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Beyond Health: The Meaning of Recreation Participation for Injured Service Members

Catherine Munroe

Clemson University, catmaurer82@yahoo.com

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BEYOND HEALTH: THE MEANING OF RECREATION PARTICIPATION
FOR INJURED SERVICE MEMBERS

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements
for the Degree Master of Science
Parks, Recreation, and Tourism Management

by
Catherine Maurer Munroe

May 2014

Accepted by:
Dr. Brent L. Hawkins, Committee Chair
Dr. Lynne Cory
Dr. Marieke Van Puymbroeck

ABSTRACT

The Global War on Terrorism and the ongoing contingency operations have resulted in a large number of service members returning home with life changing traumatic injuries. As a result, there has been a surge of programs designed to facilitate transition into life with a disability and promote recovery from injury, including programs providing recreation and sports. The purpose of this qualitative study is to examine the effects of recreation and sport participation on injured service members' recovery and enhancement of health. Health is investigated using the World Health Organization's definition which includes physical, mental, and social well-being. Interviews were conducted at the 2008 Paralympics Military Sports camp and the 2010 Dixie Games and were analyzed using a phenomenological methodology. Analyzing injured service members' lived experiences within recreation services revealed the meaning and value of such programs as related to health. Results indicated that recreation and sports affected multiple aspects of service members' health recovery and enhancement. More specifically, results indicated that the restorative effects of recreation and sports went beyond health recovery and extended into optimal well-being by contributing to resilience and personal growth. Three main themes emerged related to health recovery and enhancement through recreation and sports participation: (a) recreation as a tool for social integration (b) recreation as a tool for recovery and enhancement of physical and mental health and (c) recreation as a tool for moving beyond health. Discussion expands upon the effects that take place during service members' experiences within recreation and sports participation and provides suggestions for recreational therapy practice.

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I. INTRODUCTION

The Department of Defense reports over 51,000 US service members have been wounded in action in Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Operation New Dawn (OND) (Department of Defense, 2014). Post September 11, 2001 conflicts have resulted in a large number of service members returning home with trauma induced injuries and health care needs related to traumatic injuries and military service. Many of these men and women have sustained life changing disabilities which call for a variety of clinical and community interventions and therapeutic programs.

Previous research has reported some of the effects of participation in recreation and sports on service members with combat related disabilities. Service members' participation in recreation and sports (e.g., sport camps and competition, shared recreation) has been associated with increases in quality of life, self-esteem, mood states, marital adjustment, competence within participation, and overall improvement in service members' lives along with a reduction in Post Traumatic Stress Disorder (PTSD) symptoms (Bennett, Lundberg, Zabriskie, Eggett, 2014; Hawkins, Cory, & Crowe, 2011; Lundberg, Bennett, & Smith, 2011; Sporner et al., 2009). Other recreational studies have investigated the effects of adventure-based camps on injured service members and participants reported emotional support from other service members, reduced PTSD symptoms, and an increase in coping skills, self-confidence, and self-efficacy (Dustin, Bricker, Arave, Wall, Wendt, 2011; Mowatt & Bennett, 2011). These studies have

contributed to the understanding of the effects of recreation and sports participation, which can guide recreation practitioners with the design and implementation of programs.

Health professionals have long accepted the health benefits of physical fitness related to recreation and sports. However, the concept of health has become progressively more holistic. The World Health Organization (WHO) defines health as encompassing physical, mental, and social well-being (World Health Organization, 1946). These aspects of health are often innate in leisure, recreation, and sports participation. Positive leisure experiences have been linked to improved quality of life (Iwasaki, 2007) improvements in subjective well-being (Lee & McCormick, 2004) and increases in coping mechanisms (Kleiber, Hutchinson, & Williams, 2002; Hutchinson, Loy, Kleiber, & Dattilo, 2003; Caldwell, 2005), for individuals with and without disabilities. Physical, mental, and social health may be even more important for individuals with disabilities because they are at higher risk for secondary conditions such as obesity, depression, or social isolation (Kinne, Patrick, & Doyle, 2004). Clinical and community programs must address all three aspects of health in promoting transition and recovery for injured service members in order to develop a holistically healthy individual.

Developing effective programs calls for evidence based studies to increase practitioner knowledge and guide program design. Although there have been studies on the effects of recreation and sport participation on service members, an in-depth qualitative review of how all three domains of health are affected has not been attempted. The purpose of this qualitative study is to discover the lived experience of injured service members by investigating the impact of recreation and sports on recovery and

enhancement of health using the WHO definition of health. Understanding the health benefits and challenges these individuals encounter provides a more comprehensive picture of what is needed for optimal health and well-being and how these needs can be addressed through recreational experiences. Through a better understanding of the effect of recreation, practitioners can assist service members in reaching their post-injury potential and take full advantage of the possibilities these activities may offer. This study contributes to the existing literature by addressing all three aspects of health for injured service members, considering how these aspects are affected through recreation and sports participation, and providing additional recommendations for programs involving leisure, recreation, and sports for service members.

II. LITERATURE REVIEW

The Global War on Terrorism and ongoing contingency operations have resulted in a new generation of injured service members. Many service members are surviving wounds, which in the past wars, would have resulted in death (Tanielian & Jaycox, 2008). This increased survival rate has been associated with technological advances in armor, battlefield medicine, and more accessible frontline treatment (Pasquina & Fitzpatrick, 2006; Corby-Edwards, 2009). These factors have also resulted in more complex wounds, which call for dynamic treatment that addresses multiple and co-occurring disabilities. Common traumatic injuries that service members incur are amputations, spinal cord injury (SCI), post-traumatic stress disorder (PTSD), traumatic brain injury (TBI), and burns.

Traumatic injuries along with post-deployment or post-combat adjustments make service members unique and the recovery process more complicated (Resnik & Allen, 2007). Trauma induced disability can cause an abrupt change in normal physical, mental, and social functioning and can disrupt activities of daily living, elicit distressing emotional responses, and provoke changes in social behavior (Resnik & Allen, 2007). The service members and their families must adapt to a new way of life that may include a prosthetic, wheelchair, or other assistive devices, as well as a change in cognitive and affective mechanisms. Transitioning to civilian life outside of the military culture may further complicate the adjustment process.

