A QUALITATIVE STUDY OF MILITARY VETERANS' RESILIENCE AND BODY ESTEEM FOLLOWING COMBAT-RELATED LIMB AMPUTATION

by

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STATEMENT OF DISSERTATION APPROVAL

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ABSTRACT

This dissertation is presented in a three-article format. Article 1, "The impact of disability on body esteem: A review of the literature," is a review that examines the existing literature regarding body esteem in individuals with various disabilities. The purpose of the article was to highlight principal findings and identify areas that require further research.

Article 2 is entitled, "Qualitative research contributions to military post combat transition and reintegration: A review of the literature." The purpose of this review was to examine the existing qualitative literature regarding military postcombat transition and reintegration. Four categories were identified, which included (1) psychosocial adjustment and coping; (2) physical disability adjustment; (3) protective factors; and (4) transition challenges. Several themes were also distinguished within each category.

Article 3, "A qualitative study of military veterans' resilience and body esteem following combat-related limb amputation," included semistructured interviews with six former service members who had sustained a military combat-related limb amputation, and their spouses. Semistructured interviews provided an opportunity to explore the resilience and body esteem of each amputee, as well as the views of the respective spouses. The Metatheory of Resilience and Resiliency was utilized to guide content analysis of the interviews. Open, axial, and selective coding were used to analyze the data.

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CHAPTER 1

INTRODUCTION

During the Vietnam conflict, nearly 25% of wounded service members succumbed to their injuries, largely because of the inability to reach mobile surgical hospitals (Arredondo, Foote, Pruden, McFarland, & McFarland, 2010). With improvements in protective gear and rapid medical evacuation to medical and surgery units, nearly 90% of service members wounded during the Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) conflicts survived. While the core body is well protected, arms and legs are vulnerable to blast injuries. Rapid evacuation to military medical centers in the United States results in the medical care system seeing more severely wounded service members with major limb loss surviving and requiring extensive rehabilitation (Arredondo et al., 2010). After the service member is injured, he or she begins the road to recovery. Although this process is life long, the advantages of being a veteran include access to multiple support systems and the development of innovative medical care for combat injuries.

This research builds on previous work by continuing to explore how individuals cope with and recover from amputations, with specific attention to how body esteem may or may not affect the injured individual's ability to reintegrate back into society in general. The experiences of combat amputees have been explored through the lens of the Metatheory of Resilience and Resiliency. It is important to utilize this theoretical

framework because it gives structure to the understanding of the recovery process. The theoretical framework also provides a means to conceptualize relationships between body esteem, resilience, and reintegration following amputation. These relationships are important to examine given that the physical structure of the amputee's body has significantly changed.

Specifically, this research examines the relationship between resilience, body esteem, and reintegration. Resilience refers to the ability to maintain stable, healthy levels of functioning, and the capacity for generative experiences and positive emotions following highly disruptive events (Bonanno, Galea, Bucciarelli, & Vlahov, 2007). Body esteem refers to one's view of the physical self in relation to feelings of self-worth and life purpose (Akyol, Tander, Goktepe, Safaz, Kuru, & Tan, 2013). Reintegration refers to the degree to which one is able to integrate with previously known communities and networks of support (Richardson, 2002). This work examines the experiences of six amputees following the extremely adverse event of being traumatically injured. Some amputees may be able to resiliently reintegrate, meaning that they are able to thrive and perceive their bodies and minds as stronger and more capable than before the injury. Other amputees may reintegrate with loss, meaning that they are not be able to accept their physical changes or psychological changes that may accompany the physical changes (Richardson, 2002). The result of this research is an increased understanding of how some individuals with amputations experience the trauma, what personal resilient traits have guided their recovery process, and how they come to some level of integration back with the society in which they functioned prior to the amputation.

Three-Manuscript Format

The following dissertation focuses on examining issues related to resilience, body esteem, and reintegration. It is presented using a three-manuscript format. The subsequent three chapters will be as follows:

1) Chapter 2: "The impact of disability on body esteem: A review of the literature," is a review that examines the existing literature regarding body esteem in individuals with various disabilities. The purpose of the article was to highlight principal findings and identify areas that require further research.

2) Chapter 3: "Qualitative research contributions to military postcombat transition and reintegration: A review of the literature" examines the existing qualitative literature regarding military postcombat transition and reintegration. Four categories were identified, which included (1) psychosocial adjustment and coping; (2) physical disability adjustment; (3) protective factors; and (4) transition challenges. Several themes were also distinguished within each category.

3) Chapter 4: "A qualitative study of military veterans' resilience and body esteem following combat-related limb amputation" included semistructured interviews with former service members who had sustained a military combat-related limb amputation. Five of the spouses were also interviewed in order to gain additional insight from the partner point of view. One spouse was not able to participate due to researcher's inability to contact her. In lieu of a grounded theory approach, which is common in qualitative research, the Metatheory of Resilience and Resiliency was utilized to guide the analysis of the interviews with these 6 male veterans, and 5 female spouses, with the understanding that the interviews were semistructured and open-ended in nature.

Open, axial, and selective coding were used to analyze the data. The remaining chapter discusses limitations, implications for the field of Health Promotion and Education, and personal reflections of the researcher.

Literature Review

This review defines the nature of resilience and body esteem, and describes how these concepts have been explored in relation to traumatic amputations. Resilience has long been a topic of research interest, and more so recently within military and veteran populations, with the vast numbers of troops having been sent, and now returning from Iraq and Afghanistan. However, no published qualitative studies have been identified that focus on body esteem, resilience, and the reintegration process of military personnel following a combat-related amputation.

Body Esteem and Amputation

Within the context of this review, body image and body esteem are interchangeably used and are defined as a person's perception, positive or negative, of body size, shape, and appearance (Reel & Beals, 2009). In Western cultures, body image seems to be based on youth and physical attractiveness. This emphasis can overshadow other personal attributes (Taub, Blinde, & Greer, 1999). The importance given to the physical body may have a negative impact on people with an amputation, especially on body perception (Sousa, Corredeira, & Pereira, 2009). Perception of everyday reality depends on one's point of view of the world and the body's way of being-in-the-world. The actions of the body construct a world of social relations (Sousa et al., 2009). In this way, the body can only be seen as deficient by comparison, assuming that others' views are considered important (Crossley, 2001). A person with an acquired amputation

experiences a fundamental being-in-the-world change that creates a need to relearn and reformulate ways of living life. The loss of a limb is perceived as a loss of part of the self, and as a loss of the "lived-body" (Goodwin, Thurmeier, & Gustafson, 2004).

After an amputation, one is faced with loss of functionality, and often times, loss of ability to continue working, which then can have a profound effect on self-concept (Horgan & MacLauchlan, 2004). Social discomfort and body image anxiety tend to be associated with a poor adjustment in terms of greater activity restriction, depression, and generalized anxiety (Horgan & MacLauchlan, 2004). Body image experiences of individuals with an acquired amputation present distinct degrees of adjustment to a new reality. Social barriers that individuals with amputations have to face on a daily basis become apparent in prejudiced and discriminatory conceptions that have been embedded in a society that struggles to accept body differences. As such, resilience is an important aspect to explore in relation to the body esteem of those who have visible physical differences.

Body Esteem and Resilience

Individuals with visible physical differences tend to struggle with their body esteem namely because the myth of bodily perfection is prevalent throughout Western society. Body image is embedded within historical, cultural, and social settings, and it is responsive to everyday experience (Sousa et al., 2009). The body is also viewed as a means for being productive. People with disabilities have emphasized how important it is for them to work, not only to provide stable income, but also as a means of maintaining self-respect and giving meaning to life (Schoppen, Boonstra, Groothoff, DeVrie, Goeken, & Eistma, 2001). Social discomfort and body image anxiety tend to be associated with

poor adjustment in terms of greater activity restriction, depression, and generalized anxiety (Horgan & MacLachlan, 2004). There is evidence that sociocultural norms for the ideal body influence individuals to base their self-worth more strongly on appearance (Strahan, 2008). Those with visible disabilities have reported that they often experienced rejection in social settings (Stone, 1995). When there is a sudden traumatic change to body image, typically it creates anxiety and is perceived as a distortion of self (Aamot, 1978). Even if plastic surgery or prosthetic placement creates a socially acceptable body, individuals may have difficulty adjusting their mental image with the new image (Aamot, 1978). A growing amount of more recent literature concerning body esteem can be found in research concerning eating disorders and their associated body image symptoms (Reel & Beals, 2009; Stice & Hoffman, 2004).

In related studies, resilient qualities have been found to be protective factors against body dissatisfaction (Cook-Cotone & Phelps, 2003). Choate (2005) proposed a body image resilience model where five specific protective factors were identified that serve as the foundation for the resilience model. The protective factors include (1) family-of-origin support, (2) gender role satisfaction, (3) positive physical self-concept, (4) effective coping strategies, and (5) sense of holistic balance and wellness. Furthermore, the Metatheory of Resilience and Resiliency suggests that, among several resilient drives, the drive for noble resilience includes an innate desire to sustain a sense of self-worth, which encompasses physical self-esteem (body esteem) and purpose in life. Thus, body esteem has been theorized to be an integral component of an individual's ability to bounce back following trauma or adversity (Richardson, 2002). The nature of one's sense of the physical self and how this is connected to one's self-worth and purpose

in life remains to be of great interest to researchers when exploring resilient factors in combat wounded military personnel.

Resilience

Psychological resilience is important for the military community with regard to keeping military members and leaders fit for duty and protecting the health and wellbeing of military families (Meredith, 2011). The resilience concept has been the cornerstone of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) Resilience Program, which was created in 2007 as an effort to shift the culture within the military away from an illness-focused medical model of care to a model that focuses on psychological health (Meredith, 2011). Resilience research efforts have exponentially increased in the military as a result of the military activities and related consequences during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), specifically with regard to the factors that contribute to resilience (Bonanno, 2004; Burnell, 2006; Butler et al., 2007; Dolan & Adler, 2006; Gillham et al., 2007; Haglund et al., 2007; King et al., 2004; Maguire & Hagan, 2007; Meredith et al., 2011; Norris & Stevens, 2006; Tugade & Fredrickson, 2004; ; Van Breda, 1999a; Van Breda, 1999b) and the resilience programs that are operating within the military infrastructure (Adler et al., 2009; Bowles & Bates, 2010; Decker, 2007; Deuster et al., 2007; Jarrett, 2008; Ritchie et al., 2008; Sammons & Batten, 2008; Sharpley et al., 2008; Waynick et al., 2006; Williams et al., 2007; Warrior Mind Training, 2012).

Resilience in general has long been a concept of research interest. Numerous resilience-based theories and research projects have been explored and implemented throughout the past several decades (Emmons & Crumpler, 2000; Greene et al., 2003;

McCullough, 2000; Richardson, 2002; Rutter, 1985; Ryan & Deci, 2000; Seligman, 2000; Ungar, 2003; Werner, 1982). The majority of theories incorporate the notion that resilience is a dynamic process that changes over time (Fletcher & Mustafa, 2013). Patterson (1988) described a process of families balancing demands and capabilities as they interact with family meanings. The outcome is either family adjustment or adaptation. Polk (1997) introduced a nursing model of resilience where resilience is conceived as the result of a synergistic relationship between four patterns: dispositional, relational, situational, and philosophical. Haase (2004) presented an adolescent resilience model based on the interaction of concepts that are categorized as one of three factors: protective (e.g., family protective, social protective), risk (e.g., individual risk, illness-related risk), and outcome (e.g., resilience, quality of life). Agaibi and Wilson (2005) presented a generic model of resilience in response to psychological trauma. The model is an integrative, person-environment approach, emphasizing the interaction between five interrelated variables: personality, affect, modulation, ego defenses, coping style and mobilization, and utilization of protective factors. Gillespie, Chaboyer, Wallis, and Grimbeek (2007) suggested that five variables explain 60% of the variation in resilience: hope, self-efficacy, control, coping, and competence. A grounded theory of personal resilience was presented by Denz-Penhey and Murdoch (2008) which suggested that resilience consists of five dimensions: connectedness to one's social environment, one's family, one's physical environment, one's experiential inner wisdom, and one's strong psychological self. VanVliet (2008) also introduced a grounded theory of shame and resilience in adulthood, and suggested a rebuilding of the self as the main category that signifies the process of recovering from a shame event. Self-reconstruction occurs

through five main processes: connecting, refocusing, accepting, understanding, and resisting. Leipold and Greve (2008) indicated that resilience results from coping processes (e.g., assimilation and accommodation), which are influenced by personal and situational conditions. Resilience is considered to be an important part of the conceptual bridge between coping and development. Galli and Vealey (2008) introduced a conceptual model of sport resilience where adversity, sociocultural influences, and personal resources were factors discussed by athletes as being at the center of the resilience process (agitation), which consequently lead to positive outcomes (e.g., learning and perspective). Mancini and Bonanno (2009) hypothesized that individual differences (personality, a priori beliefs, identity, complexity, positive emotions, and comfort from positive memories) are proposed to have direct and indirect effects on coping with loss. Appraisal processes and social support play a critical role as shared mechanisms of resilience. One final grounded theory suggested that numerous psychological factors (relating to a positive personality, motivation, confidence, focus, and perceived social support) protect the world's best athletes from the potential negative effect of stressors by influencing their challenge appraisal and meta-cognitions. These processes promote facilitative responses that precede optimal performance (Fletcher & Sarkar, 2012).

The concept of resilience continues to evolve through current research efforts that provide new insights to this phenomenon and its related factors. Additional qualitative inquiry may support a deeper understanding of the nature of resilient qualities in relation to the development and maintenance of wellbeing in military personnel and veterans.

Resilience and Amputation

Resilience and how it relates to body esteem and self-concept is important to consider for individuals who have sustained a military combat-related amputation because these individuals are faced with several life-altering adjustment issues when returning from deployment with a disabling injury. There appears to be a dearth of research pertaining specifically to resilience and amputation. Most studies are quantitative in nature, and report findings in the areas of psychosocial adjustment and posttraumatic growth with regards to amputation (Horgan & MacLachlan, 2004; Benetato, 2011). Other studies focus more on adaptation to prosthetic limb use (Murray, 2005). Also, since there is a dearth of research on body esteem, resilience, and reintegration of military veterans following combat-related amputation, this gap presents a need for qualitative research that can serve to strengthen existing resilience programs and recovery efforts for military service members and veterans.

Study Overview

The purpose of this dissertation was to learn about individual lived experiences of sustaining a military combat-related amputation, with specific focus on how the veteran's injury has affected body esteem, and how body esteem and personal (resilient) characteristics are determining the veteran's path of reintegration. This qualitative study used a purposeful sample of military veterans and their spouses to develop an in-depth understanding of the reintegration process following amputation. The main research questions include:

1. What is the nature of individual experiences of sustaining a combat-related amputation?

2. In what ways, if at all, has the amputation affected the veteran's body esteem?
3. How do veterans with amputations, and their spouses describe the role of personal resilience in the paths of reintegration?

Study Methodology

Qualitative Research

Based upon these research goals, the Metatheory of Resilience and Resiliency was chosen as a conceptual framework (Appendix F). This methodology fits well with the study's main goal of understanding the reintegration process of military service members who sustained a combat-related traumatic limb amputation.

Paradigm Guiding the Research

A constructivist research paradigm was chosen. A research paradigm is guided by five principles: ontology (the nature of reality), epistemology (the relationship between researcher and participant), axiology (the role of the researcher's values), rhetorical structure (the language used to present the results), and methodology (the procedures of research) (Cresswell, 1998; Ponterotto, 2005). Each of these principles explains assumptions associated with a constructivist paradigm.

Ontology

The ontological perspective used to guide this study suggests that no objective reality exists. Each individual's reality is a social construction based on concepts, models, and schemes that are invented in order to make sense of their own experiences (Bloomberg & Volpe, 2012; Handbook of Qualitative Research, 2000; Ponterotto, 2005).

Epistemology

Part of capturing each participant's reality and discovering meaning is through the interaction between the researcher and participant (Morse et al., 2009). It is believed that both the researcher and participant are changed in some way because of their interactions with one another.

Axiology

According to a postpositivist paradigm, research should be objective and unbiased. However, according to the constructivist paradigm, the researcher's individual values and biases can have an important role in the research process. For this study, the researcher's experiences were a means to dialogue and connection with the participants (Ponterotto, 2005).

Rhetorical Structure

A third-person rhetorical structure is used in discussing past research and current results. A first-person structure would be used when the researcher is focusing on personal experiences related to the research topic (Ponterotto, 2005).

Methodology

A qualitative approach was selected as it provides "a wide range of ways to explore and understand data that would be wasted and their meaning lost if they were preemptively reduced to numbers" (Richards & Morse, 2007, p. 1). Conducting this study was a deductive process in which general ideas within the conceptual framework were utilized to define and give meaning to the components of the specific stories and cases. Individual stories from participants were drawn upon to explain meaning and

support the Metatheory of Resilience and Resiliency with regard to the participants' reintegration following combat-related traumatic limb amputation (Cresswell, 1998).

Researcher as Instrument

The researcher is considered to be the "instrument" used to collect data. Consequently, it is important that the researcher account for personal experiences and acknowledge how personal values, beliefs, and culture may affect the process and quality of data collected (Marshall & Rossman, 2006; Richards & Morse, 2007). One researcher suggested, "the art and science of qualitative research is the ability to provide a credible interpretation of the findings while acknowledging [these] biases, assumptions and feelings" (SooHoo, 2008, pp. 26-27). In acknowledging personal values and experiences, I will be better equipped to present credible findings based on the participants' experiences.

I have taken courses in research design and qualitative research, which I believe have sufficiently prepared me to conduct this qualitative study. Additionally, I have been a Licensed Clinical Social Worker (LCSW) since 1999, specializing in the treatment of posttraumatic stress disorder (PTSD), and am currently operating as the Director of Behavioral Health for the Utah Army National Guard in a military duty status. Furthermore, I have been a U.S. Army Master Resilience Trainer for several years. I strongly believe that this background, along with a long family legacy of military service and leadership, provides rich personal preparation for me to conduct this study.

Participants

Selection Criteria

Participants were purposefully selected based on the following sampling criteria: (a) men (and their respective spouses) between the ages of 18 and 40 who sustained a combat-related traumatic limb amputation; (b) currently serving or have served in one of the branches of the United States Armed Forces; (c) were willing and able to share their experiences of reintegration following injury; (d) fluent English speaking.

No specific geographic parameters were determined for this study. However, the Salt Lake Veterans Affairs (VA) was instrumental in providing access to participants for the study. Thus, all participants resided within the service area of the Salt Lake VA. The age parameters were determined in order to capture military service members who had been injured during Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF), both of which are Post 9/11 service periods. The male gender was selected simply to narrow the focus of the study. The spouses were recruited through the male veteran participants. And finally, due to the qualitative nature of this study, it was important that participants (veterans and their spouses) were willing to share their experiences and that they spoke fluent English.

Sampling Procedures

Purposeful sampling was used initially to recruit information-rich cases that matched the above study criteria. Theoretical sampling was also used to select individuals who would best contribute to the chosen conceptual framework, the Metatheory of Resilience and Resiliency. This included obtaining more information from participants who had already been selected, and recruiting more participants that met the

sampling criteria and contributed to the chosen theory (Bloomberg & Volpe, 2012; Corbin & Strauss, 2008). Sampling and data collection were immediately followed by data analysis.

Typically, theoretical sampling and data analysis is an iterative process that continues until saturation is reached. Saturation occurs when categories are well-defined and fresh data no longer bring new insights (Charmaz, 2006; Corbin & Strauss, 2008). Thus, it is often difficult to determine a sample size prior to completing the study. However, because of time constraints associated with this study, the goal for this study was to obtain 6 to 8 interviews from approximately 6 to 8 veterans and their spouses, with short follow-up discussions with each participant (Cresswell, 1998). Upon completion of the study, there were 11 interviews from 6 veterans and 5 spouses.

Recruitment

The veteran participants in this study are current outpatients at the Salt Lake VA. The spouses were recruited through the veteran participants. As the Principal Investigator (PI), I have established professional relationships with several VA and University of Utah researchers who work with VA providers in the Physical Therapy/Occupational Therapy Clinic (PT/OT). This study was made known to the PT/OT providers through a study flyer (Appendix A) that University of Utah researchers shared with the VA providers. I then contacted one of the providers about potential assistance with recruitment. The provider, in turn, shared the study information with several of her veteran patients who met the study criteria. In addition, 1 veteran participant was recruited through the Army Wounded Warrior Project Manager for the Salt Lake Region, and 1 veteran participant was recruited through word of mouth. All

veteran participants in this study are current outpatients at the Salt Lake VA. Spouses were recruited through their veteran husbands.

Sources of Data

Participant Interviews

The goal of interviewing participants was to "capture the deep meaning of [their] experience in [their] own words" (Marshall & Rossman, 2006, p. 55). To have an effective interview, it was important to ensure that the interviewee was as comfortable in their surroundings as possible (Gillham, 2000; Richards & Morse, 2007). To ensure this, participants were given the option of meeting with me at either the VA or the participant's home.

I began the initial interview by getting to know the participant and explaining the purpose of the research study. Participants were asked to consent to an audio recording of their interview, which was then used as a source of data in the research study (Appendix B). I encouraged participants to ask any questions they had and to stop the interview at any time if they felt uncomfortable or did not wish to proceed.

Participants were also asked to provide a small amount of demographic information (Appendix C). Following completion of the demographics questionnaire, the interview began with me asking questions based upon a semistructured interview guide created for the purposes of this study (Appendices D and E). Having a semistructured guide allowed me to gather information pertaining to the goals of the study while also following the lead of those being interviewed.

At the completion of the interview, participants were thanked and given a gift card for their time. Interviews lasted approximately 40-90 minutes. Some participants

were asked follow up questions via email. Questions for the follow-up email were based upon data that were previously collected. Interviews were conducted until I felt saturation was reached. Following data analysis, all participants were asked to review the findings of the study to ensure that I accurately reflected the experience of each participant.

Field Notes

I kept field notes concerning all interactions and interviews with each participant. Field notes were recorded following each interview and allowed me to capture details about the participants, interview locations, atmosphere, interpersonal interactions, and any insights or interpretations gained through the interview process (Marshall & Rossman, 2006).

Data Analysis

Data Management

Successful data analysis begins with proper data management techniques (Bloomberg & Volpe, 2012). Interviews were transcribed verbatim as soon as possible, saved, and stored securely on a password-protected computer. Transcript files were organized according to the participant's first name or nickname, and the date of the interview. Transcripts were analyzed using a manual process.

Coding

Specific systematic coding procedures were used for data analysis, which included open coding, axial coding, and selective coding (Corbin & Strauss, 1990). Codes were represented through a combination of colors and key words (Marshall &

Rossman, 2006). A coding scheme was created to define each code used (Bloomberg & Volpe, 2012). Open coding, axial coding, and selective coding are subcategories of Coding.

Open Coding

First, open coding was used to break data down into categories and subcategories. These categories were developed using a constant comparative approach in which each event/action/interaction was compared to others in search of similarities and differences (Corbin & Strauss, 1990; Cresswell, 1998). This stage of coding required the use of various analytic tools, such as questioning the meaning of words, obtaining various perspectives, drawing upon personal experiences, and examining emotions expressed by participants (Corbin & Strauss, 2008).

Axial Coding

Second, axial coding was used to explore the relationships between categories and their subcategories (Corbin & Strauss, 1990; Cresswell, 1998). Glaser's (1978) suggestion of examining the causes, contexts, contingencies, consequences, covariances, and conditions related to each category and subcategory were applied.

Selective Coding

Last, selective coding was used to choose a core category that represented the central phenomenon in the study. All other categories were organized around and related to the core or central phenomenon (Corbin & Strauss, 1990).

Memoing

Memoing was used throughout the entire data analysis process to record ideas and notes about the data. Memoing aided in the process of asking questions and making connections about the data (Bloomberg & Volpe, 2012; Mayan, 2009).

Visual Representations of Data

Data Summary Cards

During open coding, data summary cards were used to display each category along with its subcategories. All transcripts were divided according to how each word/sentence/phrase had been coded (Bloomberg & Volpe, 2012). The summary cards were then arranged according to categories and subcategories.

Concept Maps

During axial and selective coding, concept mapping was used to visually express the relationships and connections between categories, subcategories, and the central phenomenon. Concept maps were also used to help identify any holes or gaps in the theory (Butler-Kisber, 2010).

Trustworthiness

When conducting research, it is important to know that the data were correct and accurately represented the experience of each participant. Lincoln and Guba (1985) suggested four principles that must be addressed in order to meet these goals: credibility, transferability, dependability, and confirmability.

Credibility

Credibility involves spending long amounts of time with participants and using multiple sources of data and methods (i.e., triangulation) in order to give an accurate description of participants' experiences. Credibility for the current study was established by (1) spending extensive amounts of time reviewing audio recordings and transcripts, (2) triangulating various data sources (e.g., interviews, field notes, memos), and (3) conducting member checks in which the researcher presented the findings and interpretations to each participant and ensured that the findings were consistent with the participant's experience (Cresswell, 1998).

Transferability

Transferability is the ability to transfer information gained from the study to other settings and individuals. Transferability was achieved by providing a very detailed and thick description of the reintegration process and components within that process. Taking extensive field notes and being immersed in the data allowed the PI to discover a more detailed description of the data.

Dependability and Confirmability

Dependability and confirmability establish the quality of the data and how much the findings are supported by the data. Dependability and confirmability were established through an external audit conducted by another researcher who was not directly involved in the study. This audit helped manage the assumptions of the PI demonstrating that the findings were accurate and could be confirmed by another expert in the field.

A variety of conceptions of qualitative research exist, and as such, it is

noteworthy to mention that there are competing claims as to what counts as good-quality work. These competing claims revolve around the issue of criteria (e.g., trustworthiness) and how they are used to pass judgment on qualitative research (Sparkes & Smith, 2009). Lincoln and Guba (1985) acknowledge a criteriological view that seeks to judge all forms of qualitative inquiry against a preestablished notion of trustworthiness (e.g., credibility, transferability, dependability, and confirmability), noting that the more techniques that are used, the more trustworthy the study. It is important to realize that perfect studies are seldom, if ever, conducted and that all investigations have strengths and weaknesses (Sparkes & Smith, 2009). Alternatively, relativism suggests that criteria should not be determined in advance of any particular piece of inquiry and rejects claims that anyone can gain access to a social reality in ways that are independent of our interests, purposes, and languages used. As such, Sparkes and Smith (2009) indicate that reality itself and method alone cannot provide a referent point for sorting out claims to knowledge, or "good" and "bad" research. From this perspective, Smith (1993) suggests that the researcher describe what one *might* do, rather than mandate what one *must* do across all contexts and on all occasions prior to any piece of research being conducted.

Ethical Considerations

Approval to conduct the study was gained from the Institutional Review Board (IRB) at the University of Utah. My main goal was to ensure that each participant was treated ethically, had a positive experience, and had the freedom to share their experiences.

