloads/MFCO40912_041A.pdf

3. Miller, M., (2012). Caregivers of U.S. veterans, retrieved from

   http://www.cbsnews.com/news/caregivers-of-us-veterans-bear-scars-of-war/

Upon completion of this Module, the learner will:

1. Be able to identify which aspects of the course apply to them.
2. Be able to practice mindful breathing.
3. Be able to identify the ways in which living with a veteran with PTSD may impact families.

Lecture

Demonstration of Breathing Activity

Module 2: Secondary Trauma

Secondary trauma, caused by living with someone who is experiencing PTSD, causes physical changes, and these cause problematic symptoms that mimic those of the person with PTSD, even though the actual traumatic event was not witnessed. These symptoms include

physical symptoms, such as a racing heart, emotional symptoms, cognitive symptoms, and social symptoms. Module 2 explores these and offers hope for the participant through the use of techniques that counter these symptoms.

Module Materials:

4. Fugett, K. (2012), Secondary PTSD, retrieved from militaryfamily.com/2012/3/20/secondary-ptsd
5. Military Family (n.d.), Triggers, retrieved from militaryfamiliy.com/wp-content/MF_Downloads/MFCO40912_041A.pdf
6. Miller, M., (2012). Caregivers of U.S. veterans, retrieved from http://www.cbsnews.com/news/caregivers-of-us-veterans-bear-scars-of-war/

Upon completion of this Module, the learner will:

4. Be able to identify causes of secondary trauma.
5. Be able to state some of the various symptoms that they may be experiencing as a result of proximity to the trauma victim.
6. Be able to connect the use of mindfulness techniques that can help build resiliency.

Lecture

Speaker TBA

Begin journal of symptoms

Module 3: Parenting Changes Post-Deployment

Families of returning veterans need to find ways to reintegrate the returning veteran. Trauma that results from being in combat can complicate this process. This module will help military families understand the changes that occur upon return from combat and offer ways to help reintegrate the veteran family member while building resiliency skills.

Module Materials:

1. MacDermid-Wadsworth, S. & Riggs, D. (2013), Military deployment and its consequences for families (risk and resilience in military and veteran families). New York, NY: Springer Science& Business Media.
2. Nadel, C. (2010), Daddy's home: explaining PTSD to children. Arlington, VA: Mookind Press.
3. University of Minnesota, Department of Social Sciences (2015), Resources for Families, retrieved from http://www.cehd.umn.edu/fsos/projects/adapt/resources.asp.

Upon completion of this Module, the learner will:

1. Be able to identify the ways in which their family has faced challenges with reintegration of the returning veteran.
2. Be able to identify parenting challenges they have faced with the returning veteran with PTSD.

Lecture

Speaker TBA

Journal assignment:

Continue journaling about the parenting challenges faced by the family when the veteran returned with PTSD, Traumatic Brain Injury, and any other medical problems that may be present.

Module 4: Managing Crises

Combat and the after-effects of PTSD create problems for the returning veteran and their families. PTSD leaves the veteran in a state of overly reactiveness. Small things can set

the stage for a strong emotional reaction that families may be unprepared to deal with. This module explains the dynamics of this and offers strategies to manage the crisis in ways that support the family structure.

Module Materials:

4. MacDermid-Wadsworth, S. & Riggs, D. (2013), Military deployment and its consequences for families (risk and resilience in military and veteran families). New York, NY: Springer Science& Business Media.
5. Nadel, C. (2010), Daddy's home: explaining PTSD to children. Arlington, VA: Mookind Press.
6. Collateral Damage: The Mental Health Issues Facing Children of Veterans, retrieved from http://www.cbsnews.com/news/collateral-damage-the-mental-health-issues-facing-children-of-veterans/.
7. Operation Emotional Freedom website: http://www.operation-emotionalfreedom.com/
8. Fink, S.,(2013), Crisis communications: the definitive guide to managing the message. New York, NY: McGraw Hill Education.