Common Challenges Experienced by Injured Service Members

The experience of combat and military service along with the frequent injuries associated with service (e. g., amputations, SCI, PTSD, TBI, and burns) cause injured service members to face common challenges in recovery. Resnik and Allen (2007) reported service members from OEF/OIF with traumatic injury faced challenges in domains of learning and applying knowledge; general task and demands; communication, mobility, self-care, domestic life, interpersonal interactions, major life areas; and community, social and civic life. Specifically, service members reported challenges with recreation, leisure, and socialization during reintegration into the community.

Interpersonal interactions and social participation in the community may be hindered as service members attempt to return to civilian life. In particular, TBI and PTSD in service members have negative effects on quality of life, social functioning, and satisfying roles in the community (Sandberg et al., 2009). In Resnik and Allen's (2007)

study, caregivers reported that some injured service members preferred to be in the company of other service members. Often these “battle buddies” lived long distance and were not available for consistent supportive roles. Clinicians treating injured service members also described their tendency to isolate, become apathetic, and withdraw, which can contribute to decreasing human contact and social circles (Resnik & Allen, 2007). Some service members and their significant others noted a loss of interest in activities that the service member once enjoyed (Resnik and Allen, 2007). This reduction in participation in recreational activities may be due physical or perceived limitations or loss of interest.

These studies indicate that service members with traumatic injury are at risk for experiencing poor transition into civilian and community life because of the physical, mental, and social domains affected. Challenges in participating in recreation and leisure, loss of interest in once enjoyed activities, and social isolation put these service members at risk for an unfulfilling leisure life-style and a reduction of important social roles (e.g., family member, friend). These challenges support the need for community programs, such as recreational-based activities, to help with physical functioning, community integration, socializing, and to support fulfilling leisure and recreational experiences.

Leisure’s Relationship to Recovery and Well-being

Service members face the reality of recovering from their injury, adapting to a new functioning level, and transitioning into civilian life, all of which can cause psychological distress. Recreation and leisure can contribute to recovery and

psychological well-being by aiding in adjustment and coping with negative life events and traumatic injury (Caldwell, 2005; Hutchinson et al., 2003; Kleiber et al., 2002).

Recreation and leisure have also been shown to be a predictive factor in subjective well-being for individuals with traumatic injury (Lee & McCormick, 2004). Caldwell (2005) described how leisure safeguards from the negative physical and psychological effects that disability can induce. She suggested that leisure serves as a coping mechanism for stress of daily life, traumatic events, and can create a diversion from negative life events.

Kleiber et al. (2002) suggested that effective coping may be the foundation for adaptation and personal growth following a traumatic event. Leisure can aid in coping by being a diversionary activity which distances one from losses, provides optimism for the future, facilitates a continuous life story, and creates a basis for personal transformation (Kleiber et al., 2002). Continuity implies that people seek to maintain roles, relationships, routines, and activities that are meaningful to them (Robertson & Long, 2008). The on-set of traumatic injury calls for a relearning of one's boundaries and capabilities while maintaining a sense of normalcy and connection to the past. Injured service members may have a loss of interest, or physical limitations to activities they once enjoyed (Otter & Currie, 2004; Resnik & Allen, 2007). This may cause a void in quality time and positive emotions. New activities or different ways to participate in the same activities must be found to aid in a reconstruction of a continuous life story and promote positive experiences that make way for hope and optimism (Kleiber et al., 2002).

These studies and reviews suggest that after a traumatic injury, service members can use recreation and leisure to aid in psychological recovery because of its ability to aid

in coping mechanisms. Furthermore, it is suggested that recreation and leisure may even promote personal growth following a negative life event, such as a traumatic injury or combat experience. Therefore, recreation and leisure would be an appropriate treatment modality for injured service members.

Effects of Recreation and Adaptive Sports

Adaptive sports are one form of recreation that is increasingly available and marketed to injured service members. Adaptive sports have been shown to have positive psychological and social effects in individuals with traumatic injury. Kennedy, Taylor, and Hindson, (2006) examined the effects of a one-week residential multi-activity courses that included skiing, riding, water-skiing, canoeing, rappelling, and gliding, on individuals with SCI. Results suggested that following participation in the program, self-efficacy, motivation to engage in activities, and satisfaction with leisure increased while anxiety decreased. Participants stated that they felt the course had positively contributed to their recovery. In qualitative interviews participants repeatedly mentioned, making friends, meeting others, increasing self-confidence, learning new skills, and improving perception of possibilities and capabilities and a sense of achievement as benefits of the activity course.

Specifically, among injured service members, recreation and adaptive sports are common recreational modalities utilized for the recovery, transition, and support of these individuals. A few studies have examined the effects of adaptive sport and recreation programs on injured service members. Lundberg, Bennett, and Smith (2011) reported a significant increase in perceived competence, and a reduction of negative mood states

such as: tension, depression, and anger in injured OIF/OEF service members who participated in a five day therapeutic adaptive sports and recreation program.

Recreational based therapies such as river running, and therapeutic fly-fishing have been shown to have beneficial effects on service members diagnosed PTSD (Dustin et al., 2011; Mowatt & Bennet, 2011). Service members in these studies reported a reduction of PTSD symptoms and enhanced coping skills. Self-confidence and self-efficacy increased through the acquisition of recreational skills. Recreational activities offered a context for experiencing camaraderie, exploring trauma related issues outside of a traditional hospital setting, and allowed service members to experience joy (Dustin et al., 2011).

Similar benefits have been reported in service members who participated in adaptive sport programs. Sporer et al. (2009) examined experiences of service members who participated in the National Veterans Wheelchair Games (NVWG) and Winter Sports Clinic (WSC). Eighty-nine percent of the veterans in the sample stated that their life had been improved by participating in the NVWG and WSC. Veterans reported the most change in the social aspect of their lives in which they had gained friendships. Interviews revealed service members' experiences of camaraderie amongst fellow service members. Cohesion amongst individuals with similar experiences served as a basis for building relationships and extending social supports. In addition to the social aspect, findings showed that individuals had an improved quality of life as well as increased self-esteem, confidence, and motivation.

Hawkins, Cory, and Crowe (2011) sought to increase understanding of the effects of recreation and sport by interviewing injured service members participants in a

military-specific, paralympics sport camp. Participants reported involvement in recreation and sports changed perceptions of disability and movement towards self-acceptance, provided motivation through social comparison and participation, provided a sense of relatedness and social connection, and improved perceptions of health, fitness, and general well-being. Competence and relatedness were considered important factors in the recreation and sport experience.