Risk to Subjects

There were minimal risks associated with participating in this study. I anticipated that some participants might experience unpleasant feelings as a result of sharing their experiences and other sensitive information with the me. Consequently, I (being a mental health provider) offered several methods of contacting me for continued support and appropriate referrals. There was some risk that identifying participant information could be seen by others on the research team; however, the risk was very minimal. Precautions were taken to store all identifying information securely.

Protection Against Risks

Participation was completely voluntary. Individuals who decided to participate were asked to sign a consent form that explained the study procedures, risks, and benefits to the participants (Appendix B). Even if a participant signed the consent form, they were still free to withdraw from the study at any time and without providing a reason. Participants were allowed to skip any questions that they did not wish to answer, and they were able to withdraw from the study at any time without any consequence. This, hopefully, helped alleviate any concerns that participants may have had with participating in the study.

Participants were also asked to consent to an audio recording of their interview, which was used as a source of data in the research study. The audio files were labeled by the participants' first names or nicknames in order to keep all of their information confidential. For further protection, recordings and any other study related materials (e.g., field notes, transcripts, memos) were kept in secured files. Computer data records were also password protected. Only I had access to participant contact information.

Results of the study may be published or presented at conferences; however, participant full names and other identifying information will be kept private.

Potential Benefits

The potential benefits for participants included helping researchers understand how to better help those recovering from traumatic injuries. While there were no guaranteed benefits to the participant, it was expected that participants would benefit by learning more about themselves and resilient reintegration after a major life disruption. Participants were compensated with a $25 Target gift card for their participation.

Conclusion

Due to the vast number of military troops returning from Iraq and Afghanistan, there has been an increased demand for services to those who have sustained amputations. As such, there has been a growing body of research pertaining to the struggles that returning military personnel face following traumatic combat-related injuries.

This study asks the questions, "What is the nature of individual lived experiences of sustaining a combat-related amputation? In what ways, if at all, has the amputation affected veterans' body esteem? How do veterans and their spouses describe the role of personal resilience in the paths of reintegration?" This qualitative study utilized a purposeful sample of military veterans and their spouses to develop an in-depth understanding of their reintegration process following amputation. This qualitative inquiry will add to a growing body of case study literature, and although qualitative findings are not generalizable to larger populations, the findings can provide transferability to similar populations. Additionally, the profound understanding that

results from such inquiry can certainly contribute to future military resilience education, maintenance, and enhancement that has not yet been fully explored and implemented, especially with respect to the altered physical body following amputation. Such research can then serve to strengthen existing resilience programs and recovery efforts for military service members and veterans (see Appendix H for a list of existing military resilience programs)

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CHAPTER 2

THE IMPACT OF DISABILITY ON BODY ESTEEM: A REVIEW OF THE LITERATURE

Abstract

The purpose of this review was to examine the existing literature regarding body esteem in individuals with various disabilities in order to highlight principal findings and identify areas that require further research. Methods: Relevant articles were located through PubMed, PsychINFO, PsychARTICLES, Sciencedirect, and the screening of bibliographies. Results: The available data suggest that individuals with disabilities, which include but are not limited to 1) limb amputations, 2) other acquired mobility injuries (e.g., orthopedic injuries, spinal cord injuries), 3) burns and scars, 4) other visible impairments or alterations (e.g., cancer/cancer treatment, cystic fibrosis, scleroderma), 5) posttraumatic stress disorder (PTSD) (and pervasive comorbid disorders), and 6) acquired brain injury (ABI) (e.g., traumatic brain injury (TBI), stroke), tend to have a significant deterioration of perceived body esteem. Conclusion: Further exploration regarding the manner in which individuals with disabilities interpret and perceive their body esteem is necessary in order to provide an increased variety of effective interventions and treatments.

Introduction

The impact of disability on body esteem is an important area of investigation that merits additional attention in the research literature. Concerns about physical appearance are of great importance in a society that places a high premium on physical attractiveness, and perceived physical attractiveness is associated with many important social advantages and personal characteristics (Lanlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000). Body esteem may play a significant role in the lives of individuals with disabilities, hence this subject matter warrants increased investigation.

This review identifies known studies that address the effects of various disabilities on body esteem. Throughout the literature, definitions of body and body esteem noticeably vary. Drench (1994) proposed that body image is the integration of how a person looks to others, and how he/she perceives this appearance (as cited in Yuen & Hansen, 2002). Drench's definition emphasized the influence that societal values have on body image. According to Taleporos and McCabe (2001), body image can be viewed as the interaction between affective, cognitive, and physical elements of self.

Taleporos and McCabe (2002) also defined body esteem as the appearance, function, form, and desirability of one's own body, which is influenced by environmental and individual aspects. These definitions highlight the interplay of body image with identity. Thus, the authors defined body image as a blend of an individual's perspective and the environmental influences on the body. Their definitions point to the link between one's thoughts about one's body, and one's feelings about what the ideal body constitutes. White (2000) explained that dimensions of one's body experience are highly subjective, and do not necessarily reflect objective reality. As such, they comprise

thoughts, feelings, and perceptions, which are multifaceted, and include elements such as body size, function, and competence.

In many ways, body image dimensions are inseparable from feelings about the self, and are inextricably linked with social factors. In this review, body esteem and body image may be interchangeably used, and body esteem will be reviewed based on a psychosocial perspective that is informed by a social model of disability. Psychosocial theory provides a framework for understanding the body image concerns of people with disabilities. Theory can define concepts such as 'stigma' and 'otherness' and can integrate the problem of exclusionary social norms and ideals (Taleporos & McCabe, 2002). The social model of disability "challenges the traditional view of disability as a medical tragedy, and replaces it with a view of disability as a social oppression…arguing that disability is socially constructed, not biologically determined" (Shakespeare, Gillespie-Sells, & Davies, 1996, p. 3).

Stigma theory also provides one of the earliest and most noteworthy psychosocial perspectives on disability. Goffman (1963) built his theory around the concept of stigma that he defined as "an attribute that is deeply discrediting" (p. 12). He distinguished between three types of stigma. The first type included abominations of the body, and within this category were the physical disabilities or disfigurements. The second type included blemishes of individual character, such as a mental disorder. He described the final category as a tribal stigma that included religious, cultural, and racial minorities (Taleporos & McCabe, 2002).

For purposes of this review, the term disability will encompass limb amputations other acquired mobility disabilities (AMD) (e.g., orthopedic injuries, spinal cord

injuries), burns and scars, other visible impairments or alterations (e.g., cancer/cancer treatment, cystic fibrosis, scleroderma), posttraumatic stress disorder (PTSD) (and pervasive comorbid disorders), and acquired brain injury (ABI) (e.g., traumatic brain injury (TBI), stroke). With regard to limb amputation, adaptation to an altered body can cause anxiety and body esteem distortion. Such distortion has been found to be associated with depression, decreased quality of life, and lower levels of self-esteem (Breakley, 1997; Fisher & Hanspal, 1998; Horgan & MacLachlan, 2004; Rybarczyk, Nyenhuis, Nicholas, Cash, & Kaiser, 1995). Other acquired mobility injuries also present struggles for individuals regarding their changed bodies and associated altered functions, activities, and societal roles. Sheldon et al. (2011) found several themes in their study of male subjects with acquired spinal cord injuries, including not feeling whole, having changes in the ways they are able to do things, feeling embarrassed with public staring, and being overly worried about appearance. Lack of sensory input/motor experience and muscle atrophy also contribute to a change in the perception and evaluation of one's body, and can have a negative impact on one's identity (Trieschmann, 1988). Any grieving is not only for the loss of body functioning, but also for the loss of self-identity (Davidhizar, 1997).

Burn injury is a sudden, often catastrophic event with implications for immediate (e.g., pain) and long-term (e.g., disfigurement) adjustment (Patterson et al., 1993). Burns severe enough to warrant hospitalization require survivors to cope with many physical and psychosocial challenges. Numerous survivors suffer from significant body dissatisfaction due to related changes in appearance, and sometimes permanent scarring (Patterson et al., 1993). Although the psychosocial impact of alterations in appearance is

well established (Browne et al., 1985; Fauerbach et al., 2000; Riva & Molinari, 1995; Tudahl, Blades, & Munster, 1987), researchers have just begun to look at the impact of different types of coping on adjusting to acute changes in appearance (Fauerbach et al., 2002).

Other visible impairments or alterations may be due to disabilities such as cancer, side effects of cancer treatment, cystic fibrosis, or scleroderma. In some instances, changes to appearance may be sudden and unexpected, where other circumstances may include changes that develop over a period of time. Concerns about appearance may initially be secondary to those relating to survival and life-saving treatment. Drawing conclusions about the psychosocial impact of an acquired visible difference can be intimidating given the variation in type, severity, visibility, body sites affected, degree of permanence, and treatment courses, together with the numerous individual and social characteristics that contribute to body image and adjustment (Rumsey, 2002). However, despite this complexity, there is a consensus regarding the difficulties that are reported, the most frequent of which relate to difficulties with social interaction and negative self-perceptions (Rumsey & Harcourt, 2007).

Thousands of military personnel are currently returning from overseas war zones, and trauma is becoming an everyday subject (Kneipp, Kelly, & Wise, 2011). In addition to combat, other incidents such as rape/sexual abuse, auto accidents, and natural disasters can produce traumatic reactions (Vieweg et al., 2006). Rates for PTSD prevalence among the general U.S. population vary between 3% and 8% (Hoge et al., 2004; Palmieri et al., 2007). Moreover, Breslau et al. (1998) reported that approximately 98.6% of U.S. citizens are exposed to at least one traumatic incident in their lives. Trauma

victims may develop a range of disorders including major depression, generalized anxiety, and panic disorder, as well as PTSD (Beitchman et al., 1992; Browne & Finkelhor, 1986; Rowan & Foy, 1993). Trauma may alter one's capacity to regulate arousal levels, which in turn can alter the concept of self. Body image is a part of self-concept. Consequently, distortion in body image may be vastly influenced by traumatic experiences (Kneipp, Kelly, & Wise, 2011).

An acquired brain injury can have a profound effect on the survivor's self-concept. Traumatic brain injury is the leading cause of disability for persons under 45 years of age, affecting nearly 2 million Americans every year (Tarconish, 2011). When an individual experiences a brain injury, he or she may face physical, behavioral, emotional, cognitive, and personality changes, depending on the severity of the injury and the region of the brain that is damaged (Farace & Alves, 1999). Most of the consequences of TBI are invisible, including those that affect cognition (Brain Injury Association of America, 2010). Individuals with TBI tend to have significantly poor views of postinjury self-concept (Tyerman & Humphrey, 1984; Wright & Telford, 1996), especially when compared with neurologically intact controls (Brinkman & Hoskins, 1979; Ellis-Hill & Horn, 2000; Kravetz et al., 1996). Therefore, the aim of this manuscript was to conduct a review of the research assessing the effects that the aforementioned disabilities have on body esteem, and to suggest directions for future research.

Methods

Search Strategy

Relevant articles relating to body esteem and disability were located through PubMed, Sciencedirect, PsychINFO, PsychARTICLES, and the screening of bibliographies. Text word and thesaurus terms were used to maximize identification of relevant articles. The following keywords were searched using Boolean logic: (1) body image, body image disturbance, self-image, self-concept, self-perception, appearance (2) disability, disabled (attitudes toward), disabled personnel, (3) injuries, trauma (physical), posttraumatic stress disorder, trauma, emotional trauma (4) traumatic brain injury, brain injury (traumatic), (5) burns, (6) cancer screening, oncology, (7) spinal cord, spinal cord injuries, physical disorders, (8) amputation. Additional references cited in retrieved articles or relevant review articles were also obtained.

Inclusion and Exclusion Criteria

Documents included were (1) published in English in a peer reviewed journal, (2) theses/dissertations, (3) conference presentations, (4) books, and (5) reputable websites. Information covered included (1) body image, body esteem, self-concept, (2) the description of different disabilities in adults and children, and (3) the relationships between body esteem and disability. Exclusion criteria were articles that were not related, directly or indirectly, to the core concepts of body esteem and disability, and any material that was not produced in, or translated into, English.

Review Procedure

Abstracts were reviewed for relevance, and full articles obtained where appropriate. Manuscripts were then separated into the following categories: (1) limb

amputations, (2) other acquired mobility injuries (e.g., orthopedic injuries, spinal cord injuries), (3) burns and scars, (4) other visible impairments or alterations, (5) posttraumatic stress disorder (PTSD) (and pervasive comorbid disorders), and (6) acquired brain injury (ABI) (e.g., traumatic brain injury (TBI), stroke. All data were synthesized together to underscore the connections between body esteem and disability.

Results and Discussion

There were six subtypes of disability contained within the reviewed articles, including 1) amputation, (2) other acquired mobility injuries, (3) burns and scars, (4) other visible impairments, (5) PTSD), and (6) acquired brain injury. The most notable issues pertaining to body esteem, body image, and self-concept are presented.

Amputation

In Western cultures, body image seems to be based on youth and physical attractiveness. This emphasis can overshadow other personal attributes (Taub, Blinde, & Greer, 1999). The importance given to the physical body may have a negative impact on people with an amputation, especially on body perception (Sousa, Corredeira, & Pereira, 2009). Evidence suggests that attitudes toward people with physical disabilities are generally negative, simplistic, and discriminative (Arbour, Latimer, Ginis, & Jung, 2007). Blinde and McClung (1997) proposed that sports participation aids individuals with disabilities to transform their body perceptions with respect to their physical characteristics. Perception of everyday reality depends on one's point of view of the world and the body's way of being-in-the-world. The actions of the body construct a world of social relations (Sousa et al., 2009). In this way, the body can only be seen as deficient by comparison, assuming that others' views are considered important (Crossley,

2001).

A person with an acquired amputation experiences a fundamental being-in-the-world change that creates a need to relearn and reformulate ways of living life. The loss of a limb is perceived as a loss of part of the self, and as a loss of the "lived-body" (Goodwin, Thurmeier, & Gustafson, 2004; Senra, Oliveira, Leal, & Vieira, 2011). Body image is embedded within historical, cultural, and social settings, and it is responsive to everyday experience (Sousa et al., 2009). Disability is very much situational and contextual, and is dependent on the meanings given to it (Oliver, 1986). The relationship between body and aesthetics in a society dominated by the sense of vision makes people the arbiters of beauty, desire, goodness, and truth (Jenks, 1995). The "gaze" has the power to either fix an identity or to condemn an individual to an identity (Sousa et al., 2009). The body is also viewed as a means for being productive. People with disabilities have emphasized how important it is for them to work, not only to provide stable income, but also as a means of maintaining self-respect and giving meaning to life (Schoppen et al., 2001). After an amputation, one is faced with loss of functionality, and often times, loss of ability to continue working, which then can have a profound effect on self-concept.

The incidence of lower-limb amputations has historically been much greater than that for upper-limb amputation (Gregory-Dean, 1991), and the majority of all amputations have occurred in older adults, as a complication of diabetes (Reiber, Pecoraro, & Koepsell, 1992), congenital limb deficiency, vascular insufficiency, cancer, and traumatic injury (Murray & Fox, 2002). Although all individuals with amputations face major physical, emotional, and social adjustments, adaptation to adjustments seems

to vary widely between individuals (Akyol, Tander, Goktepe, Safaz, Kuru, & Tan, 2013; Williamson, Schultz, Bridges, & Behan, 1994).

Social discomfort and body image anxiety tend to be associated with a poor adjustment in terms of greater activity restriction, depression, and generalized anxiety (Horgan & MacLauchlan, 2004; Mathias & Harcourt, 2014). Breakey (1997) surveyed people with lower limb amputations to examine their psychosocial wellbeing and self-perception. A significant correlation was found between body image and life satisfaction, indicating the more negative a person feels about his or her body image, the less satisfied he or she is with life. Fisher and Hanspal (1998) found that body image disruption, depression, and anxiety were common for young people with traumatic amputations. Rybarczek et al. (1992) indicated that psychological maladjustment is common among adults with leg amputations, and that some individuals with amputations feel that other people reject them because of their disability. We hypothesized that poorer psychosocial adjustment to an amputation would be predicted by higher scores on the Amputation-Related Body Image Scale (ARBIS), an 11-item scale that addresses specific issues related to social discomfort with regard to the appearance of the prosthesis and/or the exposed stump. We believed that the highly significant results obtained in their study were likely related to their use of this scale that addressed body image issues that are specific to the amputation rather than global body image disturbances.

In summary, the body image experiences of individuals with an acquired amputation present distinct degrees of adjustment to a new reality. Social barriers that people with amputation have to face on a daily basis become apparent in prejudiced and discriminatory conceptions that have been embedded in a society that struggles to accept

body differences.

Other Acquired Mobility Injuries

Traumatic injuries (other than limb amputation) resulting in a sudden disruption of mobility and body control may lead to an alteration of body integrity and appearance. In many individuals with spinal cord injury (SCI), the lack of sensory input and motor experience, and muscle atrophy contribute to a changed body perception and evaluation (Trieschmann, 1988). Jackson (2012) reported that body image is an important factor related to health behaviors in SCI, and that individuals with less severe SCI have higher ratings of appearance satisfaction on several body image subscales. SCI rehabilitation has focused primarily on addressing physical impairments, often leaving patients to deal with the social and psychological issues that arise after injury (Renwick & Yoshida, 2004).

Body image disturbances can interfere with activities of daily living, social roles, and engagement in work (Drench, 1994; Keppel & Crowe, 2000; Van Deusen, 1997). In paraplegia, patients have commonly reported feelings that their body feels larger than actual size (Conomy, 1973; Evans, 1962). Some studies indicated that physical performance failure, combined with negative societal assumptions, provided an unstable foundation from which an individual living with a changed body had to build a new self-concept (Corbin & Strauss, 1987; Yoshida, 1993). Other studies exploring the perspectives of individuals with acquired SCI often reported negative changes in quality of life due to adaptations to disability that they had to make (Bach & McDaniel, 1993; Chau et al., 2008; Kothari, 2004; Manns & Chad, 2001; Martz et al., 2005; Reitz et al., 2004; Smith & Sparkes, 2005; Song, 2005). Sheldon, Renwick, and Yoshida (2011)

found three themes that emerged in their study with men who had SCI: changes in self and body, interactions with the public, and decisions and actions people take. These changes reflected the changes in body image after SCI and the alterations in self-concept that the men had experienced. Not feeling whole was also an emerging subtheme where the participants reported a disconnection between parts of their bodies that still function and parts that were affected by the SCI. Overall, the men discussed the ongoing struggles to achieve acceptance of their new bodies. Another study with 47 adult males with SCI highlighted the negative impact of physical disability on body image (Romeo, Wanlass, & Areamas, 1993). Using the Derogatis Sexual Functioning Inventory (DSFI), the study revealed that participants scored lowest on Body Image compared to the other DSFI scales, and the mean scores were significantly lower than for the nondisabled normative group.

Yuen and Hanson (2002) found that individuals with mobility disabilities are exceptionally concerned with their physical appearance, go to great efforts to wear attractive clothing, and use appearance strategies (e.g., hiding atrophied body parts with clothes) to maintain a sense of normalcy. Furthermore, the authors concluded that when a disability is present, it is more difficult to evaluate one's overall health since the injury itself may diminish the perception of being in good health. Thus, more vigilance may be needed to maintain health, and could interfere with any ability to form positive perceptions concerning body image and health. Treicshmann (1980) reported that the physical, social, and emotional dimensions of the body have a significant role in identity formation, so the "failed body" of an individual with SCI has a profound impact on self-concept. The repeated experience of failure then leads to negative body perception.

Dewis (1989), in a study with 15 young people with recent SCI, reported two emerging themes with regard to body image. The first was a concern with normalcy and being valued, and the second was the use of deliberate strategies to maintain a sense of normalcy in physical functioning and appearance. Chau et al. (2008) described a framework for understanding the unique experiences of women with SCI and how they reclaim comfort toward their changed bodies. The framework consisted of three phases: (a) discomfort with changed body; (b) moving toward comfort with changed body; and (c) comfort with the changed body. The authors indicated that the participants moved in and out of each phase multiple times as they moved toward more permanent acceptance of their bodies.

SCI is one of the most catastrophic events that a human being may experience. In one instant, the injured person changed from an independent, self-sufficient, contributing individual to a patient dependent on various mechanical devices and a multitude of medical personnel. After surviving the trauma, the person faces a lifetime of possible complications and issues related to body dissatisfaction.

Burns and Scars

Individuals who have experienced severe burns are often assumed to be at risk for poor body esteem in comparison to the general population because of sudden changes in their appearance related to burn scars. Burn survivors not only face the challenge of mourning the loss of their preinjury appearance and accepting their altered appearance, but also are at risk of experiencing stigmatizing behavior, such as startled responses, stares, avoidance, unsolicited questions and comments, teasing, and rude behavior (Beuf, 1990; Blakeney, Robert, & Meyer, 1998; Bull & Rumsey, 1988; Connell, Coates,

Doherty-Poirier, & Wood, 2013; Lovegrove & Rumsey, 2005; Macgregor, 1990; Pruzinsky & Doctor, 1994; Solomon, 1998; Tarnowski & Rasnake, 1994; Thompson & Kent, 2001; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999;).

The cognitive-behavioral model of body esteem disturbance assumes that both sociocultural factors and psychological processes interact to produce and maintain negative body esteem. A person negotiates body esteem in a sociocultural context where he or she receives many different cues about the importance of appearance, and social tolerance of deviation from societal standards of appearance (Pruzinsky & Doctor, 1994; Thompson et al., 1999; Walters, 1997). These standards are often culture specific and tend to change over time. (Cash & Henry, 1995; Thompson et al., 1999). Other distinctions in appearance (e.g., cleft palate, scarring due to burns, obesity) are considered socially unacceptable, and consequently, people with these visible differences are often stigmatized (Bradbury, 1997; Rumsey et al., 2004; Thompson & Kent, 2001).

Both Thompson et al. (1997) and Partridge (2005), leading theorists on the process of adjusting to acquired disfigurement, have proposed a staged process of adapting to unexpected alterations in appearance. The process implies that people with burn injuries will go through an initial developmental period in which body image will worsen over time as the person struggles to accept physical changes that are out of his/her control, and will develop the social skills necessary to cope with newly experienced social stigmatization. Furthermore, the authors found that body image mediated the relationship between preburn and postburn psychosocial functioning, and they proposed that adjusting to appearance changes is an integral part of adapting after a severe burn. Thombs and colleagues' (2008) study supported this research.

Living with scars can be particularly challenging in a sociocultural context that puts a high premium on physical attractiveness (Beuf, 1990; J.K. Thompson et al., 1999). Negative feedback regarding appearance can take other indirect forms such as pointing, whispering, ignoring, avoiding, and job discrimination (Beuf, 1990; Macgregor, 1990; Pruzinsky & Doctor, 1994). The cognitive-behavioral model of body esteem also suggests that certain psychological mechanisms maintain low body esteem (Cash, 1997; Newell, 1999; Rosen, 2001). Evidence reveals that people who are self-conscious about their appearance tend to process information and behave in ways that confirm their negative assumptions about their appearance. For example, Strenta and Kleck (1985) conducted a study where they placed artificial facial scars on participants. Without the participants' awareness, they removed the scars from some of them before the participants entered into an observed social interaction. Participants who believed they were scarred perceived others' reactions to them as being more negative.

This suggests that people with disfigurements may also process information and behave in a way that confirms their belief that their physical distinction makes them socially unacceptable, and therefore has a negative impact on body esteem. Consistent with the cognitive-behavioral model of body esteem, Lawrence, Fauerbach, and Thombs (2006) found that self-rated importance of appearance moderated the relationship between subjective scar severity and body esteem among adults with burn scars. For individuals who indicated their appearance was of little importance, subjective scarring had a low correlation with body esteem. For individuals who were highly invested in their appearance, scarring was highly related to body esteem. Similarly, Lawrence et al. (2004) conveyed that burn characteristics are less important than social and emotional

variables in determining the body esteem among burn survivors. These results supported the hypothesis that self-acceptance and social comfort are more important than burn severity and scar location in predicting body esteem.

In an earlier study, Orr, Reznikoff, and Smith (1989) measured depression, body esteem, self-esteem, and social support in burn survivors between the ages of 14 and 27 years. They found that body esteem was unrelated to burn size, burn location, or gender; however, body esteem was positively related to self-esteem and social support from friends, and was negatively correlated with depression. The social nature of body esteem is consistent with the dominant model of adaptation to disabilities in the rehabilitation psychology literature that emphasizes the contextual and interactive nature of adjustment to disabilities.

Thriving with differences such as burn scars is a function of the person-environment fit (Dunn & Doughery, 2005; Dunn & Elliot, 2005). If a burn survivor learns to cope with negative body esteem by avoiding exposure to his or her body and social situations, the symptoms of negative body esteem are likely to get worse over time (Newell, 1999; Thompson & Kent, 2001). Screening is particularly important among children who may suffer in silence because they do not have the social or communication skills to ask for help with body esteem and social problems related to burn scars (Lawrence, Rosenberg, & Fauerbach, 2007).

Body esteem is determined in part by a series of appraisals about aspects of one's appearance. Satisfaction with one's appearance is determined not only by one's appraisal of one's appearance, but also by a decision about the importance of physical appearance (Cash & Pruzinsky, 2002; Davis, Dionne, & Shuster, 2001; Mendelson et al., 2000;

Thompson et al., 1999). Those who have physical disabilities in combination with a belief that physical appearance is highly important are at greater risk (Mendelson et al., 2000). Lawrence, Fauerbach, and Thombs (2006) found that for those who believed that their appearance was not important, the relationship between burn scar severity and body esteem was small and statistically nonsignificant. For those who rated physical appearance as very important, the relationship between scar severity and body esteem was very strong.

Progress has been made regarding the empirical understanding of the role body image has in the long-term psychological adjustment of burn survivors. Measurement of these issues and related matters has been enhanced with the development of psychometrically sound tools such as the Perceived Stigmatization Questionnaire, the Social Comfort Questionnaire, and the Satisfaction with Appearance Scale (Fauerbach, Pruzinsky, & Saxe, 2007).

Other Visible Impairments or Alteration

A close relationship between appearance and self-concept in the general population has been documented in the literature (Grogan, 1999; Harter, 1999). The connection between appearance and self-concept for people with visible impairments and alterations has been supported by a range of studies over time (Kent & Thompson, 2002).

The impact of cancer and its treatment on body esteem is dependent on characteristics of the disease and treatment, as well as chronological age and development (Fan & Eiser, 2009). As survival rates improve, there has been an increased focus on long-term adjustment to cancer and cancer treatment (Evans & Zeltzer, 2006). Adaptation to body alteration is a dynamic psychosocial process, and although cancer and

treatment would be expected to have adverse consequences for body image, empirical evidence has been somewhat inconsistent (White, 2000). Some studies have found no significant difference between cancer patients and controls with respect to body image disturbance (Beardslee et al., 1982; Calaminus, 2007; Jamison et al., 1986; Langeveld et al., 2004; Puukko, Sammallahti et al., 1997; Weigers et al., 1998). Other studies found significant differences in various aspects of body image and visible differences. Enskar et al. (1997) reported that major changes in appearance due to cancer and the treatment were very hard to live with for females, especially with respect to hair loss, short stature, and weight gain.