Upon completion of this Module, the learner will:

3. Be able to state the dynamics of PTSD and the impact it has on managing crises.
4. Be able to state the stages of a crisis.
5. Be able to identify key triggers that precipitate emotional crisis in their family.
6. Be able to state and apply the principles of managing a crisis in their family.
7. Be able to identify signs of stress and trauma in children.

Lecture

Speaker TBA

Journal assignment:

Continue journaling about the parenting challenges faced by the family when the veteran returned with PTSD, Traumatic Brain Injury, and any other medical problems that may be present. Identify some of the triggers that can lead to a highly charged emotional situation in the family.

Module 5: Mindfulness, Meditation, and other Self-Help Strategies

Some evidence-based techniques can help build resiliency and mitigate the impact of trauma. While not designed to take the place of medical care and psychological treatment, if needed, these techniques can help prevent more serious problems and mitigate the stress that is in effect when living with a PTSD victim.

Module Materials:

1. Mindfulness yoga, retrieved from https://www.youtube.com/watch?v=py7ufqJ4sLs.

2. MBSR yoga #1, retrieved from https://www.youtube.com/watch?v=_pYoDdUijY8.

3. Mindfulness Meditation in 20 minutes, retrieved from https://www.youtube.com/watch?v=64ZU2UCQdmQ.

4. Anxiety Tapping with Brad Yates, retrieved from https://www.youtube.com/watch?v=K6kq9N9Yp6E.

5. Anxiety Healing EFT Tapping 911, retrieved from https://www.youtube.com/watch?v=CKu88AY-9sI.

6. Nurrie Stearns, M., & Nurrie Stearns, R., (2013), Yoga for emotional trauma: meditations and practices for healing pain and suffering. Oakland, CA: New Harbinger Publications, Inc.

7. Emmons, H., & Kranz, R. (2006), The Chemistry of Joy. New York, NY: Simon & Schuster.

Upon completion of this Module, the learner will:

1. Be able to identify key mindfulness practices that help them reduce stress and anxiety.
2. Be able to identify resources for themselves to continue practicing mindfulness techniques.

Lecture

Speaker TBA

Journal assignment:

Continue journaling about the parenting challenges faced by the family when the veteran returned with PTSD, Traumatic Brain Injury, and any other medical problems that may be present. Discuss the various techniques that were tried and how they affected your stress level and ability to cope.

Module 6: Evidence-Based Programs for Building Support Networks

Part of stress reduction involves social support. This module introduces the Mental Health Certified Family Peer Specialist Program and offers the participant an opportunity to understand the benefits of social support as well as benefits of becoming certified as a parent peer support person through a nationally recognized program.

Module Materials:

1. Mental Health Certified Family Peer Specialist Program, retrieved from http://www.macmh.org/programs/certified-mental-health-family-peer-specialist-program/.
2. National Certification for Parent Support Providers, retrieved from http://www.ffcmh.org/certification.

Upon completion of this Module, the learner will:

3. Be able to identify and state the advantages of peer support.
4. Be familiar with the options for providing support at the peer level for other families.
5. State advantages of becoming certified as a peer support specialist.

Lecture

Speaker: TBA

Journal assignment:

Continue journaling about the parenting challenges faced by the family when the veteran returned with PTSD, Traumatic Brain Injury, and any other medical problems that may be present. Discuss the various types of support that is available to the participant as well as what types of support might also be helpful to better support them.

Appendix B: Implementation Plan

Inputs:

- Group of stakeholders: DNP student, Military representative, Preceptor, Grant Administrator, Technology Support Staff, Related Content Expert
- Financial support: Grant funded
- Human Resources for the Project: Student, Technology Support Staff, Preceptor
- Other Resources: Student time, Recording equipment, Staff time, Space on Webpage (MACMH)

Outputs:

Activities:

- Content Validation
- Learning Modules converted to webcasts
- Upload edited webcasts to web site
- Track usage of the individual and collective modules
- Evaluation Tools

Participants:

- DNP student
- Preceptor
- Tech Support Staff
- Content Experts
- Grant Administrator

Outcomes:

Short Term:

- Enhanced knowledge of secondary trauma

Medium Range Term:

- Participants will use skills and information to reduce symptoms of secondary trauma

Long Range:

- Improved Quality of Life
- Reduced visits to primary care
- Reduced lost work/school time

Appendix C: Evaluation Plan

Evaluation Plan

The evaluation plan was developed with the outcomes in mind, and also to evaluate some of the logistics, such as video quality and technical issues. This was developed with input from members of the project group. This program evaluation was developed by using the Logic Model (Kettner et al., 2013). Due to the unique aspects of this program (web-based and difficulty in predicting who will answer), the project team opted for evaluation on an individual basis rather than the participants as a whole.

The Logic Model has three main components: inputs, outputs, and outcomes ("Logic Model," 2004). This model has been used in community programs as it can be placed in a visual presentation that shows the relationship between these components (Hulton, 2007). The BRACE program has as its objectives measurable outcomes that will fit with the Logic Model. These include identification of new skills, attitude of hopefulness, use of skills, and improved family relationships, which will fit well within the various levels of outcomes, as depicted below:

Data collection will be over the Minnesota Association of Children's Mental Health (MACMH) website. The outcomes that will be measured are identified above in the Logic Model depiction in the Appendix. One of the tools that will be used is the Short Form Health Survey (SF-36). When a participant opens up the modules for the BRACE program, there will be a few questions without requiring any identifying information, but with the option and encouragement to leave an email address for a follow up SF-36 evaluation in 6 month and 18 month intervals. Follow up is completely voluntary, however, it is hoped that there will be a desire to help improve the program and make it more relevant and helpful to others.

The SF-36 questionnaire involves a series of 36 questions and is a generic measure that is internationally accepted of the Health Related Quality of Life (HRQoL) questionnaire (Nilsson et al., 2013). There are 8 categories that contain questions that are subjectively stated evaluations of health status (Nilsson). The categories include physical functioning, role limitations secondary to physical limitations, pain, general health, vitality, social functioning, role limitations due to emotional problems, and mental health (Nilsson). Possible scores range from 0 to 100, and the higher the score, the more positive the health status (Nilsson). The SF-36 is well tested and proven to be both reliable and valid with satisfactory psychometric properties (Nilsson). For the purposes of BRACE, the measures for both physical health and mental health are the target symptoms to manage and reduce. Therefore, these categories will help to evaluate the effectiveness of educational components of the BRACE program.

The SF-36 questionnaire will be placed at the beginning of the web-based program and converted into an electronic version for ease of use. Online scoring is available once permission to use is obtained. Permission is being sought for use and will be placed in the Appendix once received. No modifications will be needed as each category fits well within the areas to be evaluated for the BRACE program. The project team chose as its target a goal of a 10% increase per individual participant within a 6 month time frame, and a 20 % increase by an 18 month time frame. This was determined by the project team due to the unique circumstances of this program: it is web-based, with voluntary participation, and individuals may not take all of the modules in order, or even at all.

As to threats and error, there are minimal risks to these, as the program will be available anonymously to users, and the data gathered will be used only to evaluate the

program effectiveness and make modifications as needed. An invitation will be extended to request that participants return to the web site in six months, and again in 18 months (one year from the 6 month evaluation) to evaluate longer range effectiveness. Anonymity is important with this population due to the fear of reprisal for mental health problems (Psychiatric Times).

In order to use the SF-36, permission for use needs to be obtained through the SF-36 organization (SF-36). A request has been made for permission to use this tool. Once the permission is obtained, instructions will be obtained for the necessary steps for its use (SF-36). These steps need to be taken in order to assure that scientific standards for the surveys and also to allow for ease of scoring algorithms (SF-36).

References:

Nilsson, M., Forsberg, A., Lennerling, A., & Persson, L. (2013). Coping in relation to perceived threat of risk of graft rejection and Health-Related Quality of Life of organ transplant recipients. *Scandinavian Journal of Caring Sciences,* 27(4), 935-944.

SF-36.org (2015). SF Licenses, retrieved from http://www.sf-36.org/wantsf.aspx?id=1.