The previous research reveals a multitude of benefits associated with leisure, recreation, and sports in the physical, mental, and social domains. Participation in recreation and sports can provide individuals with opportunities to gain social support by expanding social circles, experiencing camaraderie, and integrating into the community (Dustin et al., 2011; Kennedy et al., 2006; Otter & Currie, 2004; Sporer et al., 2009). Recreation and sports participation was also shown to have multiple effects on psychological well-being, such as increased self-efficacy, self-confidence, positive self-perceptions, subjective well-being, and decreased anxiety, depression, tension, and anger (Otter & Currie, 2004; Dustin et al., 2011; Hawkins et al., 2011; Kennedy et al., 2006; Lee & McCormick, 2004; Lundberg et al., 2011). Recreation and sports participation has the potential to help injured service members develop an awareness of their capabilities, learn new skills, and gain motivation to engage in activities (Kennedy et al., 2006). Given that service members and non-veterans with traumatic injuries report a decrease in quality of life, barriers to community reintegration, and loss of interest in previous activities, (Powdthavee, 2009; Sandberg et al., 2009), recreation and sports may be an effective approach for recovery and enhancement of health by treating the traumatic injuries.

Previous studies have not specifically examined the perceptions of health associated with participation in adapted recreation and sports participation. This study strives to explore the effects recreation and sports participation on injured service members' recovery and enhancement of health. Physical, mental, and social domains of health are examined to fully understand the most predominate and significant health effects as perceived by the service members.

III. METHODS

Background and Sampling

Following approval from the local Institutional Review Board, qualitative data were collected in the form of semi-structured interviews. The first set of interviews were collected at a Paralympics Military Sports Camp in 2008. This camp is a bi-annual event sponsored by the United States Olympic Committee and was designed to introduce injured service members to adaptive sports. The event spanned over the course of several days in which service members were given the opportunity to participate in a number of summer and winter sports ranging from archery to swimming. Sports clinics held at the camp were led by Paralympics coaches and athletes.

The second set of interviews were collected at the 2010 Dixie Games. These games were a sanctioned adaptive sports competition that attracted athletes with both congenital and acquired disabilities, and often include injured service members. Four service members were present at the 2010 Dixie Games and three service members elected to participate and be interviewed by the researcher. Data from the Paralympic Military Sports Camp were subjected to secondary analysis following the completion of a

previous study, however the data from the Dixie Games had not been analyzed previously.

A purposive sample was used in which the site and the participants were selected to provide an understanding of the central phenomena in question, which was the meaning of recreation and sports participation for injured service members in regards to health. There were three inclusion criteria for individuals to participate in the study: (a) the individual must be a service member, active or guard/reserve from any branch of the military, (b) have a traumatic injury, and (c) be involved in organized recreation and sports activities. The service members attending sports camps, sports competitions, and other recreational activities were considered to have the knowledge to produce the richest descriptions of what participation in recreation and sports meant to them in relation to health recovery and enhancement. Eight participants who met the purposive sampling criteria and agreed to be in the study were interviewed.

Qualitative Methodology

Phenomenology was deemed the most suitable qualitative method to explore the meaning of participation in recreation and sports for service members because of the methods' capacity to provide an in-depth look at personal experiences and reveal significance. A hermeneutic phenomenological design (Van Manen, 1990) was used to interpret, analyze, and describe the lived experience of eight service members with traumatic injuries.

Rigor in research was established following a variety of validation strategies (Creswell, 2007). A thorough literature review was conducted prior to data analysis

which enabled the researcher to recognize patterns or concepts that have already been reported, refer to established explanations and theories, and notice variations that appear in their own data (Mores & Richards, 2002). Methodological congruence (Morse & Richards, 2002) was used to ensure a fluid and coherent research design by logically connecting the purpose of the study to the research question and choosing the most appropriate method and analysis process to reveal answers. Multiple levels of data analysis were conducted during theme analysis as suggested by Creswell (2007), which are discussed in the following sections.

Data Collection

Semi-structured interviews were conducted and focused on participants' lived experience of recreation participation. The purpose of the interviews was to elicit the service members' perceptions of the relevance of recreation and sports participation following traumatic injury. All service members were asked the same questions in relatively the same order. However, if a participant brought up an interesting or ambiguous topic, the researcher asked them to expand or provided prompts in search of more information. The researcher's goal was to provoke rich, detailed, and multilayered answers. Each service member was interviewed separately. Questions included: How has being involved in recreation and sport affected your life since your injury? What aspects of your life are better or worse since you have been participating in recreation and sports? What is the most valuable aspect of your participation in recreation and sports? How has participation in recreation and sports influenced the relationships in your life? If you could speak with a newly injured service member, what would you tell them about

participation in recreation and sports? Interview settings varied from quiet rooms at recreational facilities to outdoor fields where sport competitions were taking place.

Data Analysis

Information collected in recorded interviews were transcribed and coded following hermeneutical phenomenology as suggested by Van Manen (1990). This method sought to expose and describe experiential meaning structures also called themes (Van Manen, 1990) which were subject categories relevant to health that consistently appeared within the participant interviews. Each theme is an elemental aspect of how the service members experience recreation and sports and was used as a tool for analyzing, understanding, and reflecting upon the data. The researcher reflectively pursued the essence of the service members' experiences by making sense of what the participants' statements meant, while being aware of possible events, contrast, processes, key experiences, actions, perspectives, values, emotions, and intentions within the data.

Critical analysis was performed using several exploration processes. The first step of critical analysis involved detecting initial themes within the data. This helped to reduce the complexity and amount of the data and made data more manageable for analysis. To detect meaning structures or themes, participants' statements were evaluated for their significance as related to participation in recreation and sports. At this stage, significant statements and phrases were highlighted and margin notes were used to label more elusive subject categories.

In the second step of analysis, each participant interview was organized into themes with corresponding statements following each category. This technique further

identified themes that were in the data, revealed how prevalent those structures were across participants, and helped with the consideration of how the structures might be organized into themes, sub-themes, and idiosyncrasies. After all the interviews were reorganized by topic they were reread and statements were reflected upon and described by the researcher.