Hair loss (alocepia) has been ranked third after vomiting and nausea as the most troublesome side effect of chemotherapy (Coates et al., 1983). In a study by Tierney (1991), alopecia was ranked above vomiting. Especially in women, hair is a part of the sense of self and personal identity. Hair loss due to cancer chemotherapy has been shown to change patients' self-concept and body image (Baxley et al., 1984). Larouche et al. (2006) indicated that cancer survivors believe that people stare at them because they do not look normal. As a result, they go to extra measures to maintain a sense of normalcy, avoid social situations, and constantly feel the need to test the safety of their environment. Madan-Swain et al. (1994) reported that survivors felt extremely uncomfortable in their own bodies, and they felt unresolved. Additional studies support similar findings (Mattsson et al., 2007; McCaffrey, 2006; Puukko, Hirvonen et al., 1997; Woodgate, 2005; Wu et al., 2003; Munstedt et al., 1997).

White (2000) suggested that visible changes that affect the head, neck, or eye, and consequences of surgical treatment for cancer, chemotherapy, or radiation often cause

body image disturbance. Additionally, a substantial number of women have described extreme dissatisfaction associated with mastectomy scars, and discontent with their prostheses (Maguire et al., 1983). Other studies support similar findings of dissatisfaction with appearance, perceived loss of femininity and body integrity, reluctance to look at one's self naked, and feeling less sexually attractive (Bartelink et al., 1985; Beckmann et al., 1983; Cohen et al., 1998; Ganz et al., 1992; Ganz et al., 2003; de Haes et al., 1986; Hopwood, 1993; Kemeny et al., 1988; Lasry et al., 1987; Pozo et al., 1992; Sanger & Reznikoff, 1981; Steinberg et al., 1985; Wellisch et al., 1989; White, 2000).

In one of a few studies that included noncancer comparisons, women with mastectomy and chemotherapy reported significantly more body image dissatisfaction and feminine self-image concerns than women who had a negative breast biopsy, had been treated for gall bladder disease, or healthy women (Penman et al., 1986). Fobair et al. (2006) also reported that substantial proportions of young women with breast cancer experienced difficulties with sexual functioning and body image.

Also, people with cystic fibrosis tend to have delayed onset of puberty, low body weight, are short in stature (Erskine et al., 2007; Lai, 2006; Wenninger et al., 2003), and experience body image disturbances that contribute to them engaging in risky activities, like refusing to take nutritional supplements (Robertson, 2009) or abusing anabolic steroids (Morris, Ledson, & Walshaw, 2010). Additionally, people with scleroderma, which is a progressive connective tissue disease, often have disfiguring changes in their appearance in areas, like the hands, that create extreme social discomfort (Heinberg et al., 2007). These changes are similar to those caused by burn injury; however, unlike burn

scarring which is relatively static over time, scleroderma is progressive, so the body image changes vary, and likely worsen over time (Heinberg et al., 2007). Scleroderma patients have reported greater body image dissatisfaction than those hospitalized for severe burn injuries (Benrud-Larson et al., 2003).

Posttraumatic Stress Disorder (PTSD)

PTSD, a mental health diagnosis, was initially used to describe psychological suffering experienced by many Vietnam veterans who were returning from combat. Numerous studies have demonstrated that the diagnosis of PTSD captures essential elements of the suffering caused by traumas like rape, motor vehicle accidents, child abuse, torture, child abuse, and combat experience (Van der Kolk, 2002). People with PTSD tend to suffer from 1) a lack of a predictable sense of self with a poor sense of separateness, and a disturbed body image; 2) poorly modulated affect and impulse control, including aggression against self and others; and 3) uncertainty about the reliability and predictability of others (Van der Kolk, 2006).

Researchers have explored the role of traumatic experiences in those who have been diagnosed with eating disorders, which are common comorbid conditions with PTSD, and concluded that a distorted body image is a salient issue in this relationship (Weiner & Thompson, 1996; Wenninger & Heiman, 1998). Kneipp, Kelly, and Wise (2011) described trauma in three dimensions: avoidance (defensive avoidance), hyper-arousal (anger/irritability), and impaired self-reference. The authors suggested that trauma diminishes one's capacity to regulate his/her arousal levels, which in turn can change his/her concept of self. A number of related studies suggest that a strong link exists between trauma and body shame (Thompson, Wonderlich, & Crosby, 2001; Truer,

Koperdak, Rozsa, & Furedi, 2005; White & Grilo, 2005). Another study suggested that most traumas involve boundary violations, loss of autonomous action, and loss of self-regulation (Van der Kolk, 2006). The link between PTSD and body image disturbance is emphasized within this context.

Weaver and colleagues (2007) studied PTSD and body image in female victims of intimate partner violence (IPV). IPV-related injury has been associated with increased risk of developing PTSD (Kilpatrick et al., 1989; Resnick, Kilpatrick, Dansky, Sanders, & Best, 1993). One third of women who live through IPV receive some form of injury, and after injuries have healed, physical appearance may be altered with residual marks and scars (Tjaden & Thoennes, 2000). Scars from injuries such as facial lacerations have also been associated with increased appearance-focused concerns (Tebble, Thomas, & Price, 2004). Body image distress could be evoked by seeing the injury, or by others' responses or questions regarding the injury, and could lead the individual to avoid the injury and other trauma cues. Avoidance may then have a role in the development and maintenance of PTSD (Weaver et al., 2007).

Dr. Peter Levine, founding practitioner of Somatic Experiencing (SE), suggests that trauma is treated in the body, not the mind (Levine, 2010). He explains that people rarely die from the trauma itself, but the failure to neutralize the experiences and restore balance to the body. Furthermore, he states that wherever there is war or conflict of any kind, there is a "trauma vortex." A trauma vortex is set in motion when unresolved trauma becomes nondischarged energy in the body, thus creating body disturbance. This phenomenon compounds when events occur that rekindle previously unresolved trauma, reopening a flood of memories of every past injury and loss. Given the increase in the

number of individuals who have experienced trauma, coupled with the increasing numbers of individuals experiencing body image/body esteem issues, continued efforts in this field of research remain crucial (Kneipp et al., 2011).

Acquired Brain Injury (ABI)

Emotional disturbances are recognized as a common development following acquired brain injury, such as traumatic brain injury (TBI) and stroke. Stroke has been a leading cause of focal neuropsychological impairment in adults (Keppel & Crowe, 2000). Stroke-related impairments have can severely affect young people's perception of their body, forcing them to change their self-concept, and threatening their ability to engage in social settings (Keppel & Crowe, 2000). Consistent findings reveal that lowered self-esteem and body esteem are significantly correlated with affective disorders in both acutely and chronically disabled populations (Anderson & Antonak, 1992; Hogg, Goldstein, & Leigh, 1994; Langer, 1994; Levine, Van Horn, & Curtis, 1993; Outland & Coonerty, 1995). Keppel and Crowe (2000) found that young people who had experienced their first stroke reported that their physical self-esteem was significantly, negatively affected following stroke. Their physical attributes were highly regarded and their loss or impairment left them with feelings of inferiority, and reduced their self-respect.

TBI represents the signature injury of the Iraq and Afghanistan wars, and has become a noteworthy issue facing military service members and veterans (Defense and Veterans Brain Injury Center, 2009a). The Department of Defense has identified approximately 134,000 service members with TBI since January 2003 (Daniel, 2010). According to the Center for Disease Control (2010), roughly 1.7 million individuals

experience a traumatic brain injury annually (CDC estimates of TBI do not include injuries documented at the U.S. Department of Defense or U.S. Veterans Health Administration Hospitals). Falls and motor vehicle/traffic-related incidents are the leading causes of TBI in the U.S., with men ages 14 to 24 years being the most frequently diagnosed (Faul, Xu, Wald, & Coronado, 2010). For active duty military personnel in war zones, blasts have been found to be the main cause of TBI (Champion, Holcomb, & Young, 2009).

A necessary adjustment for individuals with TBI is addressing the change in the body's appearance and functioning. Physical, cognitive, and psychosocial limitations can negatively affect the self-concept and one's ability to self-reflect. Thus, the survivor may lack motivation to work towards goals, and may be less able to self-regulate behavior (Leary & Tangney, 2003). Vickery et al. (2006) found that TBI survivors frequently develop poor self-concept, self-esteem, and perception of the body.

Howes, Edwards, and Benton (2005) studied female body image following TBI. They found clear differences between the TBI and comparison groups on a number of measures of body image and psychological health. Most notably, 47% of the TBI group scored above the cut-off point for body dissatisfaction. The same authors also studied male body image following ABI, and found that the body parts with which men with ABI were significantly less satisfied were appetite, reflexes, muscular strength, physical coordination, agility, arms, and legs. The emphasis on physical effectiveness supports previous work by Grant and Fodor (1986) that males place physical effectiveness as extremely important when evaluating their body image. The males were also significantly less satisfied with their sex organs and sex drive. This supports previous

work that found that men place more importance on bodily functions directly related to sex (Franzoi & Shields, 1984). Therefore, following brain injury, these areas become the focus of body dissatisfaction. In some cases, body image changes following brain injury are due to perceptual disturbance. However, even those without neurological disturbances have to adjust to an alteration in body image due to other residual illness or disability (Drench, 1994; Giles, 1984).

Conclusion

The purpose of this review paper was to examine the extant literature regarding body esteem in individuals with a range of disabilities. Disabilities covered in this paper include the following: 1) limb amputations, 2) other acquired mobility injuries (e.g., orthopedic injuries, spinal cord injuries), 3) burns and scars, 4) other visible impairments or alterations (e.g., cancer/cancer treatment, cystic fibrosis, scleroderma), 5) posttraumatic stress disorder (PTSD) (and pervasive comorbid disorders), and 6) acquired brain injury (ABI) (e.g., traumatic brain injury (TBI), stroke). Current research suggests that individuals with disabilities experience negative feelings related to body esteem. Debate continues in the literature concerning the role of the etiology of the disabilities in body image/body esteem distress and psychosocial adjustment (Rumsey & Harcourt, 2004). Newell (2000) argued that individuals who have disabilities from birth will have had more opportunity to incorporate their anomaly into their body image to habituate to the responses of others, and to acquire effective coping strategies. People who acquire a disability later in life are forced to confront their reactions to the circumstances surrounding the onset including the loss of their previous appearance and body functioning, and to the changes to their body esteem (Bradbury, 1997).

Rumsey and Harcourt (2004) suggested that strategies should be developed for dealing with the reactions of unfamiliar others, and considerable initiative is required to progress beyond initial encounters to form new relationships. Establishing relationships can be perceived as problematic for people who are uncomfortable with their appearance, and once a relationship has been established, concerns about the disability may cause ongoing difficulties. Also, the literature appears to be sparse with respect to body esteem and PTSD, and body esteem and TBI. As vast numbers of military personnel are returning from Iraq and Afghanistan with diagnoses of PTSD and TBI, future research needs to focus on the effects of PTSD and TBI on body esteem, as well as effective treatments. Moreover, further exploration of the manner in which individuals with disabilities interpret and perceive their body esteem is necessary in order to provide an increased variety of effective interventions and treatments. Finally, further research will be helpful to understand the role of resilience education in the treatment, stabilization, and recovery of individuals with disabilities.

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CHAPTER 3

QUALITATIVE RESEARCH CONTRIBUTIONS TO MILITARY POSTCOMBAT TRANSITION AND REINTEGRATION: A REVIEW OF THE LITERATURE

Abstract

The purpose of this review was to examine the existing qualitative literature regarding military postcombat transition and reintegration in order to highlight principal categories and themes, and to identify areas that indicate further research. Methods: Relevant articles were located through PubMed, PsychINFO, PsychARTICLES, Sciencedirect, and the screening of bibliographies. Results: The available data indicate a paucity of qualitative inquiries with regard to military postcombat transition and reintegration. Common categories and themes have been formulated from analyses of the available qualitative research. Four categories have been identified, which include (1) psychosocial adjustment and coping; (2) physical disability adjustment; (3) protective factors; and (4) transition challenges. Several themes have also been distinguished within each category and will be examined in detail within the context of the reviewed qualitative studies. Conclusion: Future qualitative research should be conducted in order to contribute to a much deeper, richer understanding of individual lived experiences with regard to postcombat transition and reintegration, specifically after traumatic injury.

Introduction

Military postcombat transition and reintegration are important areas of investigation that have received little attention in the qualitative literature. The use of qualitative methods can make a substantial contribution to our understanding of various constructs related to postcombat transition and reintegration experiences. In particular, qualitative research addresses two specific shortcomings: the selection of outcome variables, and the challenge of accounting for the specific contexts in which transition and reintegration occur. Qualitative methods are shown to be particularly well suited to the discovery of unnamed processes. They study phenomenon in very specific contexts, and they elicit and add power to 'voices', which account for unique localized constructions by avoiding generalizations in favor of transferability (Ungar, 2003). Qualitative methods have been shown to complement well quantitative studies, achieving a finer grain of the perception of health and coping phenomenon (Rank, 1992).

This article reviews and summarizes the qualitative literature with regard to military transition and reintegration. Analyses of this research have led to the identification of four major categories, which include (1) psychosocial adjustment and coping, (2) physical disability adjustment, (3) protective factors, and (4) transition challenges. Within the first category, psychosocial adjustment and coping, four common themes have been identified: self and body image, grief and loss, family and mental health issues, and coping with the attitudes of others. The second category, physical disability adjustment, includes three common themes: living with limitations, increased pain tolerance, and normalization of disabilities. The third category, protective factors, encompasses three common themes: meaning making, family and social support, and

resilience. Finally, the fourth category, transition challenges, embraces four common themes: hyper-vigilance, isolation, employment and educational challenges, and being in two worlds at one time. Each of these categories and themes are examined in this review in order to emphasize the powerful nature of qualitative inquiry with regard to providing a much deeper understanding of military individuals' lived experiences with transition and reintegration following combat deployment.

Again, it is important to note that there have been very few qualitative studies on the reintegration experiences of military personnel and veterans. Also, there is a gap between what the best-designed quantitative instrument can capture and the full rich life of an individual. The effort that goes into widely used instruments and programs are considerable, and they derive their validity in part from their fixed and unchanging nature. Thus, in areas of "discovery," caution is warranted as a rich, descriptive hypothesis-generating approach offers potential value over reliance on hypothesis-testing approaches that have been validated and standardized on populations that may not be a good match for the one under consideration (Messinger, Pasquina, & Griffin, n.d.). Qualitative research offers an emphasis on the qualities of entities and on processes and meaning that are not measured in terms of quantity, amount, intensity, and frequency (Bourgeault, 2012; Denzin & Lincoln, 2000).

Methods

Search Strategy

Relevant qualitative articles relating to military individuals' postcombat transition and reintegration were located through PubMed, Sciencedirect, PsychINFO, PsychARTICLES, Dissertations and Theses, and the screening of bibliographies. Text

word and thesaurus terms were used to maximize identification of relevant articles. The following keywords and phrases were searched using Boolean logic: (1) qualitative military, qualitative veterans, military phenomenology; (2) military deployment AND disabled personnel, resilience (psychological) AND qualitative AND recovery, military injury AND reintegration, military personnel OR veterans OR deployment AND qualitative AND disability management, military personnel AND trauma AND qualitative; (3) military transition AND injury AND qualitative; (3) military psychology AND resilience, military psychology AND amputation, military psychology AND transition AND recovery; (4) military medicine AND qualitative AND amputation, military medicine AND resilience, military medicine AND transition; (5) disability AND rehabilitation AND military. In addition, several journals were searched in their entirety for relevant qualitative research, including Qualitative Social Work, Qualitative Sociology, Qualitative Health Research, Qualitative Research in Sport, Exercise and Health, Qualitative Psychology, Qualitative Research, Qualitative Studies, and The Qualitative Report. Additional references that were cited in retrieved articles, dissertations, theses, and relevant review articles were also obtained.

Inclusion and Exclusion Criteria

Documents included were published in English for (1) peer-reviewed journals, (2) dissertations and theses, and (3) conference presentations or abstracts. Information covered included (1) the nature, benefits, and contributions of qualitative research to the study of military postcombat transition and reintegration; (2) major categories and common themes within this qualitative literature; and (3) recommended future research. Exclusion criteria were (1) articles that were not qualitative in nature or were not related,

directly or indirectly, to the qualitative research on the core concepts of military postcombat transition and reintegration, (2) unpublished research, with the exception of conference presentations or abstracts, and (3) any material that was not produced in English.

Review Procedures

Article and conference abstracts were reviewed for relevance, and full articles were obtained where applicable. Dissertations and theses were also reviewed, many in their entirety. Manuscripts and sections of manuscripts were then separated according to emerging categories throughout all gathered data. Four major categories were determined, and thematic findings were outlined from analyses of the four categories. All data were synthesized to underscore the significance of qualitative research regarding military postcombat transition and reintegration.

Findings and Discussion

While every individual's life experience is different, common themes emerged in four major categories throughout the reviewed literature: (1) psychosocial adjustment and coping, (2) physical disability adjustment, (3) protective factors, and (4) transition challenges.

Psychosocial Adjustment and Coping

In terms of psychosocial adjustment, there were four central themes that emerged: (1) self and body image, (2) grief and loss, (3) family and mental health issues, and (4) coping with the attitudes of others.

Self and Body Image

Several of the reviewed qualitative articles discussed issues with self and body image. Cater (2012) interviewed 6 servicewomen with combat-related amputations and reported that all 6 indicated that they had to adjust to a new image in the mirror. The amputation was viewed by some of the women as a badge of honor, while others wore a prosthesis as a cosmetic cover, demonstrating a greater need to appear normal. Messinger (2009) contrasted two case studies. When one of the soldiers spoke about his injuries, he talked in terms of how he was being forced to reconfigure a sense of himself and who he felt himself to be. The kinds of injuries he received forced him to constantly balance what he had lost against what he still had. Pichard (2012) interviewed disfigured servicemen and reported that they need to grieve the loss of their former body as they attempt to accept their new appearance. Some feel proud and as though they have become disfigured for a purpose that is greater than themselves. Hagerty, Williams, Bingham, and Richard (2011) reported similar findings through nursing interviews with combat-wounded patients.

Grief and Loss

Grief and loss was a common theme throughout this qualitative literature. Cater (2012) indicated that servicewomen grieved over limb loss, but the grieving slowly diminished over time. One woman spoke of being determined to stay alive despite her limb loss and grief because her husband was still struggling with the death of his younger brother the prior year in Iraq. Other studies included similar themes that related to grief such as feelings of loss, a sense of confusion, struggles to regain a sense of control over their losses, and a need for forgiveness for what was lost in the wars (Brunger, Ogden,

Malia, Eldred, Terblanche, & Mistlin, 2014; Graf, Miller, Feist, & Freeman, 2011; Gutierrez, Brenner, Rings, Devore, Kelly, Staves, Kelly, & Kaplan, 2013).

Family and Mental Health Issues

Common difficulties among military service members in transition include struggles reintegrating with their families and significant others, as well as financial difficulties, problems with alcohol, depression and anxiety. Several studies indicated that familial and marital relationships completely dissolved for some individuals, while other relationships are laden with turmoil and struggles to reintroduce the service member back into the family structure (Doyle & Peterson, 2005; Graf et al., 2011; Messinger et al., n.d.; Verey & Smith, 2012). Additionally, Graf et al. (2011) indicated that the males in the study have a difficult time resuming the roles of husband and father, and taking up routine family tasks. Also, they commonly act overprotective or controlling with the children, have difficulty expressing intimacy, and abuse alcohol as a method of escape from their realities.

Coping with Attitudes of Others

Cater (2012) reported that servicewomen with amputations feared their friends would abandon them and it would be difficult to make new friends due to the changed perceptions of the people around them. Finley (2009) reported that one family member described with horror how she had heard friends and neighbors speak about veterans who returned home from the recent wars with troubled minds. Another soldier stated that his girlfriend, who had read about PTSD in her training as a veterinary technician, thinks he is crazy, which enrages him. Other studies indicated that service members were reluctant to seek mental health assistance because the military in general, as well as peers, would

think they were crazy, would label them in their permanent military records, and would think they were not pulling their own weight (Ainslie, 2010; Gutierrez et al., 2013; Jett, 2011; Messinger, 2009; Verey & Smith, 2012). Finally, Rumann and Hamrick (2010) reported that student veterans felt that other students did not understand what they had been through and did not know how to approach them, so the student veterans feared what other students thought about their states of mind.

Physical Disability Adjustment

In terms of physical disability adjustment, three central themes emerged as the qualitative literature was reviewed: (1) living with limitations, (2) increased pain tolerance, and (3) normalization of disabilities.

Living with Limitations

Burke and Utley (2013) conducted a qualitative inquiry with combat-injured veterans who climbed Mt. Kilimanjaro. The authors indicated that for all of the participants, the added burden of climbing the mountain with the sequel of a functional impairment involved adapting to physical changes acquired as a result of being injured. Climbing the mountain with a physical injury involved performing in a difficult and challenging environment ripe with unique stresses that required adapting to limitations. Pichard (2012) described how participants struggled with anger and inner conflict over their physical ailments as they came to develop coping strengths to handle their limitations. Several studies described how participants worked through the stress of having limitations, how they were able to gain autonomy, how they became accustomed to prosthetic use, and how they overcame the chaos and confusion associated with their injuries (Braun, 2013; Brunger et al., 2014; Cater, 2012; Harmon, 2007; Hawkins, Cory,

& Crowe, 2011; Messinger, 2009; Messinger et al., n.d.).

Increased Pain Tolerance

Matthias, Miech, Myers, Sargent, and Bair (2014) noted how participants who were dealing with chronic pain appreciated having someone with whom to talk, especially during pain exacerbations, and that this additional verbal support actually increased their ability to tolerate their pain. Jett (2011) reported participants' perceptions of having to deal more effectively with chronic pain and suffering. The participants indicated that the high stress levels of long duration caused by the extreme physical and psychological hardships that troops endured to survive during combat led to them being able to better cope with and tolerate their postcombat pain and suffering. Another study supported similar findings (Gutierrez et al., 2013).

Normalization of Disabilities

Braun (2005) described several factors involved in participants' decisions to return to work following injuries. The results suggested that postrehabilitation, a small number of servicemen return to combat, but many find it rewarding and normalizing to return to duty in another capacity. Many reported that work-related activities that they used to be able to do with their eyes closed where very difficult with a prosthesis or disabling injury, but not impossible to do, and easier to do with practice, as living with the disability became "normal." McCoy (2009) indicated that spiritual practices and meditation were helpful to participants in beginning to normalize their lives with their injuries. Other studies discussed participants' learning to manage activities of daily living with greater ease, utilizing community resources to support normalization of life with their disabilities, and engaging in adaptive recreation and physically challenging

events to overcome feelings of inadequacy and abnormality (Brunger et al., 2014; Burke & Utley, 2013; Hawkins et al., 2011; Messinger et al., n.d.; Pichard, 2012).

Protective Factors

Protective factors contribute toward personal resilience and the capacity to adapt to change (Cater, 2012). Three major themes arose from the review of the qualitative literature regarding such protective factors for military service members in transition: (1) meaning making, (2) family and social support, and (3) resilience.

Meaning Making

In 1962, Victor Frankl wrote in *Man's Search for Meaning* that humans have a psychological need to find or create a sense of meaning and purpose after suffering and loss (Frankl, 2000). Cater (2012) reported that participants with an amputation found comfort in having lost their limb in service to their country, and said that surviving the loss of a limb gave them new courage. One participant stated that she gained a new outlook on life, no longer took anything for granted, and believed that losing her leg brought new opportunities. Another participant said that she had accomplished more in her life with one leg than she ever would have with two. Each of the participants in this study reported that she developed her own personal meaning from her limb loss. Ainslie (2010) also indicated that female veterans sought meaning from their traumatic experiences, and that they wanted to share their experiences with others in an effort not only to help themselves, but to help and protect others. Such service to others was a powerful way for the participants to feel as though their trauma had meaning and purpose. Other studies supported similar themes of participants' beliefs that their deployments were the hardest times of their lives, they were not going to let their

disabilities slow them down, and their military service was well worth it, despite injuries and setbacks, due to personal growth and importance of their service to who they are as individuals (Brunger et al., 2014; Finley, 2009; Hagerty et al., 2011; Jett, 2011; Rumann & Hamrick, 2010).

Family and Social Support

Messinger et al. (n.d.) reported that nearly all of their study's participants were married, or in long-term relationships, and many had children. Only 1 participant was not in a partner relationship, but he stated that he was very close to one of his parents and a sibling. The intensity of the participants' relationships, and the extent to which support (or lack thereof in some cases) drastically affected their abilities to recover and reintegrate, was striking to the researchers. Hinojosa and Hinojosa (2011) stated that the role of social relationships in health outcomes is an area of growing research importance, and that the Veteran's Administration has begun to encourage research programs to more deeply explore the role of family members in veterans' health outcomes, particularly after the deployed veteran has been away for an extended time. This study further highlighted the importance of military friendships, recreation with friends, and emotional intimacy with partners. Other studies revealed that social and family interactions always changed when veterans returned from combat; that veterans seek support from those with similar experiences; that families were very instrumental when they were in the hospital; and that they were motivated to keep going when they were around family, friends, and other veterans who had worse injuries than they had (Cater, 2012; Finley, 2009; Graf et al., 2011; Hagerty et al., 2011; Hawkins et al., 2011; Matthias et al., 2014; Rumann & Hamrick, 2010; Verey & Smith, 2012). Finally, Burke and Utley (2013) found that

participants not only needed the social support, but they thrived on the sense of camaraderie and working together as a team with their families, friends, and military comrades.

Resilience

Koenig, Maguen, Monroy, Mayott, and Seal (2014) reported that participants encouraged each other to apply their military values to their everyday lives as a way of being proactive and demonstrating courage to overcome absolutely anything. Several participants in Cater's (2012) study indicated that they used humor to get through tough times and to help other people relax around their amputations. One participant said that four key factors in her healing process were (1) actually having a leg to stand on (one leg was amputated), (2) her belief in God, (3) being able to joke about things, and (4) support from her family and fellow National Guard soldiers.