IV. RESULTS

Eight injured service members with a wide variety of injuries were interviewed. Injuries included TBI, SCI, PTSD, nerve damage, burns, and single and bilateral amputations (Table 1). Six of the eight interviewees were between the ages of 20 and 30. The median time since injury was 2.75 years, and only one participant had been injured for longer than five years and involved in recreation and sports longer than five years. Four participants noted their involvement in recreation and sports before their injury. Event attendants were told that participation in the interview was voluntary. Pseudonyms are used in lieu of the participant's given names to protect their identities.

Personal meanings of recreation participation among the wounded service members were organized into recurrent themes. Themes revealed some common experiences among service members. The following themes were unveiled:

- (a) Recreation and sports as a tool for social integration
- (b) Recreation and sports as a tool for recovery and enhancement of physical and mental health
- (c) Recreation and sports as a tool for moving beyond health

These three themes were divided into sub-themes to describe the variations in which these themes were experienced. Interview excerpts and service member stories were used to further express and reflect upon these themes and sub-themes.

Social Integration

All service members reported an improvement in their relationships or increased social networks as a result of their participation in recreation and sports. Recreation and sports provided a conduit for two types of social involvement, interactions at home and interactions in the community. Three facets of social integration appeared in the data: (a) building social circles; (b) staff guidance; and (c) improving family relationships. These forms of social relationships provided service members with support and motivation to push themselves mentally and physically within recreation and sport and strive for personal growth.

Building social circles through recreation participation. Service members reported getting out into the community, meeting people, making friends, and gaining mentors during their recreation and sports involvement. After involvement in recreation and sports, service members explained their expanded social networks and new relationships. Social interactions with service members with similar military and traumatic injury experiences created cohesion and camaraderie. Service members reported being motivated by other service members with traumatic injuries by observing their abilities in adaptive sports and recreation. Having support from others within a recreational context, who had similar experiences, provided motivation and resistance to the negative effects of injury such as depression:

... And meeting people that, for lack of a better word, like me, and seeing that they can do it also. It motivates me to try harder, to push harder, a little competitive edge in there. (Adam)

What we got going on here, we got people from England here ... and they are awesome people. And I am glad that I got to meet them. People from other states who are participating in this that I would have probably never met in my life until we got here and just meeting them is great because they are really nice people. And it's people that you would like to keep in touch with [to] see how they are progressing... There are times that a lot of us are gonna be down or depressed. Everybody goes through it. But you keep in touch with them and help push them along ... Give them motivation. It means a lot [more] coming from people who are just like them than someone who does not understand. So this is one great organization, just to get all of us to become friends like a big family. And everyone feels more comfortable with each other, [because] we have all been there, in the same situations. (Bryan)

Staff guidance. All service members mentioned the staff that supported them in their participation in recreation and sports. Service members' desired staff with positive attitudes, the skill and knowledge to teach technique, and who could prepare well-organized recreational events. Supporting staff that were mentioned by service members included recreation practitioners, therapist, coaches, Veterans Affairs doctors, and commanding officers. Many of the service members had their first adaptive recreation or sport experience in the hospital where they were receiving treatment for their injuries. Other service members had staff that worked with them during their treatment that facilitated recreational opportunities by connecting them with recreational events, programs, and other adaptive sport participants. Staff also provided service members with motivation to participate, knowledge of how to participate, and a sense of value during participation.

Relationship with family. Recreation and sports participation played a dynamic role in service members' family relationships as participation in recreation and sports and

family life had a reciprocal relationship. Recreation and sports became a family activity, gave service members the opportunity to be a role model for their family, improved family relationships, and was a bonding factor for families. In turn, families provided participants with the motivation to participate and showed support for their service members during participation in recreation and sports. Service members reported that their families gave them the motivation to participate in recreation and sports and participation provided them with an opportunity to be a role model for their family.

But it was my kids and my family that really made me want to change my life. So I'll get up and run and then you know, get them to participate so they can be healthy also. (Adam)

The biggest difference is, that it has made in my life as far as getting involved in wheelchair sports is, before I was just basically retired, stay-at-home dad (chuckles). You know. And this has given me something I think for my kids to maybe be proud of me about, or whatever, before they couldn't tell what their dad did, now there is something that they can say that I do. They are my motivation. (David)

When asked what aspects of his life were better or worse since his involvement in recreation and sports, Anthony reported that the quality of his family life had increased the most:

I would have to say my family life most, that's been better. You know, my relationship with my wife and my kids has been outstanding ever since I started doing something productive with myself. It has brought my family so much closer than we were.

As described, recreation and sports involvement provided the opportunity for social integration in many areas of life. Service members were able to get out into the community, meet others with similar experiences, gain social support, and strengthen

family relationships. Staff guidance provided supports which enabled successful participation and further supported social integration.

Recreation and Sports as a Tool for Recovery and Enhancement of Health

Regaining and improving health was of great importance to the service members for various reasons. Recovery was expressed in both physical and mental terms and often listed together when discussing the benefits of participation in recreation and sports.

Recovery and enhancement of physical health. Many service members reported a component of being physical as the most valuable aspect of their participation in recreation and sports. Recreation and sports were often reported to be a tool for recovery from injury, a path for becoming healthy and improving physical health, and a platform for physical activity. Physical health benefits mentioned by service members included higher energy levels, smoking cessation, weight loss, and an increase in strength, cardiovascular fitness, immunity, and range of motion. Gaining physical abilities often increased motivation to participate in recreational activities. Nicholas was best able to put the effects on physical health into words. He described participation in recreation and sports as being a form of physical rehabilitation from his SCI. Participation in recreation and sport also increased his motivation to challenge himself physically. As his strength and recreational performance improved, he also saw improvement in his health and his ability to perform everyday activities. These successes in recreation performance and his increased ability to perform daily tasks further encouraged him to enhance his health. He labeled this phenomenon as a domino effect:

Like the first time I threw a shot put, I literally threw it like two feet away from where I was sitting. That is horrid, horrid... But with my nature I was like... 'I got

to get my bum in the gym and get strong, put some muscles on my body and then maybe I can throw further.'... It's like a domino effect. You know you want to do well in one thing [recreation] but you got to do some of the other things to get good. So then you do that. You go to the gym, you live better, you're healthier, you know. And then all of a sudden your day to day activities are easier, like transferring. You know, because you are getting stronger, so you can transfer easy into the shower. Or you can transfer easier into the car or into the bed...And then your range of motion starts getting better so when you are reaching for the shampoo when you are taking a shower and it's easy.