Participants with amputations in the Mt. Kilimanjaro study (Burke & Utley, 2013) responded to the experience of climbing with a sense of determination and inner strength. Rather than withdrawing or disengaging from attempts at achieving the goal of getting to the summit, they anticipated success and strived to reach the top of the mountain. All of the participants experienced pain and frustration, but despite limited functional abilities, they showed an unwavering sense of commitment and consistently responded to both favorable and adverse situations on the mountain through proactive efforts. Similarly, the female veterans in Ainslie's (2010) study highlighted like aspects of resilience, how they related to the meaning making of their traumas, and how they each used self-determination to press forward. The women all agreed that there are multiple, sometimes unexpected pathways to resilience. Other studies highlighted topics

such as perseverance; always placing the mission first (a military value); active involvement in community, church, school, and social events; not being afraid to seek mental health treatment when needed; proactively seeking opportunities for growth; and sharing experience, strength, and hope with others (Braun, 2012; Brunger et al., 2014; Doyle & Peterson, 2005; Finley, 2009; Gutierrez et al., 2013; Hawkins et al., 2011; Rumman & Hamrick, 2010).

Transition Challenges

The final category, transition challenges, was quite prominent throughout the reviewed literature. Four major themes resulted after careful appraisal of each qualitative report: (1) hyper-vigilance, (2) isolation, (3) educational and employment challenges, and (4) being in two worlds at one time.

Hyper-vigilance

Koenig et al. (2014) interviewed participants who described how they were trained in critical survival skills in a war zone, such as being on guard and vigilant about their surrounding environment all the time. When transitioning back to civilian life, they reported that they maintained this same level of hyper-vigilance, where unfamiliar objects in the street or unanticipated loud sounds evoked the war zone. Other participants recounted experiences of reaching for military equipment, such as a firearm, helmet, or body armor, when surprised or caught off guard. Because these skills are continuously practiced and reinforced during deployment, on their return home, it is difficult to simply stop being vigilant, despite the absence of obvious external threat. Messinger et al. (n.d.) reported similar findings of participants' descriptions of feeling like they were being besieged and targeted, even though there was no imminent danger. Cater's (2012) female

veterans with amputations described having personal safety fears. All of the women in this study were highly trained warriors with combat experience along with training in self-defense. However, after their injuries when they were struggling just to maintain balance, they felt vulnerable all the time. Other studies reported similar themes of participants' constantly feeling vulnerable, feeling the need to be on guard, and maintaining hyper-vigilance all the time (Doyle & Peterson, 2005; Gutierrez et al., 2013; Rumann & Hamrick, 2010).

Isolation

Hinojosa and Hinojosa (2011) recounted 1 participant's account of how he had close friends in whom he confided, but he was reluctant to share his deployment experiences with them, which left him feeling quite isolated. Other participants in this study reported similar feelings, and said that people just do not understand unless they have been there. Finley's (2009) participants described an urge to isolate from family and friends, where they appeared to have an involuntary flattening of emotion. One participant described being unable to feel any kind of emotional attachment to anybody. The author explained a second kind of dislocation, the feeling of being cut off from loved ones, and how this feeling was reverberated throughout the tale of almost every veteran who described himself as struggling in the aftermath of deployment. The levels of withdrawal and feelings of being cut off were different depending on the nature and severity of the injuries or disabilities. Doyle and Peterson (2005) explained that participants often sense a loss of common purpose when they return from deployment, which causes them to feel isolated from family and friends. Other studies reported similar findings with regard to isolation and withdrawal (Graf et al., 2011; Koenig et al.,

2014; Matthias et al., 2014; Rumann & Hamrick, 2010).

Employment and Educational Challenges

Schmaltz (2011) interviewed 25 veterans who had been injured during Operation Iraqi Freedom/Operation Enduring Freedom about their experiences returning to the civilian workforce postdeployment. Some participants reported having high expectations that were unmet, and that finding employment was more difficult than they had thought it would be. Many said that they did not receive any preferential consideration for being a wounded veteran. Others expressed that they had wanted to stay in the military, so they were just looking for a job that would allow them to continue supporting the warfighter. Finley (2009) reported similar findings, and added that some participants said that their coworkers were afraid of how to treat them, and they were experiencing the same problems at work as they were at home with regard to reintegration.

Six participants in Rumann and Hamrick's (2010) study described three principal role incongruities that they experienced on campus after returning from combat: military and academic life, the incompatibilities of lingering stress and anxiety with returning to college, and enacting aspects of the student role during deployment and aspects of the military role during college. Koenig et al. (2014) included one veteran's account of having gone from fast-paced work in the military that fostered a sense of connectedness and shared purpose, to low-intensity work, as well as lack of meaningful rapport with colleagues. Additionally, participants pursuing college education emphasized the slow pace of traditional academic environments compared to active duty deployment. Brunger et al. (2014) described how one veteran's injuries made him a totally different person, with significant reduction in cognitive ability, that prevented him from efficiently

performing in his designated job role, and also increased his sense of frustration. Messinger et al. (n.d.) described how some student veterans struggle to integrate in an academic environment because they tend to be older and more mature than other students. Finally, Braun (2013) described a variety of interrelated conditions within and surrounding the soldier that influence work performance, including cultural, personal, temporal (the time it takes for the wounded service member to heal), virtual, physical, and social conditions. In essence, the transition from deployment back to work or school is multifaceted.

Being in Two Worlds at One Time

Rumann and Hamrick (2010) reported 1 participant's reflections on his past and present selves. He concluded, "I think the two biggest problems, being completely separate from each other, that a soldier might have coming back is he either see the two worlds as completely separate and cannot relate them or he tries to attack the problems in this world the same way he attacked the problems in the other world. And you have to find some kind of middle ground" (p. 447). Other participants said they had to search for a new normalcy between their two worlds, one world being their deployment world, and the other being their home world. Doyle and Peterson (2005) reported that their participants struggled with transitioning from their deployment duties to their home duties, like who was going to pay the bills, take out the trash, or mow the lawn. Participants described knowing what they were expected to do down range, but not at home once they returned. They often struggled with desiring to be in two places at the same time. Other studies described similar struggles of vacillating between two worlds (Finley, 2009; Graf et al., 2011; Hinojosa & Hinojosa, 2011; Koenig et al., 2014).

Conclusion

The purpose of this review was to examine the qualitative literature that has focused on military service members and veterans in postcombat transition and recovery situations. Four major categories emerged from this review, which included (1) psychosocial adjustment and coping; (2) physical disability adjustment; (3) protective factors; and (4) transition challenges. Several themes also developed within each category. Individual accounts were examined and supported by other similar descriptions.

Each of these categories and themes emphasized the powerful nature of qualitative inquiry with regard to providing a much deeper understanding of military individuals' lived experiences with transition and reintegration following combat deployment.

While qualitative research results cannot be indicative of all or even other service members and veterans who are going through transition and reintegration after combat trauma and injury, it does suggest that these individuals tend to report similar experiences through qualitative inquiry that could be transferred, as opposed to generalized, to like populations.

Future Research

Several opportunities abound for future research within the realms of qualitative inquiry and postcombat transition. Burke and Utley (2013) suggested more exploration of the role of self-directed, challenging activities as a way of improving the experience of recovery and adjustment following serious combat injury. A better understanding of the recovery process and the potential role of a challenging and meaningful goal as a path to

recovery may aid the return to a fully functional life. Hawkins et al. (2011) recommended similar future research and proposed that the role of autonomy be addressed as a motivating factor for participation in a proactive lifestyle. Ainslie (2010) recommended that future research focus on gathering many more personal histories of returning veterans that would enhance and potentially confirm the histories that have already been taken. Rumann and Hamrick (2010) advised further research with student veterans and their educational challenges because trends in military recruitment and deployment practices, currently comprising large numbers of Guard and Reserve personnel, continue to evolve. Ainslie (2010) recommended recruiting participants from various racial and ethnic backgrounds. And finally, several researchers suggested including family members as an integral part of the inquiry process (Braun, 2013; Graf et al., 2011; Hagerty et al., 2011).

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CHAPTER 4

A QUALITATIVE STUDY OF MILITARY VETERANS' RESILIENCE AND BODY ESTEEM FOLLOWING COMBAT-RELATED LIMB AMPUTATION

Abstract

The purpose of this study was to learn about veteran experiences of sustaining a military combat-related amputation, with specific focus on how the veteran's injury has affected his body esteem, and how body esteem and personal (resilient) characteristics are determining the veteran's path of reintegration. Additionally, veterans' spouses were interviewed with the purpose of obtaining partner perspectives. This qualitative study used a purposeful sample of male military veterans and their spouses to develop an understanding of the veterans' experiences of having sustained a military combat-related traumatic amputation, as well as an understanding of the spouses' perspectives on their husbands' experiences. The Metatheory of Resilience and Resiliency is utilized as a conceptual framework for understanding resilient qualities, the force that drives an individual to grow through adversity and disruptions, and the process of reintegration. Six Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) veterans shared their personal adjustment experiences to limb loss. Five spouses also shared their viewpoints of their husbands' adjustments to the limb loss. One spouse was not able to participate. Findings suggest that body esteem was generally positive among these

veterans, although the spouses shared slightly different viewpoints. Most of the veteran participants characterized their outcomes as resilient reintegration and the spouses corroborated the veteran outcomes. Resilient drives that appear to have promoted reintegration include finding perspective and purpose (universal resilience), living consistent with one's values and character strengths (character resilience), and accessing positive social support (ecological resilience).

Introduction

The Vietnam War led to the deaths of multitudes of wounded service members, namely due to the inability to reach mobile surgical hospitals (Arredondo, Foote, Pruden, McFarland, & McFarland, 2010). Improvements in protective gear and rapid medical evacuation to medical and surgery units have dramatically increased survival rates of service members wounded during the Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). However, even though the core body is well protected, arms and legs remain vulnerable to injury. Rapid evacuation to military medical centers in the United States results in the medical care system seeing more severely wounded service members with major limb loss surviving and requiring extensive rehabilitation (Arredondo et al., 2010). Although the recovery process may be life long, the advantages of being a military veteran include access to multiple support systems and innovative medical care for combat injuries.

In addition to innovative medical care, the military is supporting preventative efforts that target the fitness of the forces, predeployment, mid-deployment and postdeployment, through the enhancement of psychological resilience (defined as the capacity to adapt successfully in the presence of risk and adversity) (Land 2010; Mullen,

2010). Resilience is most easily conceptualized as having four prerequisites: (1) risk or predisposition to biopsychosocial or environmental conditions, (2) exposure to a high-magnitude stressor, (3) stress response, and (4) return to baseline or higher functioning and symptom levels (Ballenger-Browning & Johnson, 2010). Resilience has long been a topic of research interest. However, little published research exists on body esteem and resilience with regard to veterans' processes of reintegration following combat-related traumatic limb amputation. This qualitative study used a purposeful sample of male military veterans and their spouses to develop an understanding of the experiences of having sustained a military combat-related traumatic limb amputation. The Metatheory of Resilience and Resiliency is utilized as a conceptual framework for understanding resilient qualities, the force that drives an individual to grow through adversity and disruptions, and the process of reintegration. Six Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) veterans shared their personal adjustment experiences to limb loss. Five of the veterans' wives also shared their viewpoints of their husbands' adjustments to the limb loss.

Overview of the Literature

Body Esteem and Amputation

Within the context of this overview, body image and body esteem are interchangeably used and are defined as a person's perception, positive or negative, of body size, shape, and appearance (Reel & Beals, 2009). In Western cultures, body image seems to be based on youth and physical attractiveness. This emphasis can overshadow other personal attributes (Taub, Blinde, & Greer, 1999). The importance given to the physical body may have a negative impact on people with an amputation, especially on

body perception (Sousa, Corredeira, & Pereira, 2009). Perception of everyday reality depends on one's point of view of the world and the body's way of being-in-the-world. The actions of the body construct a world of social relations (Sousa et al., 2009). In this way, the body can only be seen as deficient by comparison, assuming that others' views are considered important (Crossley, 2001). A person with an acquired amputation experiences a fundamental being-in-the-world change that creates a need to relearn and reformulate ways of living life. The loss of a limb is perceived as a loss of part of the self, and as a loss of the "lived-body" (Goodwin, Thurmeier, & Gustafson, 2004). After an amputation, one is faced with loss of functionality, and often times, loss of ability to continue working, which then can have a profound effect on self-concept (Horgan & MacLauchlan, 2004). Social discomfort and body image anxiety tend to be associated with a poor adjustment in terms of greater activity restriction, depression, and generalized anxiety (Horgan & MacLauchlan, 2004). Body image experiences of individuals with an acquired amputation present distinct degrees of adjustment to a new reality. Social barriers that people with amputations have to face on a daily basis become apparent in prejudiced and discriminatory conceptions that have been embedded in a society that struggles to accept body differences. As such, resilience is an important aspect to explore in relation to the body esteem of those who have visible physical differences.

Body Esteem and Resilience

Individuals with visible physical differences tend to struggle with their body esteem namely because the myth of bodily perfection is prevalent throughout Western society. Body image is embedded within historical, cultural, and social settings, and it is responsive to everyday experience (Sousa et al., 2009). The body is also viewed as a

means for being productive. People with disabilities have emphasized how important it is for them to work, not only to provide stable income, but also as a means of maintaining self-respect and giving meaning to life (Schoppen, Boonstra, Groothoff, DeVrie, Goeken, & Eistma, 2001). Social discomfort and body image anxiety tend to be associated with poor adjustment in terms of greater activity restriction, depression, and generalized anxiety (Horgan & MacLachlan, 2004). There is evidence that sociocultural norms for the ideal body influence individuals to base their self-worth more strongly on appearance (Strahan, 2008). Those with visible disabilities have reported that they often experienced rejection in social settings (Stone, 1995). When there is a sudden traumatic change to body image, typically it creates anxiety and is perceived as a distortion of self (Aamot, 1978). Even if plastic surgery or prosthetic placement creates a socially acceptable body, individuals may have difficulty adjusting their mental image with the new image (Aamot, 1978). A growing amount of more recent literature concerning body esteem can be found in research concerning eating disorders and their associated body image symptoms (Stice & Hoffman, 2004; Reel & Beals, 2009).

In related studies, resilient qualities have been found to be protective factors against body dissatisfaction (Cook-Cotone & Phelps, 2003). Choate (2005) proposed a body image resilience model where five specific protective factors were identified that serve as the foundation for the resilience model. The protective factors include (1) family-of-origin support, (2) gender role satisfaction, (3) positive physical self-concept, (4) effective coping strategies, and (5) sense of holistic balance and wellness. Moreover, the Metatheory of Resilience and Resiliency suggests that, among several resilient drives, the drive for noble resilience includes an innate desire to sustain a sense of self-worth,

which encompasses physical self-esteem (body esteem) and purpose in life. Thus, body esteem has been theorized to be an integral component of an individual's ability to bounce back following trauma or adversity (Richardson, 2002). The nature of one's sense of the physical self and how this is connected to one's self-worth and purpose in life remains to be of great interest to researchers when exploring resilient factors in combat wounded military personnel.

Resilience

Psychological resilience is important for the military community with regard to keeping military members and leaders fit for duty and protecting the health and wellbeing of military families (Meredith, 2011). The resilience concept has been the cornerstone of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) Resilience Program, which was created in 2007 as an effort to shift the culture within the military away from an illness-focused medical model of care to a model that focuses on psychological health (Meredith, 2011). Resilience research efforts have exponentially increased in the military as a result of the military activities and related consequences during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), specifically with regard to the factors that contribute to resilience (Bonanno, 2006; Burnell, 2006; Butler et al., 2007; Dolan & Adler, 2006; Gillham et al., 2007; Haglund et al., 2007; King et al., 2004; Maguire & Hagan, 2007; Meredith et al., 2011; Norris & Stevens, 2006; Tugade & Fredrickson, 2004; Van Breda, 1999a; Van Breda, 1999b) and the resilience programs that are operating within the military infrastructure (Adler et al., 2009; Bowles & Bates, 2010; Decker, 2007; Deuster et al., 2007; Jarrett, 2008; Ritchie et al., 2008; Sammons & Batten, 2008; Sharpley et al., 2008; Waynick et al., 2006;

Williams et al., 2007; Warrior Mind Training, 2012). It is noteworthy to mention that in the literature, resilience is sometimes mistakenly used interchangeably with the concept of posttraumatic growth (PTG), and is often times confused with PTG (Tedeschi, Calhoun, & Cann, 2007).

Resilience, in general, has long been a concept of research interest. Numerous resilience-based theories and research projects have been explored and implemented throughout the past several decades (Emmons & Crumpler, 2000; Greene et al., 2003; McCullough, 2000; Richardson, 2002; Rutter, 1985; Ryan & Deci, 2000; Seligman, 2000; Ungar, 2003; Werner, 1982). The concept of resilience continues to evolve through current research efforts that provide new insights to this phenomenon and its related factors. Additional qualitative inquiry may support a deeper understanding of the nature of resilient qualities in relation to the development and maintenance of wellbeing in military personnel and veterans.

Resilience and Amputation

Resilience and how it relates to body esteem and self-concept is important to consider for individuals who have sustained a military combat-related amputation because these individuals are faced with several life-altering adjustment issues when returning from deployment with a disabling injury. There appears to be a dearth of research pertaining specifically to resilience and amputation. Most studies are quantitative in nature, and report findings in the areas of psychosocial adjustment and posttraumatic growth with regards to amputation (Benetato, 2011; Horgan & MacLachlan, 2004). Other studies focus more on adaptation to prosthetic limb use (Murray, 2005). More research needs to be conducted in this area. Also, since no studies

have been published on body esteem, within the context of resilience, and reintegration of military veterans following combat-related amputation, this methodological gap presents a need for qualitative research that can serve to strengthen existing resilience programs and recovery efforts for military personnel and veterans.

Methods

The purpose of this study was to learn about individual experiences of sustaining a military combat-related amputation, with specific focus on how the individual's injury has affected body esteem, and how body esteem and personal (resilient) characteristics are determining the individual's path of reintegration. This qualitative study used a purposeful sample of military veterans and their spouses to develop an in-depth understanding of their reintegration process following amputation.

A total of 8 male veterans and their spouses were invited to participate in the study, with 6 veterans and 5 spouses ultimately being interviewed. Interviews were conducted that produced substantial narratives for each of the 6 men and 5 of the spouses. The main features of the interviews were (1) the veterans' experiences of sustaining a combat-related amputation, and the spouses' perceptions of their husbands' experiences; (2) how, if at all, the amputation affected the veterans' body esteem and how the spouses felt the amputation affected their husbands' body esteem; (3) how the veterans and their spouses describe the role of personal resilience in their paths of reintegration; and (4) the meanings that were attached to their experiences. The interviews were carried out by me and followed questions set out in semistructured guides. The spouses were asked a slightly modified interview focusing more on relational factors as well as perceptions of their partner who experienced the traumatic amputation. Each participant (veteran and

spouse) was considered a co-researcher so that the research process was a shared journey between the participants and the researcher (Jones, Torres, & Arminio, 2006). The co-researchers (participants) not only shared their life experience, but also assisted in the research process by reviewing the researcher's summary of their experience and the summary of the research results. This process is termed "member checking" or "triangulation" of the data and is the process whereby the data are validated (Mousakas, 1994).

Data from the interviews were generated using the Long-Interview Method (LIM), a heuristic method developed by McCracken (1988), which found that saturation on specific topics can be reached after 6-8 interviews. After analyzing the 6 veteran transcripts and 5 spouse transcripts of this study, no new information seemed to come forward, thus saturation appeared to be attained, on the questions that were being implemented. For this reason, no additional sampling was pursued. It was unfortunate, however, that despite multiple attempts by me, the 6th spouse was unable to be contacted for interviewing.

Descriptive and interpretive analyses were conducted (Ray, 1994; van Manen, 1997). The descriptive approach is based on Husserl's original theory and uses bracketing to set aside what the researcher already knows about the life experience under investigation and strives to approach data gathering without preconceptions (Finlay, 2008). The interpretive approach is a modification of Husserl's theory that theorizes that it is impossible to eliminate preconceptions and create a blank slate approach. Thus, interpretive researchers use their own life experience to interpret others and to guide the research questions (Ball, 2009). Ultimately, the experiences were coded and described

within the conceptual framework of the Metatheory of Resilience and Resiliency. The conceptual framework offered a way to examine the participants' experiences in general and then dissect in them what was supplied by the minds of the participants from what was supplied by the given intuitions of the researcher (Mousakas, 1994).

Reliability was addressed through credibility, transferability, and dependability. The trustworthiness of qualitative research is often questioned because the concepts of validity and reliability cannot be addressed in the same way as in quantitative methods (Shenton, 2004). One key criterion, internal validity, is addressed in qualitative research via credibility, which addresses the question, "How congruent are the findings with reality?" (Merriam, 1998). Credibility was established in this study by (1) utilizing well-established qualitative research methods, (2) enhancing familiarity with the culture of the participants, (3) member checks, (4) thick description of the experiences under scrutiny, and (5) examination of previous research findings (Lincoln, 1995).

Transferability in qualitative research is a form of external validity in that it is concerned with the extent to which the findings of one study can be applied to other situations (Merriam, 1998). Ultimately, the results of a qualitative study must be understood within the context of the particular characteristics of the participants. The accumulation of findings from other studies in different settings may enable a more inclusive, overall picture to be gained. Even when different investigations offer results that are not entirely consistent with one another, this does not imply that one or more is untrustworthy. It may be that they reflect multiple realities (Shenton, 2003).

Dependability was addressed through techniques to show that, if the research were repeated, in the same context, with the same methods and the same participants,

similar results would be obtained (Shenton, 2003). In this study, such techniques included (1) the research design was reported in detail so that it can be replicated, (2) the operational detail of data gathering was reported, and (3) reflective appraisal of the project was undertaken by the researchers (Shenton, 2003). Dependability was also supported by audio-taping and transcribing verbatim the interviews. In order to manage bias while conducting this study, a separate researcher who has familiarity with military and deployment experiences read each of the manuscripts in its entirety. Key themes were discussed prior to making formal conclusions. And finally, the study's materials and procedures were approved by the University of Utah's Institutional Review Board.

The analytic method used on this qualitative data involved a step-wise process. The texts from interview transcripts were numbered by talk turns from the interview for easier location of key themes and statements from the participants (veterans and spouses). The verbatim transcripts were then read through and annotated with memos about key concepts. No specific coding scheme was used at this first phase. In light of the theory and conceptual focus of this study, the transcripts were then reviewed a second time and the annotations were used as markers of particularly relevant statements.

Codes derived from the Metatheory of Resilience and Resiliency were then used during this second pass to classify important resilient drives that have been proposed as key factors that move an individual toward resilient reintegration (Richardson, 2011). These broad categories included the following: 1) childlike resilience (the drive for pleasure and play), 2) noble resilience (the drive to feel important and valued), 3) character resilience (the drive to be moral and the yearning to live within a chosen moral framework), 4) ecological resilience (the drive and yearning to be in enriching

environments and to connect with the energy from one's surroundings), 5) universal resilience (the drive to connect to strength beyond oneself), 6) intellectual resilience is the yearning to know and understand through prompts that come from the body and spirit, 7) essential resilience (the physical body's drive to sleep, to eat, and to move). To aid with the reliability of coding of resilient statements into these categories, a classification algorithm was created. Specifically, this algorithm prompted the coder to assess whether the primary concept involved: 1) behavioral actions, 2) values, 3) learning, or 4) relating to others.

If the primary concept involved behavioral actions, the coder was then prompted to assess whether the action involved enjoyment (childlike resilience: fun, joke, laugh, play) or life tasks (essential resilience: do, move, walk, work). When the primary concept involved values, the task was then to determine if the values were inwardly focused (character resilience: passion, personal mission, spiritual values, values) or if they were outwardly focused (universal resilience: acceptance, perspective, purpose, spiritual views). In instances where the primary concept involved relating, further clarification was required to determine if relating involved being needed (noble resilience: appreciated, important, needed, valued) or needing others (ecological resilience: connection, encouragement, help, support). The code for learning automatically was classified as intellectual resilience. Body esteem themes were openly coded without any particular guiding framework.

Results

The collaborative portion of the interview allowed participants to pinpoint their current level of resilience on a graphical figure depicting the Metatheory of Resilience

and Resiliency. Five of the 6 veteran participants identified resilient-reintegration as their perceived level of resilience (See Appendix F Figure 1). The 6th veteran participant indicated that his level of resilience might actually be somewhere below resilient reintegration and somewhere above reintegration back to homeostasis. In context of the themes that emerged from each transcript, these characterizations seemed generally quite consistent with one exception, however. This exception included one veteran participant whose transcript highlighted many themes that were more indicative of reintegration with loss (e.g., "I know that life is worth living and there is still that out there, but it's hard to come back to that." [Transcript B, talk-turn 64]). In this instance, therefore, the interviewer and coder determined that it may be more accurate to characterize this individual's reintegration outcome as reintegration with loss but that his resilience appears to be actively in the process of improving. The spouses of each of the veteran participants were also asked to discuss their perception of their partner's resilient outcomes. Of the 5 who were interviewed, 2 spouses indicated that their veteran spouse was in the resilient reintegration outcome after the amputation. The remaining 3 spouses described areas of growth after the amputation and recovery but were fairly clear that their veteran partner was "between three and four," referring to reintegration back to homeostasis.

Body esteem was another key element to this study. Examination of the verbiage during this interview revealed that there was not a great deal of variance in the responses from the veteran participants. Specifically, the veteran participants all regarded their body esteem to be generally intact and positive in spite of the amputation. The spouses, however, had different perspectives about their husbands' body esteem. In essence, the

spouses each shared additional viewpoints that suggested body esteem may be more of a factor that affected wellbeing than the veterans themselves disclosed.

Emergent Themes: Drives for Resilience

There were several emergent themes related to drives for resilience that were detected after the memoing and coding processes were complete for the veteran transcripts. On the basis of the frequency of primary codes, each resilient drive together with representative statements from the veteran transcripts are described below.