Not all service members recognized recreation and sports as a form of physical rehabilitation from their injury. Other service members acknowledged recreation and sports as a means for recovery of physical health. The source of motivation to become physically healthy and improve upon health varied according to the service member. For example, Adam's near death experience made him realize that he needed to take better care of his health so he could be present to care for his family. Participating in recreation and sports was a way for him to become healthy. As he stated:

Becoming healthy is probably the most important thing, because if I'd died in Iraq, that would have made my family's average of 9 people in 9 years dying. So it was close... So the most important thing for me is becoming healthier, you know, quitting smoking which I did in July and just getting the cardio fitness back up and getting my heart and lungs back to where they need to be so I don't have to leave my kids stuck young.

Participation in recreation and sports was also used as a platform for physical activity. This perspective is different from using recreation and sport as a tool for physical rehabilitation or physical health recovery because physical activity was seen as having intrinsic value instead of a means to acquire health. Many service members indicated the value of being physically active and pushing their bodies within a competitive context. When asked to talk about the most valuable aspect of recreation and sports participation, Ty and Daniel replied:

The most valuable aspect is that I get to get out and be physically active. (Ty)

The fact that we can still do it [recreation and sports]. The fact that we are still able to come out and compete. (Daniel)

Recreation and sport participation was seen as being physically beneficial in many ways. Participation was considered a form of physical rehabilitation to recover from injury, a way to become healthy and improve health, and a platform for being physically active. Service members also talked about the psychological benefits of recreation and sports participation.

Recovery and enhancement of mental health. Many service members talked about their emotional struggles, negative experiences, and coping behaviors associated with their traumatic injury. Participation in recreation and sports was described as having benefits that countered these negative experiences and behaviors and increased positive feelings which alleviated emotional struggles. Psychological benefits included positive self-perceptions/attitudes, decreased depression symptoms, and diversion from dwelling on impairments. Another benefit of recreation and sports that countered negative experiences was the increase in quality of recreation and leisure time which led to the prevention of boredom and negative leisure lifestyles.

Many service members reported positive emotions and attitudes as a result of participation recreation and sports. Positive emotions were expressed in several ways including feeling better and positive self-perceptions. As Anthony stated:

I'm a better person [for participating in recreation and sports]... I wake up in the morning feeling a hundred times better... I think it is mostly a change in myself. It is the way I perceive myself. I'm not negative about myself anymore, so I don't have to be negative towards everyone around me, which just makes things so much easier.

Another service member, Adam, perceived the benefits of positive emotion through recreation and sports as a way to combat his depression. He described training and competing in track as an activity to help him accomplish this and stated that positive feeling from participation helped decrease his depression symptoms.

Service members also discussed being active in their leisure time. Regular engagement in activities was seen as a positive change from inactivity. Time spent being active was used in a meaningful and simulating way, which increased the quality of their leisure time:

I'm not sitting in the house as much, not doing anything.... I'm getting out and doing something... It's like a complete life style change, you get more active and you want to do what you can do. (Adam)

The increase of quality of leisure time promoted positive experiences and provided an alternative to negative leisure which promoted a healthy leisure lifestyle. Nicholas considered an excess of television, video games, and alcohol as negative leisure options and participation in sports as a positive alternative:

So I drove here, I'll compete and then I'll go back home. What a great Saturday, you know. Or you can watch Saturday cartoons all day long and not do anything. You know, I rather do this than not do anything at all... Cause if you don't ever go out and try it, then you are just going to stay home play PlayStation all day and, you know, drink, stuff like that.

When asked what he would be doing if he was not participating in recreation and sports Ty proclaimed:

Exactly! ... What would I be doing? I would be in the apartment like 'Oh my God! Somebody get me a beer.' I'd be drinking.

These statements from the service members show the psychological meaning of recreation and sport participation. Participation provided positive emotions which helped service members feel more positive and have a better attitude toward themselves, others and their injury. Service members were also able to use their leisure time in an active and purposeful way which increased the quality of their leisure time and in some cases, prevented involvement in negative leisure activities.

Moving Beyond Health

Recreation and sports participation was more than just a conduit for health recovery and enhancement, participation moved beyond the concept of physical, mental, and social health, toward optimal well-being by providing opportunities for resilience and personal growth. Service members were able to regain independence and control, show resilience through traumatic injury, and continue the recreation they loved before they sustained their injury. This helped service members assert control, feel competent, and retain a sense of their past self. After traumatic injury, abilities may be altered, which can disrupt previous goals and plans for the future. Participation in recreation and sports provided service members with a way to explore a new future which included achieving successes with their impairment. Service members discovered that recreation and sports participation provided challenges, goals, a way to fulfill potential, and optimism for the future. These may not have been the same goals that they envisioned before their injury but a movement towards new possibilities.

Recreation as a way to show independence, control, and resilience. Service members discussed the value of being independent in their everyday activities and how

this independence affected their lives. Participation in recreation and sports increased the feeling of independence, competence, and control. For example, Charles expressed the mental strife that accompanied the loss of independence following injury while Adam felt a regained sense of control following his participation in recreation and sports:

Most guys are pretty independent, and then the fact that you have to rely on people just to take care of you for a while, it's horrible! (Charles)

I'm not like 'Oh poor me, I can't do anything.' (Adam)

Recreation was used to demonstrate resilience and perseverance through traumatic injury. Resiliency is the ability to positively adapt despite significant adversity (Luthar, Cicchetti, & Becker, 2000). For example, Charles talked about the importance of not giving up and giving into inactivity as a result of traumatic injury. He observed how others reacted to similar traumatic injuries and based on this negative example he consciously chose his attitude toward his injury, which was an attitude of resilience. He emphasized the choice of taking control and being independent despite difficult circumstances:

I've seen other guys, just seen other guys at Walter Reed. They let their disability defeat them, and just not be able to do anything, and I was like I don't want to be like that. I don't want to have people feel sorry for me all the time you know. You have to do things for yourself, not just because you are injured... Sometimes you just got to take it for yourself and just do it.

Participation in recreation and sports was a way to demonstrate ability, resilience, and even triumph over traumatic injury. Being challenged in the context of sports and recreation allowed service members to show they had overcome the physical and mental challenges of traumatic injury. Service members were able to extend their physical abilities beyond the focus of daily functioning to test the limits of their physical and

mental capabilities in the context of recreation and sports. Service members also talked about perseverance through injury and how they derived inspiration from seeing other service members overcoming injury and succeeding in sports. The following quotes reveal how Bryan saw resilience in other injured service members as they participated, which inspired him to participate as well and Ty used recreation and sports participation to demonstrate resilience and challenge his abilities:

I think it is cool to see them [other injured service members] because to see how fast they progressed in their therapy and how fast they got out there and you know went to the Olympics.... You know because, they are just like us and they got in an accident and they got hurt. But the fight inside of you shows that that military spirit never dies. And seeing that is what motivates you. (Bryan)

The first time I tried to wakeboard again my brother was like ‘Come on you are not going to be able to get up on a wake board.’ I got up on my fourth try and I had a beer in my back pocket and when I got up I pulled it out of my water shorts and I cracked it and I slammed it and I turned around and flipped him off. And they were just like ‘Yeah!’ You know, it was great. (Ty)

Participation in recreation and sports gave service members feelings of independence and control after they were able to successfully navigate the physical and mental challenges of recreational activities. Participation also gave service members a way to demonstrate resilience despite adversity. Overcoming challenges experienced in recreation and sports participation gave way to goal setting, realization of potential, and optimism for the future.

Recreation as providing challenges, goals, a way to fulfill potential, and optimism for the future. Goals and personal potential were often realized through the challenges that recreation and sports provided. Participants’ ability to see potential and possibilities for growth created optimism for the future. Service members described the

enjoyment of being challenged in adaptive sports, the process of overcoming challenges to reach full potential, and the recognition of new possibilities:

I really enjoyed the shot put, because that was genuinely hard. I've never really done it before and it is something that you really need to work at to be good at. You can't just pick it up and be good. See that was fun, it was challenging so I enjoyed it. ... [Recreation and sports is] something to look forward to. It's something to work towards. It's a goal. (Daniel)

Just the fact that you find out that you can do something [within recreation and sports], presents the challenge and then you can overcome it, and then you find out that there's something else, and then there is that challenge, and you want to overcome it. So, you just want to work toward doing as much as you can. (Adam)

Being challenged, setting new goals, realizing potential, and gaining optimism within a recreational context showed movement beyond health to optimal well-being and was the basis for personal growth for these service members.

Continuity of leisure and discovery of new interest and abilities. Service members mentioned recreation and sports participation as a means of recreation continuity. Continuity of leisure was an additional way for service members in the study to retain a sense of their past. These service members discussed learning how to continue their participation in recreation and the meaning it had in their lives. In some cases participants rediscovered their abilities.

Just knowing that I am able to do the same things that I use to do before, it's always a good thing, a good feeling. (Charles)

I used to love riding the bike when I was younger, you know, just ride for days. Go hang out and ride bikes... now that they have the hand cycles that I can use, I think that's an amazing event. I could do that you know like I did back when I was younger, which is great. (Bryan)

Chris described how his post-injury swimming experience helped him set goals for the future:

This gives me more things to shoot for, I mean, just now, I knew before that there was a Paralympics swim team, but I have not swam in years and just to get back in the pool and it felt pretty good. So it gives me something to shoot for now and maybe make the team for the 2012 games. (Charles)

Not all of the service members were involved in recreation and sports before their injury. Participation in recreation and sports offered the opportunity for service members to try new activities, compete, and physically challenge their minds and bodies. These challenges facilitated the discovery of post-injury interest and abilities which motivated individuals to become active and set new goals for their future.

It's motivated me do other things like I said before, never in a million years would I have thought that I could do archery or rowing or surfing, or whatever and because of these programs I got out there and they show you all these great sports that put you out there, hands on, and you are just so amazed that you just want to do it. I want to go home and buy a kayak now cause I want to go kayaking out in smooth water. I want to do hand cycling and rowing in the Paralympics, you know. Those are two events that I would love to do. (Bryan)

Continuity of recreation before and after traumatic injury, and the discovery of new activities and abilities, provided service members with motivation to participate in recreation and sports and set goals for their future.

V. DISCUSSION

The present study focused on the experiences of military service members with traumatic injuries within recreation and sports participation and the impact on the recovery and enhancement of their health. The concept of health was based on the World Health Organization's definition, which embraces physical, mental, and social well-being as the summation of health. Results indicated that recreation affected multiple aspects of service member's physical, mental, and social health, which gave value to their experiences within recreation and lasting effects into their everyday lives. Results further

showed that the restorative effects of recreation went beyond health recovery and extended into optimal well-being by contributing to resilience and personal growth. Three main themes emerged related to health recovery and enhancement through recreation and sports participation: (a) recreation as a tool for social integration; (b) recreation as a tool for recovery and enhancement of physical and mental health; and (c) recreation as a tool for moving beyond health.

A previous study has suggested that injured service members experience difficulty with social integration after injury and military service (Resnik & Allen, 2007). As in other studies, (Dustin et al., 2011; Hawkins et al., 2011; Otter & Currie, 2004; Sporer et al., 2009) this study supports that participation in recreation and sports is a context where service members can engage in physical activity and have positive social experiences. Social engagement may not be the service members' primary focus of participation, but it is an inherent part of recreation and sports participation, which helps to facilitate the transition back into social settings. Participation aided in building social circles and social supports through interactions with service members with similar experiences, and in turn, created a sense of cohesion, camaraderie, and a sense of belonging among participants.

The positive social effects of recreation and sport participation were not limited to interactions among participants within the sporting or recreational event. Service members also experienced positive changes in their family and home lives. Families provided service members with motivation and support during their recreation and sports participation. Similarly, participation in organized recreation and sports supported

families by becoming a family activity, improving family relationships, and giving service members the opportunity to be a role model for their family.

This study supported Hicks et al.'s (2003) findings that long term physical activity increases satisfaction with physical functioning and increases perceived health in individuals with traumatic injuries. Participants in the current study reported recreation and sports as a way to rehabilitate from traumatic injury, increase physical health, and be physically active. Regaining physical functioning and physical health through recreation and sport held great significance for the participants by increasing their sense of independence. Physical health improvements and gains in physical functioning assisted them with taking control over their bodies and lives and readjusting after traumatic injury.