Universal Resilience

The most frequently coded theme related to resilient drives is universal resilience—the drive to connect to strength beyond oneself. As indicated earlier, the algorithm used for coding this concept as a primary theme included whether or not the content included values and whether the values were outwardly focused (perspectives, views) versus inwardly focused (character resilience, including values, traits). This was the single largest category of codes applied from the resilient drives coding scheme (30.28%). One theme was that of seeking out purpose and meaning from the injury:

> …there's a reason why you're here. There's a reason why you lived through it. And it might not come clear yet but it will reveal itself down the road. But for you, it's just overcoming what you need to overcome right now. (Transcript D, talk-turn 252)

Another theme within the universal resilience codes included keeping perspective through comparisons. Such resilience is captured by the following quotations:

> That is just kind of who I am. Because no matter where you look, I mean, and not necessarily physically or whatever, you can always find somebody who has got it worse than you. (Transcript Q, Talk-turn 498)

> …there's people that go through a lot harder time than losing just one limb. (Transcript J, Talk-turn 168)

Differential focus, which is a form of perspective taking, also emerged as an expression of universal resilience:

> I just think being occupied is one of the reasons I work now and I go to school. I try to keep myself as busy as possible, because as long as I'm doing something constructive and I'm moving forward, I do not think about what I lost. (Transcript Co, Talk-turn 117)

Character-Resilience

The next most frequent primary code from the resilient drives categories was character-resilience (25.68%). Character resilience is the drive to be moral and to live within a chosen moral framework and the following anchor terms were used to detect concepts related to this theme: passion, personal mission, spiritual values, and values. Character strengths such as optimism and hope were referred to in this data, as typified by the following quote:

> So I have always been a positive, I guess, person. I am not sure what stereotype or what it is called but I have just been positive always. And having hope I guess that things can get better and will get better. (Transcript Ca, Talk-turn 178)

Acting in accordance with one's values also illustrated character resilience. For instance:

> I'm not going to waste time by not going to school just because somebody is going to see me. The pro of going to school and progressing with my life far outweighed the con of having people look at me (Transcript J, Talk-turn 150). And then so I tried working for another job. I did that and then it kind of got me out of my funk after retiring. And the first job doing it kind of brought out the, I guess the hunger or the passion to do something that I want to do. (Transcript Ca, Talk-turn 210)

Ecological Resilience

In order of frequency, ecological resilience emerged as the next most frequent category of primary codes (19.27%). Ecological resilience is the drive and yearning to be in enriching environments and to connect with the energy from one's surroundings. Both

ecological resilience and noble resilience tapped the overarching theme or relating to others. The coding algorithm directed ratings to ecological resilience when the relating comment referred to needing others, whereas noble resilience was coded when the relating theme referred to being needed by others. Salient statements include those provided below. These comments underscore drive of these participants to seek out social environments conducive to resilience:

> …it really came down to my support chain as far as my life, my parents, being there, supporting me along. And that it really helped me out. But also, it was just like someone else to talk to …But they're there to also build up your morale as far as, you know, 'Well, why do not we start doing this?' Or, 'Why do not we start doing that?' Like my wife, being as I've been getting into mountain biking a lot more, we've gone out, got pretty much everybody in the family a bike. So we'll go on family bike rides now and that. But I mean, it really comes down to probably just having that person to talk to and being like, 'Hey, you know, I'm having problems with this.' (Transcript D, Talk-turn 210)

> So then at that time they were like hey, we can try to continue saving it [the limb] or we can [amputate]. Cause I guess I lost a lot of weight and I was pretty sick myself, I guess. So then they tried to - what did they say? We can try to save it or we can amputate it. I said okay. And then at that time I already saw one of the - Wounded Warrior Project had one of those guys, representatives, there. And then he was an arm amputee also and I had already seen them come in and he showed me some toys and stuff and some of the arms he had. So at that time I was like well, can you do pushups or can you like still do stuff with prosthetics and like. And he said he could and he just dropped down and did a couple there. And then so I was like okay. (Transcript C, Talk-turn 95)

Essential Resilience

Essential resilience came next in line in order of frequency as a primary code (13.76%). Essential resilience refers to the physical body's drive to sleep, to eat, and to move. Example comments are provided below and each underscores the drive to be able to do and accomplish physical tasks.

> Oh, like I was saying at the hospital, I remember my wife - I do not even know where this list is - but I was sitting there in the bed and I was just like, 'I'm never going to be able to go rollerblading again. I'm never going to be able to play

> soccer with the boys. I'm never…' I listed off a whole bunch of things that I said I was never going to be able to do. But at that point, I was still in that depressed mode. But once they got the staples out of my amputated leg and that and they started fitting me for a socket and I was able to start standing on my leg and start walking on the parallel bars, I think at that point, it started boosting my confidence. (Transcript D, Talk-turn 123)

> …you know if a crisis or a situation ever came up I do not want to be that guy or that person that is not able to help somebody out because I'm out of shape. If I'm driving along the road and someone needs to be pulled out of a car, it's just the way I think you know? I do not want to be that person that I cannot move or I'm not strong enough or I'm not physically fit enough you know; I do not want to be that person. (Transcript J, Talk-turn 158)

Noble Resilience

Noble resilience was the next category that emerged out of the primary codes (8.26%). This form of resilience is the drive to feel important and valued. Representative statements are included below:

> Yeah. I think a little easier to just kind of suck it up because you have somebody relying on you and to kind of - you have to pick yourself back up and do something. (Transcript Ca, Talk-turn 353)

> To be put in the same position, and to understand. That is ultimately why I chose. I wanted to do something in healthcare. Because I wanted to. I have been – I was two months as an inpatient in a hospital. I know how that is. I want to like almost give back. I understand somebody in a hospital's position because I have been there. (Transcript Q, Talk-turn 357)

Childlike Resilience

Childlike resilience was only coded a few times (2.75%) and intellectual resilience was not detected in the transcripts and was not used as a code with this qualitative data set.

The transcripts of the 5 spouses who were available to be interviewed were also coded for resilient drive themes. These are described below in descending order from the most frequent to the least frequent.

Universal Resilience

Themes related to deriving strength from outside oneself, including perspective and acceptance were coded as universal resilience. As with the veteran participants, universal resilience was the most frequent theme among the spouse participants (32.14%). A representative statement is below:

> He finally admitted to me the other day that he is connected so much that the way he is now and how much he accepted it he almost cannot even remember back when he did have both legs. I think he has known that it changed him and he's learned to accept and realizes that you know what? There are things that I can do. (Transcript D-S, Talkturn 38)

The next two themes both focus on the overarching theme of relating: ecological resilience and noble resilience. Each of these themes occurred in equal frequency and comprised the second most frequent theme related to resiliency drives.

Ecological Resilience

Themes relating to receiving help from others emerged frequently in the spouse interviews (21.43%). This is salient in that the spouses often play a critical part of the ecology and social support for the veteran participants. Indeed, spouses very often referred to their own efforts to provide support. A representative comment is below:

> I think it is important to have someone to support you and especially when they have been through something like that, very traumatic experiences. And to have that support, and somebody that understands, or somebody that you can talk to when you really cannot go and just talk to your friends about that stuff. (Transcript Co-S, Talkturn 80)

Noble Resilience

Resilience that is derived from being of value to others emerged as a tie in frequency with ecological resilience (21.43%). This theme captures resilience that comes from a focus on being of value and importance to others. A representative statement is

below:

> I mean, he is just doing everything he can because we have kids. He wants to be an example to them. Even though life is hard. No one wants to get their leg amputated, but he wants to be an example to our kids and show them that you're able to do [anything] in life, which is what he's doing now. And be able to have a family of their own. (Transcript Q-S, Talkturn 95)

The resilience drives cited above account for about 75% of the all themes coded in the partner interviews. The remaining themes in descending order of frequency are as follows: character resilience (10.71%), essential resilience (8.93%), and childlike resilience (5.63%).

Discussion

This qualitative study examined military veterans' resilience and body esteem following combat-related limb amputation. Resilience and body esteem have not been studied adequately in the research literature among military veterans. The results of this study suggest that resilience and body esteem are generally positive and somewhat consistent among all 6 veteran participants. That these topics emerged as generally homogenous was somewhat unexpected. In other words, the experience of an amputation was anticipated to produce a wider array of integration outcomes. Instead, 5 of the 6 veteran participants self-identified resilient reintegration as the most characteristic outcome following their amputations. This positive result is significant and may likely be due, in part, to the fact that all of the veteran participants have now had several years since their amputations. And although all of the veterans sustained TBI to some extent, this did not appear to impact the interview process, most likely due to the amount of time that had passed since injury. Several years have passed (between 3 years and 7 years) since each of the veterans had been injured. Another somewhat unexpected theme was

the homogeneity seen in body esteem. All veteran participants reported current high levels of body esteem and none seemed to be particularly distressed at the time of their interviews about their amputations. This was also an unexpected finding and one that may be explained by the resilient drive themes from the interviews.

The spouses however, shared some different viewpoints about their veteran husbands' body esteem and self-confidence. Spouse Ca-S (Transcript Ca-S) indicated that her husband (left arm amputee) becomes frustrated with fine motor skills and really struggled with switching from being left-handed to right-handed. She explained that he gets discouraged when he cannot do what other men can do, and that he is bothered when people stare at him. She also indicated that despite the amputation, the couple's intimate (sexual) relationship has not changed at all, other than a few minor position adjustments.

Spouse B-S (Transcript B-S) reported that her veteran husband's physical body is linked to his self-worth and self-confidence, he was much more confident before his amputation, but he does not openly admit it to anyone. She also indicated with a strong yes that the couple's intimate (sexual) relationship is negatively impacted by her husband's body esteem related to the amputation. She explained that the couple met postinjury, and when they were first becoming intimate, he tried to hide his amputation. She also said that before they met several women had broken up with him when they found out about the amputation. She described how hurtful this was for him, and as a result, how timid he was with her.

Spouse Co-S (Transcript Co-S) who also met her veteran husband postamputation said that she always questioned whether the amputation would affect their intimate sexual relationship in some way, but it never has. She explained that she met and married her

husband knowing the circumstances, and so she knew what to expect. She said that she believes that his amputation has not affected his body esteem, his self-worth, or their intimacy in a negative way.

Spouse D-S (Transcript D-S) explained how her veteran husband has spoken about not feeling like he was a whole man anymore, and that she kept telling him that he was, that his physical leg was not what made him whole, and that he was still the man she married and is still in love with. She described how defeated her husband initially felt, and that the slow progress he began to make helped him to build his physical self-confidence. She described that his PTSD affected their intimate relationship more than the change to his physical body, but she did describe that the couple had to make adjustments to accommodate intimate positions. She stated that she believes that his physical body and capabilities are strongly linked to his self-confidence and self-worth, although he has learned to adapt, accept his situation, and focus on what he can do rather than what he cannot do. She indicated that the couple's children play a very large part in helping him to recognize his strengths and goodness as a father and role model for them.

Finally, spouse Q-S (Transcript Q-S) described how the couple had been divorced prior to his deployment, then remarried postinjury while the veteran was still at the Center for the Intrepid in San Antonio, TX. She said that the amputation did not negatively change their intimate relationship because they both believe that everything happens for a reason. She indicated that perhaps they never would have been remarried had he not gone to Afghanistan and been injured. She says that his body esteem has not been negatively impacted per se, but there are definitely activities that he wishes he could still perform. The veteran, on the other hand, indicated previously that he had made a

"bucket list" of activities he wanted to do again, and with the help of his family, he has met nearly every one of them.

Emerging themes related to resilient drives (Richardson, 2011) were the basis of much of the qualitative data analysis and coding. Three-quarters of all the primary codes had to do with the following resilient drives: universal resilience, character resilience, and ecological resilience. The salience of these themes paints a picture of the pathways to resilience as retold and experienced by these participants. To understand their experiences is to appreciate their drive to find meaning, purpose, and perspective on life after an amputation (universal resilience); to account for the importance of personal values and character strengths enlisted in the process of recovery (character resilience); and to comprehend the critical role of supportive others (ecological resilience) in the process of resilient reintegration after the combat trauma and amputation.

Given the dramatic changes to physical functioning after an amputation, it was surprising that essential resilience—the physical body's drive to sleep, eat, and move—was not as prominent as the other themes. It would seem that part of the resilience process for these veteran participants was to put other priorities, areas of focus, and goals ahead of the amputation itself. This process not only seemed to allow the participants to enlist other powerful internal (character strengths) and external (perspectives, help from others) resources to cope with the amputation, but following this pattern may have also reduced the tendency for the amputation to take center stage in their life and coping.

Another contributing factor to the secondary regard for the amputation is that several of the veteran participants had the opportunity to choose amputation after their initial combat trauma that resulted in the severe injury to their limb. Military

rehabilitative medicine, as retold by these veteran participants, went to extensive efforts to preserve severely wounded limbs. Several of the veteran participants noted, however, after making the difficult medical decision to amputate, they found relief from infection risk and physical pain as well as increased mobility with a prosthetic limb. Both the engagement of veteran choice in the process together with positive outcomes may have resulted in enhanced coping and improved reintegration outcomes.

It is interesting to note that resilience is occasionally used interchangeably with the term posttraumatic growth, and the two terms have actually been theoretically confused in the literature (Tedeschi, Calhoun, & Cann, 2007). This begs the question, have the veterans in this study experienced some degree of resilience or have they experienced some measure posttraumatic growth?

It has been debated as to whether or not posttraumatic growth is a form of resilience, and argued whether or not posttraumatic growth is superior to resilience (Johnson et al., 2007; Tedeschi et al., 2007, Wesphal & Bonanno, 2007). Some studies have suggested that, contrary to an intuitive sense that resilience and posttraumatic growth should be positively related in that they are both salutogenic outcomes, the terms are actually conversely related in the sense that posttraumatic growth indicates a change for the better following adversity while resilience indicates an increased ability to mitigate the impact of the event(s) (Levine et al., 2009; Tedeschi & Calhoun, 2007; Westphal & Bonanno, 2007). Furthermore, posttraumatic growth has been described as a need to find meaning to traumatic events, where resilient people are less likely to engage in the meaning-making behaviors that are associated with the growth because they are unlikely to struggle with the implications of the trauma (Bonanno, Wortman & Nesse,

2004; Tedeschi & Calhoun, 2004). As such, it has been argued that resilient outcomes may provide little need or opportunity for posttraumatic growth (Westphal & Bonanno, 2007). It has been suggested that resilience is more common and expected than is often believed and that there are multiple and sometimes unexpected pathways to resilience (Bonanno, 2008). From a broad and integrative perspective (Bronfenbrenner, 1979, 1986), this is due in large part to resilience arising from the processes of interaction across multiple levels of functioning (e.g., from genes to neural systems to relationships to individual-media interaction). Posttraumatic growth, however, may only occur if trauma has been upsetting enough to drive the survivor to positive meaning-making of the negative events, which is not necessarily common occurrence (Tedeschi & Calhoun, 2004). Ultimately, the relationship between resilience and posttraumatic growth remains unclear, thus leaving the question unanswered as to whether the veterans in this study have developed or maintained some degree of resilience, or experienced some form of posttraumatic growth.

Limitations

Most veteran participants and their spouses in this study self-identified resilient reintegration as their most characteristic reintegration outcome. This result should be examined within the context of the research method by which the data were gathered. Importantly, the collaborative nature of this research design allowed for the participants to self-report their resilient integration outcomes. Demand characteristics, which are common with self-report, cannot be ruled out as a contributing factor. Importantly, however, it is likely that demand characteristics were minimized by the extensive interviewing method, which was intended to build rapport and comfort with each

participant. Furthermore, there was evidence of candor throughout the stream of thought in all the interviews, suggesting that these participants were open and quite willing to speak about the positive and the negative of their experiences.

Conclusion

While these qualitative research results cannot be assumed to be indicative of the reintegration of all or even other male military veterans who experience combat-related traumatic limb amputation, they do suggest that these veterans have increased resilience to traumatic limb loss, particularly when they seek to understand purpose and meaning from their injuries (universal resilience), and when they are able to maintain optimism and hope through the recovery and reintegration process (character resilience). Each participant and his spouse took a different journey of recovery and reintegration, and all are building new lives. They are also determined to contribute to society (noble resilience).

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CHAPTER 5

SUMMARY

Three articles were presented that discussed research related to resilience and body esteem in military veterans with combat-related traumatic amputations. Article 1 (Chapter 2), "The impact of disability on body esteem: A review of the literature," examined the existing literature regarding body esteem in individuals with various disabilities. The purpose of the article was to highlight principal findings and identify areas that require further research.

Article 2 (Chapter 3) is a companion article entitled, "Qualitative research contributions to military postcombat transition and reintegration: A review of the literature." The purpose of this review was to examine the existing qualitative literature regarding military postcombat transition and reintegration. Four categories were identified, which included (1) psychosocial adjustment and coping, (2) physical disability adjustment, (3) protective factors, and (4) transition challenges. Several themes were also distinguished within each category.

Article 3 (Chapter 4), "A qualitative study of military veterans' resilience and body esteem following combat-related limb amputation," included 6 semistructured interviews with former service members who had sustained a military combat-related limb amputation, and 5 semistructured interviews with the veterans' spouses. Personal interviews were used to gain an in-depth understanding of the resilience and body esteem

of each amputee, as well as the viewpoints of the spouses. In lieu of a grounded theory approach, which is common in qualitative research, the Metatheory of Resilience and Resiliency was utilized to guide the analysis of the interviews with these 6 male participants and 5 spouses, with the understanding that the interviews were semistructured and open-ended in nature. Open, axial, and selective coding were used to analyze the data.

Limitations

Qualitative research is a time intensive process that requires honed listening skills and significant attention to detail. When utilizing descriptive and interpretive analyses, along with a conceptual framework, these skills are even more important. Many researchers suggest that it is important to reach saturation. Saturation occurs when no new ideas or data are presented (Charmaz, 2006; Corbin & Strauss, 2008; Creswell, 1998).

Unfortunately, it is difficult to know when saturation has truly been reached. This is a possible limitation of the current study, although saturation seemed to be reached after 6 veteran interviews and 5 spouse interviews. However, more interviews would continue to add to the strength of the conceptual framework and confirm the individual components of the Metatheory of Resilience and Resiliency.

A second limitation involves the selected sample. The current study examined the process of reintegration among male military veterans who had sustained a combat-related traumatic amputation. All of the participants reside in Utah and Idaho (the region associated with the Salt Lake City VA). Consequently, the results may only be transferable to a similar population. Further research needs to be conducted to determine

how well the conceptual framework fits with the experiences of combat-wounded veterans and their spouses in other geographical areas. Additionally, further research would be helpful in determining whether female veterans experience reintegration in a similar way or not.

Last, in order to establish trustworthiness of the data, it is important to conduct member checks and have experts review the data. While these steps were taken, the participants were brief in their responses and comments concerning the collected data. Also, only one expert reviewed the 11 interviews. These limited numbers suggest that data trustworthiness might be limited.

Application to Health Education

The findings of the current study have significant implications for health education:

1) There is a large amount of stigma associated with the mental health aspects of recovering from a traumatic injury. Health educators have the responsibility to provide accurate information that explains the model of resiliency, specifically the process of going through the "trough." or the low points of the life disruption, and how one can begin to resiliently reintegrate (Richardson, 2002). A sample health education program is provided that demonstrates this unique process (Appendix G). Health educators also have the responsibility to promote a culture of understanding and compassion when educating individuals about recovery and reintegration after a traumatic event.
2) Health educators can be instrumental in helping to develop and transform

resilience programs in the military. The military is currently supporting a difficult paradigm shift away from stigma and the "suck it up and drive on" attitude, to a preventative approach that supports emotional wellness and baseline resilience (see Appendix H).

3) Last, health educators can help create a culture of resilience by teaching skills associated with resilient drives and protective factors (see Appendix G). These constructs are essential in promoting positive physical, emotional, social, and spiritual health.

Personal Reflections

Completing my doctorate degree has been one of the most difficult things that I have ever done in my life. I have been sad. I have been angry. I have been at my breaking point numerous times wishing I could quit, especially after having to start working full time at the beginning of year 2. However, I have always known that I could not quit and that I would not quit. In my heart, I knew that what I was doing was exactly what I was supposed to be doing. I am thankful for that knowledge and for my ability to persevere.

Despite all of the challenges I have faced, completing my doctorate degree was also one of the greatest experiences that I have had. I have met many amazing people, and gained a large amount of knowledge and skills. In the end, I learned more about myself than I could have ever imagined. I have learned that I am more resilient than I have given myself credit.

Completing my dissertation certainly had its challenges, but ultimately, it was a wonderful experience that has changed my life. I came to really care about the veterans

and their spouses I interviewed and am very protective of their stories and experiences. Their experiences have greatly impacted my current career path. I learned so much about struggle, heartache, and sorrow, as well as healing, love, and compassion. These veterans and their spouses taught me that having meaningful connections is central to health and happiness. Hearing their stories solidified my ultimate goals of helping military service members, veterans, and their families reach their ultimate potential, and recognize and address issues that get in their way. This is the essence of my current position with the Utah Army National Guard. I love this country and I am grateful for the opportunity to serve those who serve this country, in war and in peace. I am also grateful for the opportunity I had to interview these veterans, and for their willingness to share some of their most vulnerable moments with me.

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APPENDIX A

RECRUITMENT MATERIAL

Invitation to Join a Research Study

A study of military service members' resilience following traumatic amputation

Juliann Jeppsen, CPT, U.S. Army

University of Utah

BACKGROUND

You are being asked to take part in a research study. The purpose of the study is to learn about your experiences of sustaining a military combat-related amputation.

STUDY PROCEDURE

It will take you approximately 90 minutes to complete a personal interview. The interview may be audio recorded with your permission. After the interview, you may be asked to answer follow-up or clarifying questions, which will take approximately 15 minutes on a different day. Questions will be asked about your combat experience, how you feel about your physical appearance, how your life has changed since your injury, your recovery process, and your personal resilience. This is a semistructured interview, and you are encouraged to ask questions and share whatever information you wish to share.

DATE AND LOCATION OF INTERVIEW

Interviews will take place in late March or early April. The location will be somewhere that is comfortable for you.

RESEARCHER CONTACT INFORMATION

Please call, email, or text me as SOON as possible so I can set up a time to interview you. I can receive calls/texts at 619-616-6138. You can email me at: Juliann.m.jeppsen.mil@mail.mil or Juliann.jeppsen@gmail.com. I will always respond within 24 hours or less.

COMPENSATION FOR YOUR TIME

I know your time is very valuable, so to show appreciation for your involvement, you will receive a $25 cash card or gift card (Active-duty participants must be in a leave/liberty status in order to receive this gift).

APPENDIX B

CONSENT FORM

Consent Document

A qualitative study of military veterans' resilience and body esteem following traumatic amputation

BACKGROUND

You are being asked to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether you want to volunteer to take part in this study.

The purpose of the study is to learn about individual lived experiences of sustaining a military combat-related amputation, with specific focus on how the injury has affected body esteem, and how body esteem and personal (resilient) characteristics are determining the path of reintegration. This qualitative study is using a purposeful sample of military veterans and their spouses to develop an in-depth understanding of the reintegration process following amputation.

STUDY PROCEDURE

It will take you no longer than 90 minutes to complete a personal interview. The interview may be audio and-or video taped with your permission. After the interview, you may be asked to answer follow-up or clarifying questions, which will take

approximately 15 minutes on a different day. Questions will be asked about your combat experience, how you feel about your physical appearance, how your life has changed since your injury, your recovery process, and your personal resilience. This is a semi-structured interview, and you are encouraged to ask questions and share whatever information you wish to share.

RISKS

The risks of this study are minimal. You may feel upset thinking about or talking about personal information related to your injury. These risks are similar to those you experience when discussing personal information with others. If you feel upset from this experience, you can tell the researcher, and he/she will tell you about resources available to help.

BENEFITS

There are no direct benefits for taking part in this study. However, we hope the information we get from this study may help develop a greater understanding of recovery from a traumatic amputation. We want to understand how personal resilience and feelings about physical appearance may or may not affect recovery and reintegration.

CONFIDENTIALITY

We will keep all research records that identify you private to the extent allowed by law. Records about you will be kept on computers protected by passwords. Written notes will be kept in locked file drawers. You do not need to supply your social security number in order to participate in this study. Only those who work with this study or are performing their job duties for the University of Utah will be allowed access to your information. Your name will be kept with your responses from the interviews. In publications, your name will be removed.

PERSON TO CONTACT

If you have questions, complaints or concerns about this study, you can contact Juliann M. Jeppsen at 619-616-6138. If you feel you have been harmed as a result of participation, please call Dr. Glenn Richardson, PhD, University of Utah, at 801-581-8039, who may be reached Monday through Friday, during the hours of 8am and 4 pm, Mountain Standard Time.

Institutional Review Board: Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns which you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

Research Participant Advocate: You may also contact the Research Participant Advocate (RPA) by phone at (801) 581-3803 or by email at participant.advocate@hsc.utah.edu.

VOLUNTARY PARTICIPATION

Research studies include only people who choose to take part. You can tell us that you do not want to be in this study. You can start the study and then choose to stop the study later. This will not affect your relationship with the investigator.

COSTS AND COMPENSATION TO PARTICIPANTS

We do not anticipate that you will incur any monetary costs related to research procedures.

You may be compensated for participation in this study, up to $25 in gift card format. This will be allotted to you at the time of your interview.

CONSENT

By signing this consent form, I confirm I have read the information in this consent form and have had the opportunity to ask questions. I will be given a signed copy of this consent form. I voluntarily agree to take part in this study.

_____

Printed Name of Participant

_____ _____

Signature of Participant Date

_____

Printed Name of Person Obtaining Consent

_____ _____

Signature of Person Obtaining Consent Date

APPENDIX C

DEMOGRAPHICS QUESTIONNAIRE

DEMOGRAPHICS QUESTIONNAIRE

1) Age _____

2) Marital Status

   a. Married

   b. Divorced

   c. Separated

   d. Widowed

   e. Single, never married

   f. Unmarried, cohabitating

   g. Committed relationship, not cohabitating

   h. Other

3) Do you have children?_____If so, how many?_____

4) What is your annual gross family income?_____

5) Ethnicity

   a. White

   b. Black

   c. Asian

   d. Hispanic

   e. Pacific Islander

   f. American Indian or Alaskan Native

   g. More than one race

   h. Unknown/refused

   i. Other

6) Which of these groups best describes you?

a. Catholic

b. Protestant

c. Latter-Day Saint

d. Islam

e. Judaism

f. Spiritual, but not religious

g. Other: _____

7) Which of these best describes your current level of education?

a. Some High School

b. High School Graduate

c. Trade/Technical School

d. Some College

e. College Graduate

f. Some Graduate School

g. Completed Graduate School

8) Branch of Military in which you served.

a. Army

b. Air Force

c. Navy

d. Marine Corps

e. Coast Guard

f. National Guard

9) What is your current status?

   a. Active duty

   b. Reserve

   c. Veteran

10) What is your current rank or rank at discharge?_____ Date of discharge_____

11) How many years did you serve?_____

APPENDIX D

VETERAN INTERVIEW GUIDE

Interview Guide

1. Describe your combat experience.
2. How was the actual experience of combat different or the same as what you have anticipated from your training and years of service?
3. Describe your life before you were injured. What, if anything, motivated you? (What personal attributes/protective factors did you have that helped you? Where did you learn to be that way?)
4. In what ways, if any, has being injured changed your life?
5. What is it like to be in your body, as it is now, versus how it was before you were injured?
6. In what ways, if at all, is your physical body linked to your self-worth (pre and postinjury)?
7. In what ways, if at all, would you describe what motivates you now? (What, if any, personal attributes/protective factors help or hinder you now? Where do you think those attributes come from?)
8. Please describe your recovery process in terms of the physical, emotional, social, and spiritual components, if such components apply to you.
9. If you were to visit someone in the hospital with your same injuries who was just beginning the recovery process, what would you tell him or her?
10. What were your expectations going in to your deployment? How did the military prepare you for deployment? (How would you describe your recovery and reintegration based on this resiliency model, if this fits for you? Where would you place yourself on this model right now?)

APPENDIX E

SPOUSE INTERVIEW GUIDE

Interview Guide

1. Describe what your husband told you about his combat experience, specifically related to his injuries and his thoughts/feelings about his injuries.
2. From your point of view, please describe your husband's recovery process in terms of the physical, emotional, social, and spiritual components, if such components apply to him (each dimension will be addressed separately).
3. From your point of view, describe his life before he was injured. What, if anything, motivated him? (What personal attributes/protective factors did he have that helped him? Where do you think he learned to be that way?)
4. In what ways, if any, has being injured changed your husband's life and changed your life as a couple? What are your observations about your husband's adjustment to his changed body? As a couple, how have you adjusted to his changed body?
5. How, if at all, has his postinjury physical body changed your relationship as a couple?
6. In what ways, if at all, do you think his physical body is linked to his self-worth and his self-confidence (pre and postinjury)? Are there things that he cannot do anymore (that he wishes he could do), or that you as a couple cannot do anymore (that you wish you could do) because of his injuries?
7. In what ways, if at all, would you describe what motivates your husband now to be resilient and not give up? (What, if any, personal attributes/protective factors help or hinder him now? Where do you think his attributes come from?
8. If your husband was able to visit someone in the hospital with similar injuries

who was just beginning the recovery process, what do you think he would tell him or her regarding the recovery process? What would you tell the spouse?

9. How would you describe your husband's recovery and reintegration based on the resiliency model (the model will be shown and explained first), if this fits for him? Where would you place him on this model right now, and where would you place you as a couple on this model?

10. What else do you have to add that might be helpful for me to know as it related to this topic?

APPENDIX F

THE METATHEORY OF RESILIENCE AND RESILIENCY

Conceptual Framework

Introduction

This appendix outlines a conceptual framework that was utilized as a foundation for guiding a qualitative inquiry. The study addressed the impact of an individual's body esteem and resilience on the process of reintegration following military combat-related limb amputation. Body esteem is described as a view of the physical self in relation to feelings of self-worth and life purpose (Taleporos, 2002). The term resilience has multiple definitions, including the force that motivates people to have fulfilling experiences (Richardson, 2011a), the ability to persist in the face of challenges and to bounce back from adversity (Reivich, Seligman, & McBride, 2011), and a set of processes that enables good outcomes in spite of serious processes (Masten, 2001).

Resilience

Resilience was first formally described in 1973 and has been increasingly studied in the medical and psychological research literature since that time (McGeary, 2011). The resilience framework emerged within a broader transformation in theory and research on psychopathology that created developmental psychopathology (Cicchetti, 1984; Masten, 1989, Stroufe & Rutter, 1984). A core tenet of developmental psychopathology is that investigations of positive and negative adaptation are mutually informative (Stroufe, 1990). A resilience framework is consistent with this perspective in its assertion that the study of developmental processes under extraordinary conditions can inform understanding of both typical and atypical development, and the human capacity for positive adaptation and achievement in the face of adversity (Linley & Joseph, 2004). Research in resilience has continued to probe into finding out more about resilient

characteristics by inquiring about how resilient qualities are acquired.

The Metatheory of Resilience and Resiliency

According to the Metatheory of Resilience and Resiliency (Richardson, 2002), resilience is an area that allows for the exploration of "interpersonal gifts and strengths that can be accessed to grow through adversity" (p. 307). Resiliency is further described as the process of embracing disruptions (stressors, adversity, and life events) in a way that results in the identification, fortification, and enrichment of resilient qualities (Richardson, 2011a; Waite & Richardson, 2004). As a metatheory, primary concepts and constructs are similar to other established theories and postulates. This section provides a detailed description of the Metatheory as well as an examination of other theories and ideas from which the Metatheory was derived. The Metatheory describes three waves of resilience: (1) acquisition of resilient qualities, (2) the resiliency process, and (3) innate resilience. This qualitative study specifically explores the resiliency process as a major construct, with acquisition of resilient qualities and innate resilience as supportive constructs. Individual differences regarding reintegration are abundant, yet military service members may share common themes when it comes to certain characteristics that determine personal resilience and ability to reintegrate. In essence, everyone who survives a life disruption does reintegrate to some extent, though there are differences in types and outcomes of reintegration.

First Wave: Acquisition of Resilient Qualities

The first wave of resiliency inquiry emerged through phenomenological identification of characteristics of survivors, mostly young people living in high-risk situations. The Metatheory suggests that the more resilient qualities one acquires, the

more resilient one will be. Several foundational studies have identified qualities that predict the capacity to thrive in the face of personal challenge (Richardson, 2011b). The situational premise of resilience is that people possess selective strengths to help them survive adversity, and these strengths have been referred to as protective factors or developmental assets (Richardson, 2002). The work of Werner and Smith (1992) illustrates an example of resilient qualities serving as developmental assets. The researchers conducted a 40-year longitudinal study where they followed 72 individuals on the island of Kauai who had suffered perinatal stress at birth. These individuals grew up in poverty-stricken dysfunctional families, surrounded by substance abuse and mental illness, yet they still indicated at midlife a high sense of satisfaction and wellbeing. Other studies have identified resilient characteristics in children. Flach (2004) also described protective factors as interpersonal strengths that include self-esteem, personal discipline, and responsibility. Werner (1982) identified several traits including having high self-esteem, being socially responsible, adaptable, achievement oriented, being an effective communicator, and being tolerant. Benson (1997) discovered several external assets in children including receiving support, having a sense of empowerment, having healthy boundaries and expectations, and finding constructive uses of time.

The field of positive psychology has also contributed to the concepts of the Metatheory through the identification of additional resilient qualities. Positive human traits are key constructs in positive psychology. An exclusive issue of the American Psychologist includes 15 articles that focus on the positive features that make life worth living, like hope, wisdom, creativity, future mindedness, courage, spirituality, responsibility, and perseverance (Seligman & Csikszentmihalyi, 2000). Specific articles

described optimal resilient qualities such as happiness (Buss, 2000), subjective wellbeing (Diener, 2000), optimism (Peterson, 2000), faith (Myers, 2000), excellence (Lubinsky & Benlow, 2000), wisdom, (Baltes & Staudinger, 2000), and creativity (Simonton, 2000). Self-determination has also long been identified as a core resilient characteristic (Colditz, Willett, Stampfer et al., 1990).

Second Wave: The Resiliency Process

The second wave of resiliency inquiry was a pursuit to discover the process of attaining resilient qualities. The Metatheory is based on this resiliency model (Richardson, Neiger, Jensen, & Kumpfer, 1990), which stipulates that reintegration can be described along a continuum that includes levels of dysfunctional reintegration, reintegration with loss, reintegration back to homeostasis, and resilient reintegration. The description of resiliency begins with any point in time when one has adapted to a life situation. The term "biopsychosocial homeostasis" is used to describe this adapted state of mind, body, and spirit (Richardson, 2011a). This homeostasis is regularly bombarded with life stressors, adversities, opportunities, and other forms of change, through which humans can develop resilient qualities so that future stressors will become less disruptive (see Figure 1). Chronic stressors come about when people do not develop resilient qualities or have not grown through the disruptions in their life (Richardson, 2011a). Life disruptions result in primary emotions like fear, guilt, hurt and loss that potentially lead to self-examination and contemplation. With the passing of time and adaptation, the reintegration process begins. Figure 1 is a linear representation of what occurs during the process of reintegration. In the "trough" where the disruption occurs and reintegration begins, people often learn much about themselves and what is important in life. It is in

the disruptive troughs of life that people discover their driving forces that help them cope with life challenges. Some people will try to return to the same conditions they had before the disruption (see Figure 1, reintegration back to homeostasis), which may or may not actually be possible depending on the circumstances. Not all life events lead to people growing through the disruptions. Instead, people may cling to their comfort zones and turn down opportunities for growth to avoid more disruptions. Others will become bitter, angry, and more distressed, and will reintegrate with loss or worse yet, widespread dysfunction (see Figure 1, reintegration with loss, dysfunctional reintegration). The ideal outcome is for people to discover their inner strength, develop self-mastery skills, and resiliently reintegrate from the life disruption (see Figure 1, resilient reintegration) (Richardson, 2011b). The resiliency process could take place is just a few seconds for minor life disruptions, and potentially up to several years for traumatic events. Life progression is a function of repeated resilient reintegration that results from life disruptions, whereas life stagnation is a function of clinging to homeostasis and getting past experiences rather than growing from them. Life digression is chronic reintegration with loss or chronic dysfunctional reintegration (Richardson, 2011b).

Third Wave: Innate Resilience

The resiliency process includes an examination of one's innate resilient qualities and how one may acquire or further develop resilient qualities. Resilience theory states that there is a force within everyone that drives them to seek self-actualization, altruism, wisdom, and harmony with a spiritual source of strength. Everyone has common resilient forces and yearnings, and the energy produced by these forces can be used to progress through the resiliency process (Richardson, 2011b).

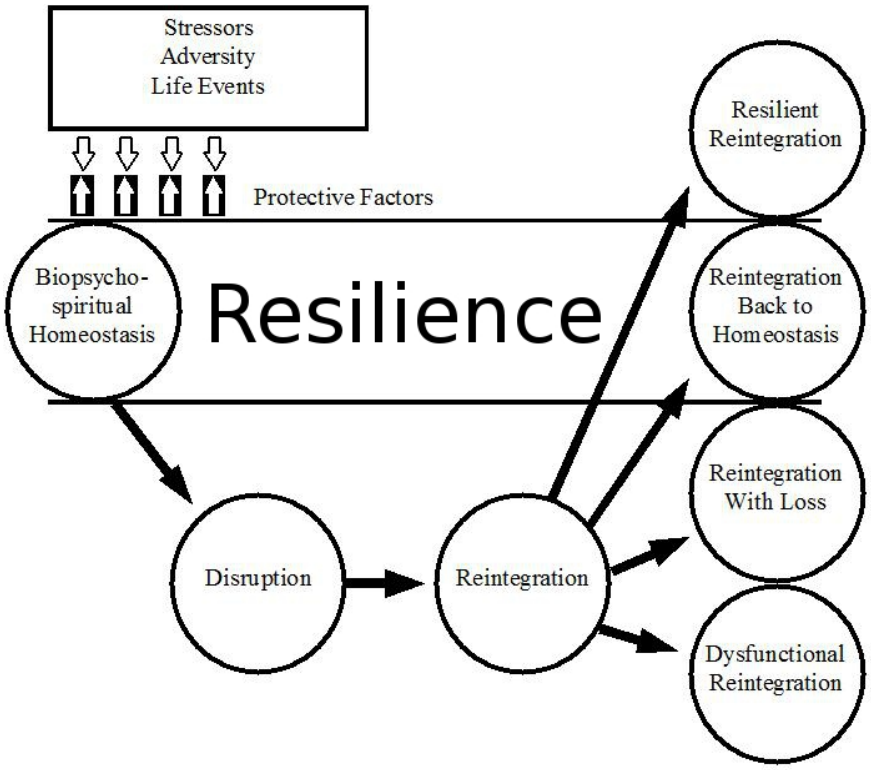

Figure 1.

Resilience has also been defined as an ecological process, expressed and affected by multilevel attachments involving families, schools, and communities, and is a complex and mysterious interplay between person and environment (Greene, Galambos, & Lee, 2004). Two postulates have been derived from disciplines such as psychoneuroimmunology, philosophy, physics, theology, psychology, Eastern medicine, and neuroscience. The first postulate suggests that a source for actuating resilience comes from one's ecosystem (Richardson, 2002). From a quantum physics viewpoint, Einstein proposed his macro theory of relativity where he suggested that, at a subatomic level of life, matter and energy are equivalent, and comprise units that come from the sun, the oscillations from the earth, plant life, light, music, animals, humans, and other forms of both living and nonliving things. On a personal experiential level, the energy that

comes from being in a beautiful natural setting, from receiving a surprise visit from a loved one, or from finding an unexpected large amount of money can have powerful healing effects and can actually eliminate minor physical ailments. The more physicists learn, the more they tend to make reference to a driving force that controls the universe (Richardson, 2002).

From an Eastern medicine perspective, Taoism proposes that all things connect through chi, or life energy, and that when peace is created within oneself, a person can move in tandem with this energy that circulates and creates a flow that allows a peaceful coexistence with oneself and the environment (Richardson, 2002). Also, most people tend to believe that their inner strength comes from their belief in God or some other creative force. Having such faith in spiritual forces strengthens the immune system of the body in addition to increasing self-efficacy and other resilient qualities (Richardson, 2002).

The second postulate indicates that resilience is a capacity in every soul. In resilience theory, soul refers to the whole integrated being of an individual with one's human spirit as the primary guiding force of the system. Actions or behaviors result as a synergistic experience of the entire soul—body, mind, and human spirit. This premise is supported by research studies that have shown that people who are optimistic, hopeful, engaged in a cause, and lacking the time to be sick have stronger immune systems because when thoughts and feelings occur, energy is transmitted throughout the entire body, mind, and spirit (Richardson, 2011a).

Other theories support the idea of innate resilience. Both Self-Determination Theory and Self-Efficacy Theory suggest that people have within themselves a force that

will drive them to pursue healthy living. Self-Determination Theory posits that human beings are driven by inherent growth tendencies and innate psychological needs, and that intrinsic motivation (the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn) and extrinsic motivation (the performance of an activity in order to attain some separable outcome) drive the choices that individuals make without any external influence or interference (Deci & Ryan, 2002). Self-Efficacy Theory suggests that the beliefs a person holds regarding his or her power to affect situations strongly influence both the power a person actually has to face challenges and the choices a person is most likely to make. These effects are particularly apparent and compelling with regard to behaviors affecting health (Bandura, 1986).

Several interrelated motivational forces and innate resilient drives give meaning to the resiliency process (Richardson, 2011a). Childlike resilience is the drive for pleasure and play. It is an innate energy that many people seem to have buried, a deep childlike nature that produces a drive or yearning to have fun, to be creative, to be spontaneous, to laugh, to take risks, to be genuine, to be curious, to be open, and to have pleasure. Childlike resilience is strength to feel a sense of adventure, to take risks, to experience playfulness and humor, and it is applying such strength to life's challenges.

Noble resilience is the drive to feel important and valued. Self-esteem, self-efficacy, and self-worth all reflect noble resilience. Feeling noble is protective against unhealthy habits and self-destructive behaviors. Purpose and meaning in life are discovered through altruism and strength-based service. Where noble resilience is the desire to acquire feelings of self-worth, it is the noble drive for altruism and service that must be acted upon in order to feel important. The means to feel good is initially

accomplished through personal goals, but with maturation, feeling noble comes as a result of altruism.

Character resilience is the drive to be moral and the yearning to live within a chosen moral framework. Living within one's chosen character structure produces guilt-free energy and promotes personal power and influence. Guilt is an energy drain and compromises the healing process. Most people resonate to concepts such as integrity, honesty, trustworthiness, kindness, loyalty, and honor. These qualities transcend across cultures and genders, and carry across the life span.

Ecological resilience is the drive and yearning to be in enriching environments and to connect with the energy from one's surroundings. Candace Pert (1997), an internationally recognized neuroscientist, described how vibrations that come from nature activate neuropeptides in the body. Neuropeptides connect with cell receptors and send messages through vibrations. Animals, plants, music, and other sources of soothing vibrations help people to thrive through adversity. These vibrations can create optimal psychospiritual states when one is receptive and open.

Universal resilience is the drive to connect to strength beyond oneself. The sources for accessing such strength come from the ecosystem, the collective unconscious, or some other form of deity. Every person can learn to discover strength of wisdom beyond normal conscious thinking. Faith facilitates healing, and even agnostic individuals can be educated regarding the vast wisdom of the collective unconscious mind that reflects a universal wisdom.

Intellectual resilience is the yearning to know and understand through prompts that come from the body and spirit. The mind listens to the yearnings of the human spirit

as well as prompts for physical needs that emanate from the physical body. The mind can learn to be sensitive to physical and resilient yearnings and prompts, decide how to fulfill the needs, create situations where the needs can be fulfilled, and form new identities that fulfill those needs (Richardson, 2011a).

Essential resilience refers more specifically to the physical body's drive to sleep, to eat, and to move. This is the yearning to optimize physical function and to be physically healthy. Essential resilience includes innate prompts to the physical body such as (1) when to sleep, (2) what, when and how much to eat, and (3) when and how to physically move, all to promote optimal physical health. The human body is a product of resilient drives and how the mind has chosen to act upon them.

The concept of resilient drives can also be seen elsewhere. Maslow (1943) described a hierarchy of needs where the base of the hierarchy includes the physiological needs such as food, sleep, stimulation, and activity. The next level includes safety needs that involve being secure and protected from harm. Higher still are the needs for love and belongingness. Even higher are the esteem needs such as self-respect, personal worth, and autonomy. At the top of the hierarchy is the need to reach full potential or self-actualization. Maslow proposed that the needs self-arrange according to necessity. Once the physiological needs are satisfied, other needs will emerge. These are needs and desires that are higher in the hierarchy, and once these needs are satisfied, still higher needs and desires will surface.

Furthermore, resilient drives are similar to the inner resources that are described in Self-Determination Theory (Ryan & Deci, 2000). All humans possess inner resources that can be used for personality development and behavioral regulation. The theory

defines a basic need, whether physiological or psychological, as "an energizing state that, if satisfied, conduces toward health and wellbeing but, if not satisfied, contributes to pathology and ill-being" (p. 74). Finally, in order for one to experience integrity and wellbeing, three basic needs of competence, autonomy, and relatedness must be satisfied across the life span.

Resilient drives also relate to various concepts from the perspective of positive psychology (Seligman & Csikszentmihalyi, 2000). Positive psychologists focus on character strengths that contribute to life fulfillment, strengths "of the heart"—zest, gratitude, hope, and love—and other cerebral strengths such as curiosity and love of learning (Park, Peterson, & Seligman, 2004). Positive psychologists have defined 6 virtues and 24 character strengths that seem to align with resilient drives and yearnings. Transcendence, for example, one of the six virtues, is defined as a set of strengths that forge connections to the larger universe and provide meaning (Seligman, Steen, Park, & Peterson, 2005). This virtue directly correlates with the drive to connect to strength beyond oneself, or universal resilience. The field of positive psychology at the subjective level is about valued subjective experiences: wellbeing, contentment, and satisfaction in the past; hope and optimism for the future; and flow and happiness in the present. At the individual level, it is about positive individual traits: the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent, and wisdom. At the group level, it is about the civic virtues and institutions that move individuals toward better citizenship, responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic (Linley, Joseph, Harrington, & Wood, 2006).

Conclusion

The preceding exploratory phenomenological qualitative study (Chapter 4) used a purposeful sample of military veterans to develop an in-depth understanding of their reintegration process following amputation. The Metatheory of Resilience and Resiliency was utilized as a conceptual framework to guide this qualitative inquiry. This research will add to a growing body of case study literature, and although qualitative findings are not generalizable to larger populations, the findings can provide transferability to similar populations. Additionally, the profound understanding that results from such inquiry can certainly contribute to future military resilience education, maintenance, and enhancement that has not yet been fully explored and implemented, especially with respect to the altered physical body following amputation. Such research can then serve to strengthen existing resilience programs and recovery efforts for military service members and veterans.

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APPENDIX G

HEALTH EDUCATION PROGRAM EXAMPLE: BODY ESTEEM, SELF-WORTH, AND RESILIENCE WITH WOUNDED WARRIORS

This curriculum is a 15 session, once per week, health education program that includes multiple modalities of teaching and learning. Each session will cover one program objective. The overarching goal of the program is to improve military personnel readiness to resiliently reintegrate following combat-related injury and disability.

Program Goals

1. Participants will develop higher levels of body esteem through cognitive, attitudinal, behavioral, emotional, and spiritual interventions.
2. Participants will develop higher levels of self-esteem and self-worth through cognitive, attitudinal, behavioral, emotional, and spiritual interventions.
3. Participants will develop higher levels of holistic resilience through cognitive, attitudinal, behavioral, emotional, and spiritual interventions, in preparation for reintegrating into community and family life outside of the military setting.

Program Objectives

Introduction

Cognitive Objectives

1) Define 'body-esteem' and demonstrate knowledge about how body-esteem is related to self-worth.
2) Discuss the benefits of Warrior Mind techniques (e.g. grounding breathing, deep listening, etc.).
3) Demonstrate knowledge of each resilient force (childlike, noble, character, ecological, universal, intellectual, and essential) and the Resilient Journey.

Attitudinal Objectives

4) Discuss how a past proactive journey has increased positive outlook on life's challenges.
5) Discuss how at least one resilient force (e.g. childlike resilience, noble resilience) has improved self-worth.
6) Discuss who you are with regard to your DREAM and Vision Board.

Behavioral Objectives

7) Develop and practice the Secure Place exercise.
8) Develop, practice, and demonstrate proficiency in Warrior Mind techniques.
9) Begin to demonstrate changes in sleep hygiene, eating behaviors, and exercise/movement behaviors.

Emotional Objectives

10) Express joy through childlike resilience: through play (e.g. Charades, dancing, Mad Libs).
11) Recognize the "bigger picture" and experience ecological resilience/related emotions (e.g. relaxation, comfort, hope) through STAR GAZING; experience nobility, and transform fear into courage, through adaptive sports participation.
12) Experience emotional connection with animals through equine-assisted therapy, and pet therapy.

Spiritual Objectives

13) Demonstrate a conscious awareness of, and connection to, the HEART, through Writings of My Heart, and principled life discussion/application.

14) Give and receive messages of love and respect to/from other participants.

15) Hold up a mirror that reflects SPIRITUAL IDENTITY (e.g. successes, strengths, good intentions/motives, spiritual qualities).

Detailed Descriptions

Objective One/Week One

Objective one assists participants to define 'body-esteem' and demonstrate knowledge about how body-esteem is related to self-worth. This objective engages verbal and linguistic learning through Power Point utilization, which will teach the students about body image, how it is developed, how it can be altered through injury, how it is related to self-worth, and how it can be repaired.

An imagery exercise will be implemented to support students' understanding of body esteem and self-worth. The following is a general summary of the imagery: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six. "Remember back to a time when you were young, and felt completely carefree, your physical body was energetic, your mind was playful (pause, breathe). Your biggest concern was no concern (pause, breathe). Describe your physical body, what it meant to you, what it could do for you (pause, breathe). What are some of

those qualities that your body still has? (pause, breathe). How do these qualities influence how you feel about yourself? (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also support this objective. Participants will be encouraged to pair with a partner and complete a body tracing on butcher paper. Determination music (e.g. Rocky, Chariots of Fire) will be played in the background while each participant writes affirmations (e.g. strong, reliable, resilient, resistant to disease, masculine, feminine, agile, brave, courageous) inside his/her body contour. Following this activity, a group discussion will be conducted. Each participant will be encouraged to share his/her creation, and what he/she has learned about personal body esteem and self-worth.

Objective Two/Week Two

Objective two will include participants in discussions regarding the benefits of Warrior Mind techniques (e.g. grounding breathing, deep listening, etc.). This objective will engage verbal and linguistic learning through Power Point utilization to teach the students about the techniques before actively participating in the activities later during the curriculum. Interpersonal learning will be supported through group discussion, interaction, and feedback regarding the various techniques and individual ideas about when and where to use the Warrior Mind techniques.

An imagery exercise will be implemented to promote students' ability to remember who they are. The following is a general summary of the imagery: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you

are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "Remember back when you first joined the Military, the very first time you put on your uniform (pause, breathe). Look in the mirror (pause, breathe). Who do you see? (pause, breathe). Describe yourself (pause, breathe). Who are you? (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also support this objective. Participants will be encouraged to pick one of their top personal values (values clarification). "Paint a representation of your value on a rock that you can later keep with you everywhere you go (this is an 'anchor')". Inspirational music (Heart of the Warrior, Dream Warrior) will be played as participants complete their projects.

Objective Three/Week Three

Objective three will facilitate participants' abilities to demonstrate knowledge of each resilient force (childlike, noble, character, ecological, universal, intellectual, and essential) and familiarization with the Resilient Journey. This objective will involve verbal and linguistic learning through Power Point utilization to teach the students about resilient forces and the Resilient Journey before actively engaging in related activities later during the curriculum. Interpersonal learning will be supported through group discussion, interaction, and feedback regarding the resilient forces and the Resilient Journey.

An imagery exercise will be implemented. The following is a general summary of the imagery: (Directions will be given in a quiet, dim, peaceful environment.

Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "You have had many struggles in your life (pause, breathe). Think of a trial that has made you stronger (pause, breathe). What did you learn? (pause, breathe). What would you tell someone who was going through something similar? (pause, breathe). How would you guide them through it? (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also support this objective. Participants will be supported in creating their personal Statue of Liberty. "Personalize your statue in any way you want. How do the various aspects of YOUR statue represent WHO you are?" Victory music (Olympic theme, Statue of Liberty on YouTube under 'victory music') will be played during the construction of the statues. Following the activity, a group discussion will be led, and participants will be encouraged to share their creations.

Objective Four/Week Four

Objective four will facilitate participants' discussions of how a past proactive journey has increased positive outlook on life's challenges. This objective will engage verbal and linguistic learning through Power Point utilization to teach the students about the Proactive Journey before actively engaging in related activities later during the curriculum. Interpersonal learning will be supported through group discussion, interaction, and feedback regarding past proactive journeys. Intrapersonal learning will be supported through encouraging students to begin reflecting on a personal proactive

journey.

An imagery exercise will be implemented. The following is a general summary of the imagery: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "Pick another of the trials that you have conquered (pause, breathe). How do you apply your strengths to a current trial? (pause, breathe). Praise yourself for your accomplishments (pause, breathe)." When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also support this objective. "With a partner (battle buddy), share your experience, create a merit badge for your buddy's accomplishments regarding his or her trial, and the strengths that they've gained. Your partner will do the same for you. We will present them to everyone at the end of the exercise." Accomplishment music (e.g. Pomp and Circumstance) will be played while presenting the merit badges.

Objective Five/Week Five

Objective five will facilitate participants' discussions about how at least one resilient force (e.g. childlike resilience, noble resilience) has improved self-worth. This objective will employ interpersonal learning, and will be supported through group discussion, interaction, and feedback regarding each student's chosen area of resilience to discuss. Intrapersonal learning will be encouraged through individual reflection upon a

chosen area of resilience and personal application. Auditory learning will be supported through utilization of inspirational background music while students reflect on, and share their experiences. Power Points regarding each resilient force will be reviewed prior to implementation of the activities.

An imagery exercise will be implemented. The following is a general summary of the imagery: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose [in the back of the throat] through a count of six). "Discover and define your kingdom (pause, breathe). Think of those whom you love, those who are important to you, those who care about you (pause, breathe). Think of one way you served each of them (pause, breathe). If they asked you for help, how quickly would you respond? (pause, breathe). How quickly would each of them respond to you? (pause, breathe). How do you feel about each of these individuals? (pause, breathe). Pick an act of kindness to do today (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will support this objective. "Build your castle: http://www.stormthecastle.com/paper-castle/make-a-cardboard-castle.htm. Invite your kingdom to join you in your castle. Scribe the names of your kingdom members on the walls of your castle." Music from "Braveheart" will be played during this activity, and a group discussion will follow. Participants will be encouraged to share their thoughts.