In addition, previous literature supports that participation in leisure, recreation, and sports as a positive leisure experience can serve as a buffer from life stressors and offset negative factors of traumatic injury (Caldwell, 2005; Hutchinson et al., 2003; Kleiber et al., 2002). Adaptive recreation and sports programs have also been shown to help decrease PTSD symptoms in service members (Bennett et al., 2014). In the current study, participation in recreation and sports provided emotional support to service members to cope with physical impairments and adjust to traumatic injury. Service members' participation created positive attitudes and self-perceptions because they saw themselves succeeding in tasks which enhanced feelings of competence. This finding agrees with Lundberg et al., (2011) findings in that recreation and sports participation resulted in a

reduction of negative mood states and an increase in perceived competence for injured service members.

Similar to Iso-Ahola and Hayllar (1992), learning leisure skills and avoiding boredom prevented negative leisure behavior which can be a detriment to health. During recreational activities participants were engaged in a meaningful and purposeful task which created a diversion from impairments, increased the quality of their leisure time, decreased boredom, and in some cases prevented negative or undesirable leisure behaviors. Results for this study show that participation in recreation and sports are a way to use time in a physically active manner that is meaningful and fulfilling for the individual which contributes to mental and physical health in many ways.

The final meaning structure “beyond health” expanded beyond the fundamentals of physical, mental, and social health, and contributed to optimal well-being by aiding in resilience and personal growth. This growth experienced through recreation and sports participation suggest the presence of posttraumatic growth in service members. Posttraumatic growth is considered the positive physiological change resulting from traumatic life events (Tedeschi & Calhoun, 2004). Kleiber et al. (2002) suggest that leisure is a resource for self-protective coping and such coping mechanisms lead to self-restoration and possibly personal transformation following negative life events.

Within the “beyond health” theme participants experienced independence, control, competence, and resilience while challenging themselves to fulfill their potential, create goals, and move toward an optimistic new future. This finding supports the proposition from Kleiber et al. (2002) that positive leisure experiences generate optimism

for the future by buffering the impact of negative life events. Positive emotions through these leisure experiences open the capacity for hope and optimism despite adversity. Coleman and Iso-Ahola (1993) contended that leisure experiences that provide individuals with meaning and direction are likely to produce perceptions of control and competence. Regaining feelings of control, competence, and independence contributed to the resilience our participants experienced through recreation and sport participation.

Kleiber et al., (2002) noted that the on-set of traumatic injury called for a relearning of one's boundaries and capabilities and that leisure could help build a continuous life story. Participation in recreation and sports gave our service members the opportunity to discover post-injury interest and abilities. Other service members in the study were able to participate in activities that they enjoyed before their injury, connecting them to their past selves.

Implications for Recreational Therapy

Recreational therapy aims to restore health and help individuals achieve optimal health and wellness through a structured process (Austin, 1998). Recreational therapy goals for service members can focus on treating mental and physical health threats, improving health, promoting social engagement, and enabling personal growth. Participation in recreation and sports led to mental, physical, and social health benefits for service members. Participation also started the process of moving beyond health to optimal well-being. Health benefits and effects that lead to optimal well-being may not occur, or may not be fully realized without continuing engagement in recreation and

sports. Therapists can provide supports necessary to encourage further participation and maximize the known benefits of recreation and sports participation.

As apparent in the interviews, staff can be influential in the service member's connection to recreation. Recreational therapists can be a decisive factor in whether the service member continues participation as a leisure lifestyle or ceases involvement. Essential supports that the therapist can provide are opportunities for recreational activities, knowledge of activity skills, motivation, and networking. Recreational therapists can facilitate recreational opportunities by connecting service members with programs and other adaptive sport participants. It is the recreational therapists' responsibility to ensure the components of successful and sustained recreation are in place. Components include a place to participate, someone with whom to participate, the skills to participate, and the motivation to continue participation. Sharing information about upcoming events can also be a role of the recreational therapist, to insure the service member has an activity to train for, achievable goals to set, and a reason to look forward to the future. A less obvious support that this study revealed was including opportunities for the service members' family to get involved in the recreation or sports activity. This interaction between the families and the service members supported the service members' participation and created circumstances for family bonding. Recreational therapists are encouraged to include family activities in the treatment plan. This may be in the form of having the service member teach their family the activity skills and participating in the recreational activity together.

Study Limitations

One major limitation within the study was the lack of gender variation. In 2009, women made up approximately 8% of the service member population in the United States and they are currently the fastest growing group within the service member population (Department of Veterans Affairs, 2011). The lack of gender variation excludes the important perspective of female service members within recreation and sports. No participants in this study were female, therefore the findings from this study may not apply to injured female service members. The effects of recreation and sports participation on health recovery and enhancement for female service members may require a different approach to providing supports from recreation professionals, but more research on the experiences of female service members is necessary.

Participants in this study provided in-depth narratives regarding the effects of recreation and sport on their health including increases in physical abilities, quality of leisure time, emotional well-being, cohesion and camaraderie amongst participants, and improvements in family life. However, specific health outcomes were not measured in this study. Additional research measuring the effects of recreation and sports participation on physical, mental, and social, aspects of health is necessary. Specifically, quantitative studies employing standardized health outcome measures will further determine the effects of recreation and sports programs on the various aspects of health.

Conclusion

As results indicated, recreation and sports participation contributed to physical, mental, and social health recovery and enhancement and extends to optimal well being through personal growth for injured service members. Regaining function and perceived

health improvements lead to feelings of independence which incited feelings of control and competence. Positive emotions from leisure experiences aided in adjustment and provided hope and optimism. Challenges within recreation lead to achievements which demonstrated resilience and created re-envisioned goals and potential. Given these findings, Recreational therapists are encouraged to increase their awareness of the multi-layered effects of recreation and sports participation on health recovery and enhancement. With awareness and understanding, recreational therapists can make corresponding treatment goals, create appropriate assessment and evaluation questions, and provide the necessary supports to maximize service members' health recovery and optimal well-being during recreation and sports participation.