Objective Six/Week Six

Objective six will facilitate participants' discussions about who they are with regard to their DREAM and vision boards. This objective will be geared toward verbal and linguistic learning through Power Point utilization to teach the students about the DREAM and the process of creating a vision board. Physical and kinesthetic learning will be supported through actual creation of vision boards. Logical and mathematical learning will be supported through students' sharing their DREAM and how it relates to the vision boards they create. Interpersonal learning will be supported through group discussion, interaction, and feedback regarding the DREAM and vision boards. Intrapersonal learning will be supported through encouraging students to begin reflecting on their DREAM.

An imagery exercise will be implemented. The following is a general summary of the imagery: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "Imagine you are attending your 'living memorial service' (pause, breathe). Those who love and care about you have gathered to pay tribute to your existence (pause, breathe). You are not there (pause, breathe). You are a fly on the wall, so you hear and see everything that is transpiring in this service (pause, breathe). Describe the service (pause, breathe). Who is there? (pause, breathe). What are they saying and doing? (pause, breathe). They see YOU for who YOU are (pause, breathe). When you are ready, you may open your eyes and reintegrate into this

room and this present environment."

Art and music activities will also support this objective. Participants will be encouraged to create a vision board. Nobility music (e.g. music from Dragon: The Bruce Lee Story, Dragon Age Origins on YouTube) will be played while participants are creating their vision boards with multiple types of materials (e.g. paints, chalks, scrap cloth, glue, felt, magazines).

Objective Seven/Week Seven

Objective seven will facilitate participants' development and practice of the Secure Place exercise. This objective will be to solicit verbal and linguistic learning through Power Point utilization to teach the students the concepts of the Secure Place technique. Visual and spatial learning will be supported through actual practice of and mastery of Secure Place technique. Intrapersonal learning will be supported through encouraging students to reflect on the power of the technique.

Following the teaching, an imagery exercise will be executed. The following is a general summary of the imagery: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). At this point, the instructor will teach the Secure Place protocol using self-administered bilateral stimulation while imagining the most secure, comfortable environment/location that the participant can imagine. "When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also support this objective. Travel/vacation/National Geographic magazines will be provided to make a collage that represents secure, calm locations. Meditative, calming music (The Secret, Omharmonics.com, Zen Garden) will be played while the participants complete their collages.

Objective Eight/Week Eight

Objective eight will assist participants to develop, practice, and demonstrate proficiency in Warrior Mind techniques. This objective will be geared toward verbal and linguistic learning through Power Point utilization to teach the students the concepts of the Warrior Mind techniques. Visual and spatial learning will be supported through actual practice of and mastery of the techniques. Intrapersonal learning will be supported through encouraging students to reflect on the power of the techniques.

The instructor will then teach Grounding Breathing and Mind Clearing exercises (Warrior MindTM protocol). Following the teaching, an imagery exercise will then be practiced. The following is the essence of Grounding Breathing and Mind Clearing: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose [in the back of the throat] through a count of six). "When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also support this objective. "What does your breath look like as you are releasing stress, tension, and negativity? Use finger paint to create a replication of your breath and clear mind." Music (Warrior Mind fundamentals) will be

played as the participants are creating replications of their calming breaths and clear minds.

Objective Nine/Week Nine

Objective nine is designed to help participants begin to demonstrate changes in sleep hygiene, eating behaviors, and exercise/movement behaviors. This objective will be geared toward verbal and linguistic learning through Power Point utilization to teach the students the concepts of healthy sleep hygiene, intuitive eating, and adaptive sports. Visual and spatial learning will be supported through actual practice of and mastery of the techniques. Interpersonal learning will be supported through group interactions in sleep hygiene discussions, healthy meal preparations, and team adaptive sports participation. Intrapersonal learning will be supported through encouraging students to reflect on the power of the techniques.

An imagery exercise will be practiced. The following is a general description of the imagery exercise: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of six, and out through the nose (in the back of the throat) through a count of six). "Imagine you have just awakened from the most restful night's sleep you have ever had (pause, breathe). You recall a vivid positive dream (Pause, breathe). What is the dream? (Pause, breathe). How do you feel in your body as you experience these positive recollections, feelings of complete recuperation, and eager anticipation for today? (Pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music will also support this objective. "Scribble down as many negative aspects that you have experienced due to insomnia, poor eating, and lack of exercise (e.g. "I hate my job," "All I want to do is sleep," "I have no energy," "I'm sick all the time," "I'm tired, bored, overweight, unmotivated, disabled"). "We will then take a trip to the fire pit, start a fire, listen to victory music (e.g. Olympic Theme) while we move/dance around the fire, and one-by-one, throw our negative aspects into the fire. This is a celebration!" The movement/dancing around the fire is an adaptive sport-type activity that will prepare the participants for more rigorous sporting endeavors (e.g. adaptive skiing, Challenge Course). Following the fire pit activity, participants will prepare an intuitive snack.

Objective Ten/Week Ten

Objective ten is designed to support participants in expressing joy through childlike resilience: through play (e.g. Charades, dancing, Mad Libs). This objective will support visual and spatial learning through actual engagement in childlike play. Interpersonal learning will be supported through group discussions and interactions with regard to the play activities. Auditory learning will be supported through musical interaction, and kinesthetic learning will be supported through dance and movement to music. Intrapersonal learning will be supported through encouraging students to reflect on the power of the techniques.

An imagery exercise will be utilized to enhance participants' emotions. The following is a general description of the imagery exercise: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready,"

(Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "Go back to the happiest time in your childhood (pause, breathe). Think of one of your favorite games that you played (Pause, breathe). Your friends are playing with you (Pause, breathe). Is it daytime or nighttime? (Pause, breathe). Are you inside or outside? (Pause, breathe). What sounds do you hear? (Pause, breathe). Are you listening to music? (Pause, breathe). Notice your surroundings (Pause, breathe). Notice how carefree you are (Pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment." A group discussion will follow to brainstorm different ideas that participants discovered during the imagery exercise.

Art and music will also support this objective. "We will discuss favorite childhood games, and pick one to play that everyone can play." Artistry will be created through the actual activity.

Objective Eleven/Week Eleven

Objective eleven will assist the participants to recognize the "bigger picture" and experience ecological resilience/related emotions (e.g. relaxation, comfort, hope) through STAR GAZING; experience nobility, and transform fear into courage, through adaptive sports participation. This objective will be geared toward visual and spatial learning through the imagery of stargazing and actual engagement in childlike play. Interpersonal learning will be supported through group discussions and interactions with regard to team adaptive sports and challenge course activities. Auditory learning will be supported through listening to the sounds of nature. Kinesthetic learning will be supported through physical activity and movement (e.g. adaptive skiing, basketball,

cycling, horseshoes, Challenge Course). Intrapersonal learning will be supported through encouraging students to reflect on the power of the techniques.

An imagery exercise will be utilized to enhance participants' emotions. The following is a general description of the imagery exercise: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "Imagine that you are about to embark on the space shuttle (pause, breathe). You arrived at NASA last night and have had a restful night's sleep (pause, breathe). You are given a new uniform for space travel (pause, breathe). You take off your Army ACUs, and put on the NASA uniform (pause, breathe). You board the space shuttle and take off straight up into the sky (pause, breathe). You land on a planet that is similar to earth (pause, breathe). You will make your new home here (pause, breathe). Whomever you want can join you (pause, breathe). What will you do? (pause, breathe). What is your new life like? (pause, breathe). Who will join you? (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and musical activities will also support this objective. "We will read Infinity and Me by Kate Hosford (children's literature) together while listening to fantasy music (e.g., Disney). Draw a portrayal (snapshot) of your new beginning, with your personal mantra as the caption."

Objective Twelve/Week Twelve

Objective twelve will assist the participants to experience emotional connections with animals through equine-assisted therapy, and pet therapy. This objective employs interpersonal learning through group discussions and interactions with regard to animal activities. Auditory learning will be supported through listening to the sounds of nature. Kinesthetic learning will be supported through physical touch and interaction with animals. Intrapersonal learning will be supported through encouraging students to reflect on the power of the activities.

An imagery exercise will be utilized to enhance participants' emotions. The following is a general description of the imagery exercise: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "Visualize your favorite pet (pause, breathe). If you didn't have a pet, remember when you wanted a pet (pause, breathe). Think of a time when a pet comforted you, gave you hope and unconditional love (pause, breathe). What does it feel like to hug or just touch your pet (pause, breathe)? Sense that connection and what it does for your sense of who you are (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also support this objective. Participants will visit with pet therapy animals. "We will take photos of you with your favorite pet visitor. Photos will be printed so you can keep it to remind you of your connection (this is an

anchor). While the animals are visiting, we will listen to uplifting "pet" music (e.g. "You've Got a Friend in Me")."

Objective Thirteen/Week Thirteen

Objective thirteen will help participants to be able to demonstrate a conscious awareness of, and connection to the HEART, through Writings of my Heart, and principled life discussion/application. This objective will employ interpersonal learning through group discussions and interactions. Verbal learning will be supported through Writings of the Heart. Logical learning will be supported through abstract exploration of principled living. Intrapersonal learning will be supported through encouraging students to reflect on the power of the activities.

An imagery exercise will be utilized to enhance participants' spirituality. The following is a general description of the imagery exercise: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready." Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six. "Imagine that you are covered with several blankets, both heavy and light (pause, breathe). Begin to take each blanket off one by one, each representing an external aspect of you (pause, breathe). Once you get all of the blankets off, WHO ARE YOU? (pause, breathe). What is in your heart? (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also support this objective. Participants will create heart art with construction paper, and other materials. In the middle of the heart, write

WHO YOU ARE. Calming, relaxing, mystical music (e.g. meditation music, Zen music) will be played while participants are constructing their heart art.

Objective Fourteen/Week Fourteen

Objective fourteen will teach and encourage participants to give and receive messages of love and respect to and from other participants. This objective will be geared toward interpersonal learning through group discussions and interactions. Verbal learning will be supported through giving messages of love. Logical learning will be supported through abstract exploration of LOVE. Intrapersonal learning will be supported through encouraging students to reflect on the power of the activities.

An imagery exercise will be utilized to enhance participants' spirituality. The following is a general description of the imagery exercise: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready." (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "Visualize a spiritual leader whom you respect (e.g. Gandhi, Dali Lama, Buddha, Christ, The Pope, Thich Nhat Hanh) (pause, breathe). You are walking along a quiet path, just you and this person (pause, breathe). What is this person saying to you? (pause, breathe). How are you responding? (pause, breathe). How will you apply this conversation to your life? (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also be used to enhance this objective. "Share your insights with the group." The group will then write messages of love and respect (on

post-it notes) to each person. Each person will be highlighted in the center of the group, while group members place their post-it note on each person's message board (poster board). Poster boards will then be decorated as desired, with various materials and mediums. Patriotic, inspirational music will be played during the activities.

Objective Fifteen/Week Fifteen

Objective fifteen will assist program participants to be able to hold up a mirror that reflects their SPIRITUAL IDENTITY (e.g. successes, strengths, good intentions/motives, spiritual qualities). This objective will be geared toward visual and spatial learning through the use of imagery regarding a mirror's reflection of spiritual identity. Intrapersonal learning will be supported through encouraging students to reflect on the power of the activity. Logical learning will be supported through investigating the mystery of the spiritual identity.

An imagery exercise will be utilized to enhance participants' spirituality. The following is a general description of the imagery exercise: (Directions will be given in a quiet, dim, peaceful environment. Language will be soft spoken and slower in speed). "Sit in a comfortable, resting position and close your eyes when you are ready," (Participants will be instructed to take a series of six breaths in through the nose for a count of 6, and out through the nose (in the back of the throat) through a count of six). "Reflect back to a walk with a spiritual leader (pause, breathe). Think about what this person said to you (pause, breathe). Use these messages to form your spiritual image (pause, breathe). What does this look like? (pause, breathe). Now, assume a new role in your life based on your spiritual identity (pause, breathe). What is your role? (pause, breathe). What is your purpose? (pause, breathe). Open your eyes and peer into the

mirror (pause, breathe). How do you see your spiritual self? (pause, breathe). When you are ready, you may open your eyes and reintegrate into this room and this present environment."

Art and music activities will also be used to enhance this objective. Each person will be given a small mirror. The mirror will be glued onto construction paper and decorated according to creative nature regarding spiritual identity. Participants will be encouraged to choose at least three words or short phrases that symbolize their spiritual identity. "Creatively place these statements around your mirror. Decorate as you desire". Meditational, hypnotic, calming music will be played while participants complete their creations.

Evaluations

Objective One

The following questionnaire will be used to assess participants' understanding of body esteem and self-worth:

1. Which of the following best describes your body esteem?
    a. How you feel about the worth of your physical body
    b. The way other people view your physical capabilities
    c. How your feelings about your physical body contribute to your identity
    d. Both a and c
2. What is the best definition of your self-worth?
    a. How much other people respect you
    b. How satisfied you are with yourself
    c. How much education you have

d. How proud you are of your accomplishments

e. Both b and d

3. In what way is body esteem and self-worth related?

a. They are not related at all

b. When I feel good about my physical appearance, I feel good about who I am

c. When I believe the things that other people say to be about my appearance, this affects how I feel inside.

d. Body esteem and self-worth are only related for females\

e. Both b and c

Objective Two

The following questionnaire will be used to assess participants' general understanding of the Warrior Mind techniques:

1. When can you use the Warrior Mind techniques?

a. Any time I want to use the techniques, I can use them

b. Never. They do not apply to me

c. Only when I am anxious or stressed

2. Where can you use the Warrior Mind Techniques?

a. Only at home

b. Only in a group setting

c. Anywhere

3. Why are Warrior Mind techniques beneficial for you?

a. They help me to connect my mind, body, and spirit

b. They really do not help me at all

c. They help me to be able to read other peoples' minds

d. They help regulate physical symptoms of stress and anxiety

e. Both a and d

Objective Three

The following questionnaire will be used to assess participants' general understanding of the resilient forces and the Resilient Journey:

1. Childlike resilience is:

   a. being immature and running away from home

   b. pretending not to understand what's going on

   c. the drive for play, fun, adventure, and pleasure

   d. getting into mischief

2. "The yearning to be valued and feel important through the mechanism of service" is:

   a. noble resilience

   b. childlike resilience

   c. military life

   d. none of the above

3. I desire to have morals because I have:

   a. a criminal record

   b. character resilience

   c. a big family

   d. a purple heart

4. Ecological resilience means:

   a. I do not care about recycling

   b. I'm happier when I am alone

   c. I yearn to be in enriching environments, with animals, and in nature

   d. all of the above

5. "Maybe I believe in God, maybe I do not; but I do know that there is a greater strength out there than just me, by myself". This is an example of:

   a. mystical thinking

   b. a religious philosophy

   c. universal resilience

   d. something a yogi would say

6. Intellectual resilience includes:

   a. the drive to understand

   b. the drive to know

   c. the drive to control

   d. all of the above

7. The drive to have quality sleep, healthier eating patterns, and physical movement/exercise describes:

   a. essential resilience: the drive to live

   b. the impossible

   c. something I will try next year

   d. military life

8. Which of the following describe the Resilient Journey?

a. disruptions and chaos open up options

b. life events and choices cause disruptions

c. resilient reintegration occurs through wisdom gained

d. all of the above

Objective Four

The following questionnaire will be used to assess participants' general understanding of the Proactive Journey:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

1. I have had at least one challenging life event from which I gained wisdom and became a better person.

   1 2 3 4 5

2. Traumatic and chaotic life events can lead to resilient reintegration.

   1 2 3 4 5

Objective Five

The following questionnaire will be used to assess participants' general analysis of their chosen area of resilience:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

1. The essence of WHO I AM comes from my innate resilient drives.

   1 2 3 4 5

2. As I've learned about WHO I AM through my resilient drives, my self-worth has improved.

1 2 3 4 5

Objective Six

The following questionnaire will be used to assess participants' general understanding of the purposes of the Dream and the Vision Board:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

1. My Vision Board helped me to conceptualize my qualities and virtues that define WHO I AM.

1 2 3 4 5

2. I know WHO I AM now.

1 2 3 4 5

Objective Seven

The following questionnaire will be given to program staff to assess participants' ability to perform the Secure Place exercise:

(To be completed by trained program staff)

1. By the end of this learning module, participant is able to demonstrate proper utilization of the Secure Place exercise.

Not at all rarely sometimes mostly

0 1 2 3

Objective Eight

The following questionnaire will be given to program staff to assess participants' ability to implement Grounding Breathing and Mind Clearing:

(To be completed by trained program staff)

1. By the end of this learning module, participant is able to demonstrate effective Grounding Breathing techniques.

Not at all	rarely	sometimes	mostly
0	1	2	3

2. By the end of this learning module, participant is able to demonstrate effective Mind Clearing techniques.

Not at all	rarely	sometimes	mostly
0	1	2	3

Objective Nine

The following questionnaire will be given in order to determine whether or not participants have begun to make changes in sleep hygiene, eating behaviors, and exercise/movement behaviors:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

(To be completed by program participant)

1. I have implemented at least one new pre-sleep activity each night during the program.

1	2	3	4	5

2. I have awakened feeling well rested during the program more than I did

before the program.

1 2 3 4 5

3. I have prepared and/or consumed at least one well-balanced, healthy meal each day during the program.

1 2 3 4 5

4. I have engaged in at least one physical/movement activity on 5 of the 7 days of the program.

1 2 3 4 5

Objective Ten

The following questionnaire will be given to participants to determine to what extent positive emotions were evoked during the activities:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

(To be completed by program participant)

1. I felt joyful, excited, playful, and/or carefree when we played Musical Chairs during the program.

1 2 3 4 5

Objective Eleven

The following questionnaire will be given to participants to determine to what extent they are able to recognize the "bigger picture" and experience ecological resilience/related emotions:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

(To be completed by program participant)

1. The Star Gazing and imagery exercises helped me to see the "bigger picture."

   1 2 3 4 5

2. I feel less fearful and more courageous after participating in the sports activities during the program.

   1 2 3 4 5

Objective Twelve

The following questionnaire will be given to participants to determine the extent to which they were able to experience emotional connections with animals through equine-assisted therapy, and pet therapy:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

(To be completed by program participant)

1. I felt a special connection with the horses in the equine activities during the program.

   1 2 3 4 5

Objective Thirteen

The following questionnaire will be given to participants to determine the extent to which they were able to demonstrate a conscious awareness of, and connection to, the HEART, through Writings of my Heart, and principled life discussion/application:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

(To be completed by program participant)

1. I feel more aware of what is in my HEART and how is feels for me to live a principled life.

1 2 3 4 5

Objective Fourteen

The following questionnaire will be given to participants to determine the extent to which they were able to give and receive messages of love and respect to/from other participants:

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

(To be completed by program participant)

1. I feel loved and/or respected by other program participants.

1 2 3 4 5

2. I am able to give love and respect to other program participants.

1 2 3 4 5

Objective Fifteen

The following questionnaire will be given to participants to determine the extent to which they were able to hold up a mirror that reflects their SPIRITUAL IDENTITY (e.g. successes, strengths, good intentions/motives, spiritual qualities).

(Please rate the following on a 5 point scale: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)

(To be completed by program participant)

1. When I look into a mirror, I can clearly see my positive qualities.

   1 2 3 4 5

2. My mirror strongly reflects back my strengths and successes to me.

   1 2 3 4 5

Concluding Point

Pretesting and posttesting may be implemented utilizing the following standardized assessment tools to further determine effectiveness of this pilot health education program:

1. Body Esteem Scale
2. Rosenberg Self-esteem Scale
3. Connor-Davidson Resilience Scale

APPENDIX H

RESILIENCE PROGRAMS IN THE U.S. MILITARY

Introduction

Since 2001, over 2 million U.S. military members have deployed to Iraq and Afghanistan (Morgan & Bibb, 2011). Stressors such as the continuing deployments, and the operational tempo for those who do not deploy, increase the risk for military members to suffer from decreased mental health functioning. While most military personnel cope fairly well under difficult circumstances, many also experience difficulties handling stress at some point. It has been suggested that on-going mental health issues are rooted in one's state of resilience; therefore, renewed support has emerged for efforts that target the fitness of military forces through enhancement of psychological resilience (Land 2010; Mullen, 2010).

Psychological resilience is defined as the capacity to adapt successfully in the presence of risk and adversity. It has also been proposed that there is a distinct difference between recovery and resilience (Ballenger-Browning & Johnson, 2010). The term recovery indicates that a degree of psychopathology is present for a period of time, typically upwards of several months, following a traumatic event before returning to pretrauma levels. The term resilience reflects the ability of individuals to maintain relatively stable mental function throughout the course of events. Resilience is most easily conceptualized as having four prerequisites: (1) risk or predisposition to biopsychosocial or environmental conditions, (2) exposure to a high-magnitude stressor, (3) stress response, and (4) return to baseline or higher functioning and symptom levels (Ballenger-Browning & Johnson, 2010). There are certainly individual differences, and factors that account for such differences.

Recently, there has been significant interest in identifying characteristics of

military individuals resilient to stressors such as those encountered on deployment, and there are a growing number of programs and strategies provided by the military and civilian sectors to encourage and support psychological resilience. The Department of Defense (DoD) has made great efforts to address psychological care of service members, including unit-specific programs and interventions. The focus of this paper is to identify and summarize several resilience programs and interventions that are currently being supported and implemented through each branch of the U.S. Military. A resilience program is one that targets any of the factors that research has shown to improve resilience and healthy responses to stress, and provides a means for helping individuals to incorporate resilience factors into their daily lives (Meredith, Sherbourne, Gaillot, Hansell, Ritschard, Parker, & Wrenn, 2011). Although military family resilience is of utmost importance, programs that specifically target only military families are not reviewed in this document. Rather, this paper summarizes resilience programs that are specifically designed for active duty, Guard and Reserve, and veteran populations, with general reference to family resilience.

Army Resilience Programs

Army Center for Enhanced Performance (ACEP)

ACEP originated from the Center for Enhanced Performance at the U.S. Military Academy in West Point, NY, which has trained soldiers since 1993. This program's key components of training include (1) mental skills foundations, (2) building confidence, (3) goal setting, (4) attention control, (5) energy management, and (6) integrating imagery. The program provides (1) mental skills education and biofeedback training for individuals and groups, (2) unit predeployment and team-building training workshops, (3)

warfare language and culture courses, (4) kinesthetic room training that uses high-tech simulations to sharpen soldiers' skills, (5) executive leader seminars to advance managerial proficiency for senior leaders, (6) family readiness programs to inspire personal and family growth, (7) warrior transition programs to promote successful transition from injury back to duty or civilian life, and (8) a learning and teaching program for developing intellectual self-awareness and self-regulation. ACEP has now become a foundational aspect of Comprehensive Soldier Fitness (Meredith et al., 2011).

ArmyFit

See Comprehensive Soldier Fitness.

Battlemind (Resilience Training)

This program in the U.S. Army's first validated mental health training program, which was developed by Walter Reed Institute of Research (WRAIR) and was based on data from the Land Combat Study, which followed an Army Infantry Division from 2003 to 2009 (Kim, Kok, Thomas, Hoge, & Riviere, 2012). Mandated Army-wide in 2007, this program is now integrated into the Army's Comprehensive Soldier Fitness curriculum. This program includes a series of life cycle and deployment cycle training modules and classes. Life cycle training includes Battlemind Warrior Resiliency, which teaches soldiers to be able identify peers at risk for psychological trauma. Deployment cycle training is provided for soldiers and their spouses in preparation for all deployment transitions. Soldier support training captures populations and subjects that life cycle and deployment cycle modules do not cover. The course modules are typically one to three hours of instruction and discussion. These occur primarily in platoon-sized classes. For some groups, such as health care providers, class sizes are much smaller. A 5-day Train-

the-Trainer program is available for military chaplains. A Master Resilience Trainer (MRT) course includes about 150 service members and involves discussion, interactive techniques, and role-playing (Castro, Hoge, & Cox, 2006; Meredith et al., 2011).

Center for Spiritual Leadership (CSL)

This program is housed at Fort Jackson, S.C. and was originally designed to offer emotional and spiritual support to chaplains who were serving military personnel. The focus has been to provide retreats for chaplains and chaplain assistants who were returning from war. Although retreats are no longer offered, the mission of the program is now to provide tailored pastoral products and programs to chaplains world wide for the purpose of self-care and spiritual resilience. Religion-specific books are provided for Christian, Jewish, and Muslim chaplains because each faith group approaches self-help in a specific way. Other resources are also provided that address different issues that any soldier may use, not just chaplains. Responsible for providing support material Army wide, the CSL has distributed more than 35,000 resources in 2010 and 2011 to active duty, National Guard, and Army Reserve Unit Ministry Teams (UMTs). The Center also participates in the Chaplain Annual Sustainment Training (CAST) events. CAST is a symposium where UMTs from around the world meet to gather much-needed information and training guidance in the former of presentations and handouts. CSL has a representative at each CAST, who sets up a booth and distributes resources, including books and flyers. The CSL staff periodically gives mobile training as well, traveling to different installations to provide support. The CSL has supported the Spiritual Fitness Center at Fort Hood, Texas, as well as the TRADOC Human Dimension, and Comprehensive Soldier Fitness. The staff uses video teleconferencing to collaborate with

and support peers overseas and in war zones (Simkins, 2011).

Comprehensive Soldier Fitness

Now called Comprehensive Soldier and Family Fitness (CSF2), this program is based on the Penn Resilience Program, and encompasses aspects of many of the other Army programs that address resilience. It is the largest military resilience program in operation, and has been designed to enhance performance and build resilience for soldiers, their families, and Army civilians through five dimensions: social, emotional, family, spiritual, and physical. There are three main components to CSF2: (1) online self-development, (2) training, and (3) metrics and evaluation. Many of the CSF2 concepts are based on theoretical and practical aspects of Dr. Martin Seligman's positive psychology. CSF2 provides hands-on training and self-development tools so that members of the Army family are better able to cope with adversity, perform better in stressful situations, and thrive in life. CSF2 has training centers at Army installations across the United States that provide resilience and performance enhancement training. The program is an integral part of the Army's Ready and Resilient Campaign that promotes physical and psychological fitness and encourages personal and professional growth. CSF2 utilizes Master Resilience Trainers (MRTs) to deliver annual skills training to soldiers and families (Reivich, Seligman, & McBride, 2011).

A newer program, Army Fit, is also part of CSF2 as an online self-assessment and self-development environment for soldiers, families, and Army civilians. Once the Global Assessment Tool (GAT) 2.0, a self-evaluation measure, is completed, an individual is given access to recommendations on how to improve resilience and performance (based on the individual GAT score, and access to a self-improvement blog.