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Table

Table 1

Participant Demographics

Participant	Age decade	Nature of disability	Time since on-set of injury	Time involved in recreation	Involved in recreation before injury	Combat/ Non-combat related
Adam	20 to 30	Left AKA	3 years	4 months	No	Combat related
Daniel	20 to 30	Bilateral AKA	<1 year	<1 year	Yes	Combat related
Charles	20 to 30	Left BKA	1 year	>1 year	Yes	Combat related
Anthony	20 to 30	SCI, TBI, PTSD	4 ½ years	1 year	No	Combat related
Nicholas	20 to 30	SCI	5 years	4 ½ years	Not specified	Combat related
David	40 to 50	Nerve damage	20 years	9 years	No	Non-combat related
Ty	20 to 30	BKA, TBI, Burns	2 ½ years	2 ½ years	Yes	Combat related
Bryan	30 to 40	Double BKA	>1 year	3 weeks	Yes	Combat related

Note. AKA = above the knee amputation; BKA = below the knee amputation; SCI = spinal cord injury; TBI = traumatic brain injury; PTSD = post traumatic stress disorder

REFLECTION

The intent of this study was to identify and provide understanding of the effects of recreation and sports participation for injured service members. The study specifically looked at the effects on physical, mental, and social health for injured service members. Results revealed the many and varied benefits experienced in all three domains of health through recreation and sports participation. Results further revealed recreation and sports' ability to contribute to optimal well-being through resilience and personal growth. A phenomenological lens was used to investigate perceived effects on health. Van Manen (1990) describes phenomenology as bringing the researcher in "more direct contact with the world" (p. 9). With this "contact" and understanding of service members' realities, practitioners have the ability support positive experiences within recreational services.

The current study provides knowledge and understanding of what service members experience within recreation and sports. From the study we are aware that service members perceived participation in recreation and sports as a path to improving physical health and becoming physically active. Recreation provided positive emotions, diversions from impairment, and an alternative to undesirable leisure life styles. Participating in recreation and sports gave service members a feeling of independence and control which contributed to resilience. Service members challenged themselves physically and saw improvements in their recreation and daily mobility performance which created feelings of success and accomplishment. Recreation and sport participation provided attainment of goals, setting of future goals, discovery of potential, and optimism for the future. Service members reported extra support and encouragement when

participating in recreation and sport activities with other service members. The benefits of recreation and sport participation were enhanced when the service members' families were included through spectating or participating in the activities with their service member.

This study informs not only recreational therapists, but all practitioners working with injured service members. Results assist practitioners in the understanding of complex and multi-layered effects on health that take place during service members' participation. Understanding the effects of recreation and sports participation helps practitioners facilitate and maximize health benefits through program intervention. Recreational practitioners can benefit from the use of this knowledge to be aware of their important and influential role in service members' successful and sustained participation in recreation and sports. Recreational therapists can further use this information to guide the APIE process, improve program effectiveness, and possibly increase goal attainment.

The experience of conducting this study taught me about myself as a student and an individual. In particular, the experience of completing the study taught me about challenges, persistence, and the importance of guidance. Graduate School was the most formidable, intellectual, and enduring challenge I have ever confronted and was compounded by my significant other, being on deployment to Afghanistan. My professor, Dr. Lynne Cory gave me the opportunity to join her in her study of the effects of recreation on injured service members. The idea of studying service members who had been wounded in combat was daunting considering my own connection to the service members. My husband had a long and strenuous battle with PTSD after he returned home

from his first deployment in 2004. After considerable thought I decided to accept Dr. Cory's offer. Little did I know it would be 4 more years, two cross country moves, an internship, and another deployment before I would actually overcome this challenge.

In this time, my thesis seemed to me an insurmountable task that I was not capable of completing. I heard this same struggle with challenges in the interviews of the injured service members. One participant stated "Once you think you can't do it, it's 10 times harder to believe that you can. You need to get the right attitude of that 'this is what I want to do and I'm going to do it,' and then follow through" (Adam). The concept of being challenged was a key aspect in the theme of 'moving beyond health' in my research findings. There are two different outcomes to being challenged: giving up or persisting and overcoming. In my case, to overcome my challenge, it took the supports of knowledgeable and encouraging staff to help me believe I was capable and show me that with small strides forward, large outcomes were possible. The right supports can mean the difference between success and failure. If recreational therapist can provide the right supports, we can set our clients up for success just as I was set up for success as a student. By having the right supports we overcome challenges, and by overcoming challenges we experience personal growth.

As a future therapist, I feel that I have endless possibilities laid out in front of me. I don't want to commit myself to serving one population in one setting because I would be limiting my potential to grow. From this study and other studies I know that recreation and sports participation is a valuable and effective modality for health recovery and enhancement and I plan to use it in some capacity no matter the population or setting with

whom I'm working. From the participant interviews and the experience of completing this study as a student, I know how crucial the right supports can be in getting involved and overcoming challenges. In my future practice I will provide all the supports I can to encourage clients to overcome their challenges, without stifling the opportunities for growth.

Many of the discoveries made during the research process were out of the scope of the research question. I feel that I would be doing a disservice to my participants if I did not mention the valuable insight they shared. The service members gave me a window into their world and shared their struggles and their successes while they talked about the meaning of recreation participation in their lives. I learned that many of the service members did not identify with being disabled. They did not want to be lumped into the category of being disabled regardless of their impairment. One service member stated that he believed disability was a state of mind not a state of the body. Many participants stated that they wanted to be treated like any other able-bodied person. Perhaps, we as a society can adjust the terms we use to describe this population. If a population is forced under a label that they do not identify with, there is likely to be oppression, misperceptions, and inappropriate treatment of that population by the public and public systems. The term "disabled veterans" may no longer convey an adequate message of the needs of injured service members. A more recent term used by the military is "wounded warrior." Further research could consult injured service members on a term that they identify with and could receive services under without being unduly stereotyped. Participants also revealed that being approached by civilians who thanked

them for their service was a very powerful way for injured service member to feel appreciated, respected, and a part of the community.

In today's society the public is more removed from the conflict overseas than any other generation. The public sees very little effects on their everyday lives from this decade long war, creating a gap of awareness of services members' lives and lack of support for service member issues. This study, past, and future studies on service members, brings our attention back to this vital group of men and women who comprise today's all-volunteer force. These individuals with the support of their families, train tirelessly and defend our nation no matter the personal cost. Such studies connect practitioners to the culture of military life and experience and enable us to advocate for programs that support this unique population, to which we owe much of our own personal freedoms. Next time you see a service member, remember to extend your hand in gratitude and thank them for the time, devotion, and sacrifice they and their families have given to serving our great Nation.