Individuals are also able to join several online health and fitness communities with a wide range of resources, are able to compare personal improvements with improvements of friends, and can earn improvement badges (ArmyFit, 2014).

Mindfulness-Based Mind Fitness Training (MMFT)

MMFT (pronounced "M-Fit") is based on a well-established course, Mindfulness-Based Stress Reduction, which has been shown to improve attention functioning and reduce the negative effects of stress. MMFT has been tailored specifically for military predeployment. The course teaches mindfulness stress resilience skills and applications to counterinsurgency environments. Exercises are to be practiced at least 30 minutes per day during training. The program includes 24 hours of teaching over 8 weeks, is typically delivered on site at organizations across the nation, to groups of 20-25 participants at a time. The curriculum is also taught in 7-day intensive courses. The program is primarily funded by the Army; however, it is available to all military service members (Meredith et al., 2011; Mind Fitness Training Institute, 2012).

Provider Resilience Training

Not long after the events of September 11, 2001, and the initiation of the Global War on Terror (GWOT), members of the Soldier and Family Support Branch (SFSB) of the Army Medical Department Center & School (AMEDDC&S) began to consider issues related to the effects of the conflict on healthcare providers. They realized then that the GWOT might well be a difficult and protracted effort. At that time, the concept of "care for the caregivers" had already received attention in such areas as geriatric psychiatry and behavioral medicine, as mental health professionals had begun to observe and respond to the effects of prolonged care-giving on family members of the chronically ill, particularly

those with dementia. Initially, the SFSB's interest in compassion fatigue, secondary trauma, and caregiver burnout resulted in briefings provided for a few courses at the AMEDD. Soon, however, decisions were made to teach PRT principles in all AMEDD courses, to create a distance learning PRT video, and to create Mobile Training Teams (MTT) to take PRT products on the road. At the same time, the SFSB decided to develop a program that would make PRT available to members of the AMEDD community, and to identify and teach special PRT trainers and supervisors who would be embedded within most military medical treatment facilities and regional training commands, and whose job it would be to provide ongoing PRT education, assessment, and interventional action to medical treatment facility providers. After numerous meetings and briefings, the program was approved by The Surgeon General, and launched in 2008 (Boone, Camarillo, Landry, & De Lucia, 2008).

Healthcare providers from across the Army Medical Department can complete three phases of PRT training. The first phase involves administration of the ProQOL a compassion assessment tool, for which immediate feedback is given to the provider regarding his current levels of compassion satisfaction (the pleasure one has from doing one's work well), compassion fatigue (work-related stress or trauma), and burnout (a feeling of hopelessness in dealing with one's occupational circumstances). This phase also has a brief, but extremely important, PRT video that sets the stage for one's ongoing self-care response to the challenges to wellbeing brought on by difficult work. Phase two involves additional, detailed education into the markers of provider fatigue and the pathways to resilience. During phase two, the healthcare provider discusses with his or her trainer the personal meaning of the ProQOL results and maps out a self-care plan.

This plan serves as the foundation of the provider's commitment to developing a positive, resilient attitude towards work, home, and all of life. The final phase, a birth-month activity, involves ProQOL reassessment and, if necessary, a fine-tuning of the self-care plan. At any time between the program's phases, PRT trainers are readily available to assist individuals with questions or concerns that relate to provider fatigue, burnout, or the self-care plan (Boone et al., 2008).

Ready and Resilient

See Comprehensive Soldier Fitness.

Warrior Adventure Quest

Warrior Adventure Quest (WAQ) is an Army reset training tool designed to introduce soldiers to activities that serve as alternatives to aberrant behaviors often associated with accidents involving recently redeployed soldiers. According to the U.S Army Combat Readiness/Safety Center, between October 2001 and October 2009, 287 soldiers died as a result of motor vehicle and personal injury accidents within one year of returning from deployment. About 21% of these deaths occurred within the first 30 days postdeployment and about 67% within 180 days postdeployment. For this reason, WAQ targets soldiers during the reset phase of a deployment cycle (Mahoney, 2010). This tool presents coping outlets to help soldiers realize their own new level of normal after deployment and move on with their lives. WAQ combines existing MWR (Morale, Welfare, and Recreation) Outdoor Recreation high adventure activities (e.g., rock climbing, mountain biking, paintball, scuba, ropes courses, skiing, zip lines, white water rafting, and others) with a leader-led after action debriefing (L-LAAD) tool developed by Army Medical Department center and school (AMEDD) (U.S. Army MWR, 2014).

The WAQ program has been developed into five phases: Phase I, Leader Training, is for all E-5 and above participants and teaches them how to facilitate a leader-led after action debrief (L-LAAD) in response to a significant event in an operational environment. Phase II, Leader Training, teaches these unit leaders how to utilize the same L-LAAD technique when facilitation surrounds an outdoor adventure activity. Phase III, Soldier Training, presents to all soldier participants concepts like Comprehensive Soldier Fitness, Combat Operational Stress Control and Post Traumatic Growth, coping skills, and how it all relates to the Warrior Adventure Quest program. Phase IV, Activity Training, is the outdoor adventure activity (e.g., paddling, riding, climbing, etc.) where team building is combined with challenging activity skills. Phase V is the actual facilitation of the L-LAAD by the unit leaders with their unit members to realize connections between the activity they have just experienced and the challenges they may be experiencing in their daily lives (U.S. Army MWR, 2014).

An important aspect of the WAQ is that it provides an informal screening tool by enabling leaders to identify soldiers who might need additional help. WAQ has formed close bonds and working relationships with many Army organizations. Through these collaborations, WAQ is able to track statistical data about participants and how the program has initiated positive changes in their behavior (Mahoney, 2010).

Warrior Resilience and Thriving (WRT)

Warrior Resilience and Thriving, and Warrior Family Resilience and Thriving, were the Army's first cognitive resilience training classes based on Dr. Albert Ellis' Rational Emotive Behavior Therapy (REBT). WRT has been based on REBT's straightforward A-B-C self-help model that seems to appeal to soldiers who have little

time for inefficiency, dependency, or overly emotional expression-oriented interventions (Jarrett, 2013). The A-B-C model states that it normally is not merely an A, adversity (or activating event) that contributes to disturbed and dysfunctional emotional and behavioral Cs, consequences, but also what people B, believe about the A, adversity. A, adversity can be either an external situation or a thought or other kind of internal event, and it can refer to an event in the past, present, or future. The Bs, beliefs that are most important in the A-B-C model are explicit and implicit philosophical meanings and assumptions about events, personal desires, and preferences. The Bs, beliefs that are most significant are highly evaluative and consist of interrelated and integrated cognitive, emotional, and behavioral aspects and dimensions. According to REBT, if a person's evaluative B, belief about the A, activating event is rigid, absolutistic, and dysfunctional, the C, the emotional and behavioral consequence, is likely to be self-defeating and destructive. Alternatively, if a person's evaluative B, belief is preferential, flexible, and constructive, the C, the emotional and behavioral consequence is likely to be self-helping and constructive. Through REBT, by understanding the role of their mediating, evaluative, and philosophically based illogical, unrealistic, and self-defeating meanings, interpretations, and assumptions in upset, people often can learn to identify them, begin to D, dispute, refute, challenge, and question them, distinguish them from healthy constructs, and subscribe to more constructive and self-helping constructs (Dryden, Davis, & Ellis, 2010).

REBT is a no-nonsense counseling approach influenced by Greco-Roman stoicism that allows soldiers to view REBT as training instead of therapy. This allows them to directly versus passively solve problems. Stoicism, a foundational element in

REBT, is a philosophy that promotes self-control, personal fortitude, detachment, and civic responsibility through moral excellence, rationality, and management of perceptions and evaluations. REBT is a reality-accepting, rational approach to putting combat, separation, and loss into perspective, as it teaches and promotes that the concepts and philosophies of life of unconditional self-acceptance, other-acceptance, and life-acceptance are effective philosophies of life in achieving mental wellness; and that people had better accept life with its hassles and difficulties that are not always in accordance with their wants, while trying to change what they can change and live as elegantly as possible with what they cannot change. Preparing for, resisting, and managing future traumas that may produce PTSD, and promoting posttraumatic growth (PTG) is a main focus of WRT. WRT also acknowledges some risk factors that may predispose soldiers for PTSD including intelligence, previous trauma, and personality style (Jarrett, 2013). WRT has provided foundational support to the development of Comprehensive Soldier Fitness.

Finally, several Army bases support base-level resilience centers. For example, Fort Bliss has the Restoration and Resilience Center that was established in 2005 by Dr. Fortunado, a psychologist, Vietnam veteran, and former Benedictine monk. He brings the Eastern practices of Reiki, acupuncture, and massage to the center. Soldiers also have traditional talk therapy and group therapy. Each soldier has a partner with whom to go through the program. The main goal of the program is to assist soldiers to apply the skills they are learning to outside environments (Giles, 2014).

Similarly, Fort Hood hosts the Resilience Campus, which encompasses a city block on the base. The Spirituality Center provides meditation guidance and other

Eastern practices, while the Wellness Center offers several programs that bridge mind and body fitness. Some of the programs include biometric testing, biofeedback, physical fitness training, tai chi, yoga, financial counseling, smoking cessation, substance abuse counseling, and nutrition guidance, among others. New resilience-focused programs and centers are continuously being developed and implemented on Army bases across the country (Graham, 2009).

Navy/Marine Corps Resilience Programs

Combat Operational Stress Control (COSC)

COSC encompasses all Marine Corps and Navy policies and programs designed to prevent, identify, and holistically treat mental injuries caused by combat or other military operations. The COSC model is unit leader-oriented, multidisciplinary, integrated throughout the organization, without stigma, consistent with the Warrior Ethos, and focused on wellness, prevention, and resilience. The current COSC model was developed in 2007 by a working group of Marine leaders, chaplains, and medical and mental health professionals. Marines and sailors receive COSC training in each career school and for any deployment over 90 days. COSC training for military leaders emphasizes five core leader functions: to strengthen (e.g., to promote stress inoculation, coping skills, and social cohesion), to mitigate (e.g., to prevent stress injuries through monitoring and alleviating stressors), to identify at-risk individuals, to treat (e.g., by self-aid, peer support, or direction to mental health professionals), and to reintegrate those with stress injuries back to full duty. Most COSC training occurs in classrooms, usually within 60 days of deployment, again within 60 days of departure from theater, and then again between 60 to 120 days after return (Meredith, 2011).

OSCAR (Operation Stress Control and Readiness) is also part of COSC. OSCAR differs from any previous military mental health effort in that OSCAR embeds mental health expertise directly in operational units at the level of the regiment, rather than attaching mental health personnel to external medical treatment facilities or external combat stress teams. OSCAR psychiatrists, psychologists, and psychiatric technicians are organic to the military units they support in the same way battalion surgeons, corpsmen, and chaplains are organic to their operational units in the Marine Corps. OSCAR mental health providers train with their Marines prior to deployment, they accompany their Marines into forward operational areas during deployment, and they continue to provide support to their Marines after they return from deployment. OSCAR builds a bridge across the cultural gap between warfighter and mental health professional the only way such a bridge can be built—by drawing the mental health professional as fully as possible into the culture and life of the military unit to be supported (Nash, 2006).

An additional feature of OSCAR, as developed in the 2nd Marine Division, is the assignment of full-time Marine staff noncommissioned officers (E6 and above) to the OSCAR teams attached to infantry regiments. OSCAR staff noncommissioned officers serve to further integrate the mental health efforts of the OSCAR mental health professionals with the line noncommissioned officers who are the “center of gravity” of combat/operational stress control in the Marine Corps. OSCAR noncommissioned officers are not corpsmen or medics, but experienced warfighters who help build and maintain bridges between the science of psychiatry and the art and science of military operations (Nash, 2006).

CREDO

In the beginning, CREDO stood for "Chaplains Response to the Emerging Drug Order." CREDO began in 1971 as an experiment led by chaplains and lay persons to confront the use of drugs by Navy and Marie Corps personnel. Because of its thrust, the Assistant Chief of Naval Personnel for Human Goals provided funding to continue the operation of the program. Over time, CREDO evolved in its approach to a new form of retreat ministry that was applicable to a broad spectrum of personal and spiritual development rather than just individuals with drug-related problems. As a result, the Chief of Chaplains assumed sponsorship of the CREDO program, and with the change in emphasis came a change in the meaning of the acronym, which now stands for "Chaplains Religious Enrichment Development Operation." The positive, proactive, preventative emphasis and results of CREDO emphasizes the Navy/Marine Corps tradition of "taking care of our own" (CREDO, 2013).

CREDO exists to supplement local commands in readiness of sea-service personnel and their families through specially designed retreat ministries. Retreats include personal growth, marriage enrichment, reclaiming the inner child, spirituality, Christian disciplines, men's/women's retreats, family retreats, and teen retreats. The objectives are to assist personnel to (1) gain self-esteem and self-understanding, (2) learn to respect themselves and others, (3) accept responsibility for their lives, and (4) develop healthy spirituality (CREDO, 2013).

Navy and Marine Corps Public Health Center

This center is headquartered in Portsmouth, VA, has over 600 people across six locations nationwide, and provides worldwide Force Health Protection services to Naval

and Joint forces in support of the National Military Strategy. Among other services, the Public Health Center provides the Guide for Psychological and Emotional Wellbeing. This guide outlines programs and services that facilitate readiness and resilience, prevent illness and injury, hasten recovery, and promote lifelong healthy behaviors and lifestyles. The guide is designed as a resource to introduce the topics of psychological and emotional wellbeing and stress management, and it introduces programs such as the Relax Relax Toolkit, Stress Zones, and Operation Healthy Reunions. In essence, these center locations are central to providing Navy personnel with needed resources related to recovery, resilience, and posttraumatic growth (U.S. Navy, 2014).

Navy Special Warfare Resilience Enterprise

The Naval Special Warfare (NSW) Command, in collaboration with the Navy Seal Foundation, has designed and implemented programs that offer events for sailors and their families to enhance family relationships during and after deployment. In addition, retreats are offered that are part of a unique program to build resilience within the force of special operators (e.g., SEALS). This is accomplished through three phases:

(1) Individual sailors' and family members' needs are assessed

(2) Educational programs and services tailored to those needs are provided

(3) Newly reunited families are supported through the reintegration process after deployments.

The assessments (phase 1) provide important insight into individual and family psychological and financial wellbeing. For sailors, these screenings represent a baseline that, when compared to future postdeployment assessments, will provide objective measures for traumatic brain injuries and combat stress symptoms. The findings also

help the command tailor the training, education programs, and other activities that can be offered to meet the sailor's needs. These efforts range from interpersonal communication workshops to parenting and financial planning classes to command-sponsored activities for spouses and children. As part of this effort, the NSW has piggybacked on the Marine Corps' Project FOCUS—Families Overcoming Under Stress—program. The Marine Corps launched FOCUS at Camp Pendleton, CA as has expanded it to several other locations to help families cope with multiple deployments (Miles, 2008).

OSCAR

See Combat Operational Stress Control (COSC).

Performance and Resiliency Program (PerRes)

This program is an outgrowth of an effort by Marine Special Operations Command (MARSOC) to build resilience among special operators in all service components whose ranks sustain grueling deployment schedules. The program is structured to three tenets—physical, mental, and spiritual wellbeing—through enhanced fitness and nutrition, and sound teaching methods. The PerRes training team consists of 20 or more health professionals with expertise in strength conditioning, fitness, nutrition, physical therapy, and mental health. The program is for anyone assigned to MARSOC, plus family members and civilians. The entire community can learn what it takes to be in peak physical and mental condition for battle (Cavallaro, 2011).

Reintegrate, Educate and Advance Combatants in Healthcare (REACH)

This program is sponsored by the Navy Bureau of Medicine (BUMED). It is a mentorship program that provides career advice, education counseling, experience

through part-time employment with on-the-job training, and the potential of job placement for qualified graduates. REACH is designed for wounded service members with a strong likelihood of a 30% or more disability rating based on DoD or VA standards. The program is specifically targeting wounded warriors interested in pursuing careers as respiratory therapists, dental assistants, medical technicians, physician assistants, nurses, medical recorders, medical coders, diagnostic radiologic technicians, occupational therapists, and case managers (Pilip-Florea, 2011).

REACH assigns each candidate a dedicated person who acts as a career counselor helping the service members select and achieve the necessary requirements among a variety of occupational career fields in medicine and health care. The counselor will assist the service members to enroll in school, assign them to mentors and coaches, provide part-time jobs and on-the-job training as needed to candidates throughout their education, and help them with job placement, after they graduate from the program (Pilip-Florea, 2011).

Air Force Resilience Programs

Comprehensive Airman Fitness (CAF)

CAF is designed very similar to the Army's CSF2 with most of the same core concepts. CAF is based on four pillars: physical, social, spiritual, and mental. Although slightly different, these pillars reflect CSF2 core principles. CAF is a fledgling program in comparison to CSF2, and the Air Force is still developing core programs, including "safety day," "resilience day," and "wingman day," which are all methods that the Air Force has developed to incorporate resilience training in the form of "CAF Days." Commanders are expected to implement a CAF day for their airmen every quarter, and

each quarter focuses on a different pillar of resilience. A CAF day can be as simple as a team building exercise in a conference room, a process improvement event within a work center, or a hiking event. CAF also promotes the "five Cs": care, commit, connect, communicate, and celebrate. In essence, CAF is very similar in theoretical structure to CSF2, yet it is a fledgling program compared to CSF2, and has much fewer components and different methods of delivery at this point in time (Air Combat Command, 2014).

Landing Gear

The Air Force's Landing Gear program, initiated in 2008, mentally prepares airmen for deployment conditions before they travel down range. Additionally, the program provides assistance to airmen who may suffer from traumatic stress and connects them with a variety of resources upon their return from deployment. Before Landing Gear went into effect, airmen received base-specific predeployment briefings only. Now, Landing Gear has a much broader focus, and has a program that every base uses for pre- and postdeployment education and support, as well as wartime environmental training and support (U.S. Air Force, 2008).

Leadership Pathways

This program encompasses a series of strategic courses adopted by the Air Mobility Command (AMC) in 2012. Classes are offered that fall into one of the four pillars of CAF: physical, mental, spiritual, and social. Classes are available for airmen and their family members covering topics of healthy living, healthy family relations, child and teen rearing, finance, physical fitness, and relationship building skills, among others. Each course provides the attendee a certain number of credits. The more credits that are acquired, the higher an individual climbs in title and recognition within the

Leadership Pathways program. For example, earning 10 credits will give the individual the Wingman level, 20 credits earns the Leader level, and 30 credits earns the Warrior level. Wingman, Leader, and Warrior levels earn recognition of group commander, wing commander, and AMC commander, respectively. Currently, the Leadership Pathways program is transferring from an all-paper tracker to an online version, which will facilitate airmen with registering, signing up for courses, and keeping track of credits and levels achieved (Brown, 2014).

National Guard/Reserve Resilience Programs

National Guard Resilience Program

In response to the Army National Guard senior leadership's priorities, several states have developed comprehensive social support and mental health initiatives to deepen soldier resilience. States with creative resilience programs include Michigan, Nevada, Nebraska, California, New Hampshire, Ohio, Wisconsin, Maryland, Delaware, Illinois, Montana, Tennessee, and Kansas. The Michigan Guard developed a program called Buddy-to-Buddy that trains soldiers at one of two levels to be able to identify other soldiers who may be in need of mental health intervention, and refer them for services. Soldiers keep in contact with their Buddies by telephone, email, and social media. The key to success with this program is that soldiers often feel more comfortable talking with a fellow soldier about behavioral health needs (Carpenter, 2010).

The Nebraska Guard, building upon the Buddy-to-Buddy concept, has concentrated its efforts to strengthen resilience through fellowship groups for veterans and their families. The groups help to resolve issues related to combat stress and readjustment from trauma experienced while on active duty. The goal of the fellowship

groups is to guide individuals to cope more effectively with a wide range of issues, including family and relationship discord, depression and anxiety, anger, guilt, impulse control, decision making, communication styles, and self-medication (Carpenter, 2010).

The California Guard has an embedded psychologist program where behavioral health professionals are assigned to units to increase opportunities for early intervention.

Ohio and New Hampshire, along with their respective state mental health groups, have formed alliances for networked care in the communities, which promotes a continuum of care for soldiers and families in need. These states, as well as many other states, also focus on preventive work through regular unit-based resilience training (Carpenter, 2010).

The Wisconsin Guard has implemented a community wellness program that prepares soldiers for challenges that they might confront in their careers. The goal of the program is for soldiers, families, and civilians to be able to identify the realities of challenging environments, develop skills to thrive and be resilient in the face of these realities, and learn how to use these skills to help themselves and others (Carpenter, 2010).

A number of states have partnered with community agencies to promote soldier resilience. The Maryland Guard developed a service called Partners in Care, a network of faith-based organizations where volunteers provide practical services for soldiers and their families. Delaware, Illinois, and Montana have similar networks (Carpenter, 2010).

The Kansas Guard seems to be at the forefront in developing a resilience training curriculum. Kansas Flash Forward for Leaders, a resilience training course, consists of sessions that address various topics including stress, family issues, chaplain services, and

instruction on biofeedback evaluation. Each module includes a video, lecture, and small group discussion. The Flash Forward Program is taught by a team of three previously deployed service members, one chaplain or chaplain's assistant, and one family support coordinator or director of psychological health. Flash Forward also has a Train-the-Trainer program (Carpenter, 2010; Meredith, 2011).

The Tennessee Guard recently implemented a unique 40-hour course, Warrior Fit Camp, for every Air and Army National Guard airman and soldier who falls short of passing the assigned fitness test or remaining within weight limits. The course objective is to challenge participants to become their absolute best through the use of safe and effective tactical fitness and resilience training. The results are body fat loss, improved strength and stamina, increased confidence, and higher spirits. Over the course of 2 consecutive National Guard drill weekends with approximately 28 days in between, participants are immersed in proper form and safety, functional fitness programs for outdoor and indoor environments, fixed and free circuit fitness training, military-style obstacle courses and fitness tests, fitness games, partner-assisted exercises, individual tracking techniques, nutrition guidance, and extensive resilience training and life coaching. Warrior Fit Camp lessons lead students through gradual crawl, walk, and run phases through progression, variety, and precision. The formula for success rests in the educational approach that total physical readiness exists under the following balance: 50% resilience training and life coaching, 40% proper nutrition, and 10% developmental physical fitness training (Weichert, 2013).

Military-Wide Programs

BOOTSTRAP

This program is a veteran-created, integrated body/mind approach to stress management that blends modern scientific stress management principles with the ancient wisdom of yoga. BOOTSTRAP teaches participants to "recognize, release, and restore"; recognize unconscious habits and mental tendencies that create and perpetuate chronic stress; release these newly-recognized patterns; and restore the body and mind to balance. The 10-week curriculum leads participants through an examination of the various aspects of chronic stress while providing tools to manage stress in daily life. In addition to the weekly curriculum, BOOTSTRAP has an additional extensive online resource center and social media support network. Linking military members and veterans to other treatment services as well as to one another provides support and encouragement in a safe online environment (BOOTSTRAP, 2014).

DCoE

The mission of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury is to improve the lives of military service members, families and veterans by advancing excellence in psychological health and traumatic brain injury prevention and care.

DCoE strives to be the trusted source and advocate for psychological health and traumatic brain injury knowledge and standards for the Department of Defense, and profoundly improve the system of care. DCoE is comprised of three centers: Defense and Veterans Brain Injury Center, Deployment Health Clinical Center, and National Center for Telehealth and Technology (Defense Centers of Excellence, 2014).

The military population is increasingly using complementary and alternative medicine therapies to enhance traditional medicine therapies they are receiving to treat their psychological health issues. Therefore, the DCoE are on the forefront of research into integrative health techniques for enhancing mind-body-spirit wellness, and are working to provide resources and guidance on how best to promote the wellness, resilience, and performance of the total force (Defense Centers of Excellence, 2014).

Additionally, the DCoE sponsors the Real Warriors Campaign, which is a multimedia public education effort designed to combat the stigma associated with seeking psychological health care and encourage service members, veterans, and military families to use the psychological health resources available to them. Through this campaign, DCoE is spreading the message that reaching out is a sign of strength. Promoting the processes of building resilience, facilitating recovery, and supporting reintegration is something in which everyone can participate on behalf of returning service members and their families (Defense Centers of Excellence, 2014).

Furthermore, DCoE manages In Transition, a free voluntary program to provide behavioral health care support to service members and veterans as they move between health care systems or providers. Personal coaches, along with resources and tools, assist service members during the transition period, empower them to make healthy life choices, and are available 24/7 via a toll-free call. Family members are also encouraged to call the program to find out how their service member can get started with In Transition. The Department of Defense developed In Transition in response to its Mental Health Task Force recommendation to maintain continuity of care across transitions for service members and veterans (Defense Centers of Excellence, 2014).

Moreover, DCoE hosts monthly webinars to provide information and facilitate discussion on a variety of topics related to psychological health and traumatic brain injury. Each month features a different topic with presentations by subject matter experts followed by an interactive discussion period. The webinars are open to the public, and many offer continuing education credit. DCoE also offers an abundance of online resources for service members, families, veterans, and providers, including web-based case studies. Finally, DCoE sponsors professional conferences, most notably the Psychological Health and Resilience Summit, formerly called the Warrior Resilience Conference (Defense Centers of Excellence, 2014).

Real Warriors Campaign

See Defense Centers of Excellence.

Warrior Mind Training

Since 2005, the Warrior Mind Training program has been helping service members achieve excellence, prepare for deployment, return home, recover from injuries and illnesses, and move on to rewarding lives and careers in the civilian world. The program has been taught on multiple military bases and veterans programs throughout the United States. The postdeployment, recovery, and transition program is broken into four phases. The decompression phase is taught for veterans returning from deployment with combat stress or posttraumatic stress. It is taught in conjunction with the foundation phase. The foundation phase is the basis of the mind training techniques. Once the foundation is established, then class members move on to rebuilding, focusing on achieving success, happiness, and excellence in their lives. Phase three, recovery and transition, focuses on maintenance of skills. Phase four is termed achievement. Warrior

Mind Training utilizes specific meditation practices to improve concentration and relaxation. Some of the techniques taught include grounding breathing, deep listening and balance, thought observation, focus on the present, positive focus, gratitude list, like list, humor, statements of focus, and mind clearing (Warrior Cycle, 2011).

Conclusion

This appendix highlights many of the existing military resilience programs. However, due to the recent expansion of military and veteran resilience programming, only major curricula have been summarized. Existing programs seem to have several commonalities, namely the implementation of mind-body-spiritual fitness as a means to strengthen resilience and wellbeing in social, emotional, physical, spiritual, and family realms. Promoting resilience in the military is an increasingly important objective of the Department of Defense. Fledgling programs that address resilience and psychological health are being implemented military-wide, and existing programs are being improved as research unfolds regarding promising preventive measures, interventions, and treatments.

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