Qualitative paper

The Promise of River Running as a Therapeutic Medium for Veterans Coping with Post-Traumatic Stress Disorder

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Abstract

Among the many costs of war, Post-Traumatic Stress Disorder (PTSD) is one of the most insidious. Having volunteered to serve their country in combat, all too many soldiers return home dramatically changed for the worse by the horrors of war. Unlike physical wounds that are readily identifiable and treatable, PTSD is less visible and more resistant to conventional therapies. In this article, we discuss therapeutic recreation's role in improving the lives of veterans coping with PTSD. More specifically, we focus on the promise of river running as a therapeutic medium for treating PTSD. Based on a collaborative pilot project conducted in the summer of 2010 between the Veterans Administration, the University of Utah's Department of Parks, Recreation, and Tourism, and O.A.R.S. (a river rafting company), we identify several areas where therapeutic recreation shows considerable promise in contributing to the healing process. We conclude with a call for an ambitious research agenda to better define the contributory potential of therapeutic recreation in serving combat veterans.

Keywords: *Combat, ecotherapy, nature, post-traumatic stress disorder, river running, therapeutic recreation, veterans*

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The National Institute of Mental Health defines Post-Traumatic Stress Disorder (PTSD) as "an anxiety disorder that can develop after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened. Traumatic events that may trigger PTSD include violent personal assaults, natural or human-caused disasters, accidents, or military combat" (NIMH, 2011). While a variety of people in a variety of contexts experience PTSD, combat-related PTSD is receiving increasing national attention. This is understandable given our country's reliance on a volunteer army to conduct its warfare and a corresponding sense of national obligation to tend to the rehabilitative needs of combat veterans.

The prevalence of PTSD among veterans has been pronounced over the years, ranging from 30.9% for men and 29.6% for women during the Vietnam era (Kulka et al., 1990), to 12.1% overall during the Gulf War (Kang et al., 2003), to 13.8% overall during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) [Afghanistan and Iraq] (Tanielian & Jaycox, 2008). While the frequency of PTSD among combat veterans appears to have diminished over time, a 2008 mental health study conducted by the U. S. Army indicates that multiple deployments of troops characteristic of a volunteer army result in a dramatic escalation of mental health problems—11.9% after a first deployment, 18.5% after a second deployment, and 27.2% after third and fourth deployments (McLeroy, 2008). No matter the military conflict, the incidence of PTSD among veterans is alarming. Consequently, there is an urgent need to better understand PTSD among veterans, how veterans typically are treated for PTSD, the shortcomings of conventional treatment approaches, and the prospects for developing new and more effective treatments.

The purpose of our article is to examine the potential of therapeutic recreation to contribute to the rehabilitative process in the context of an outdoor experience—floating a whitewater river. We begin by briefly reviewing the nature of PTSD among combat veterans and the shortcomings of conventional treatment approaches. We then examine the relevant literature regarding nature's inherent healing properties as well as what the literature says about the prospects for nature-based therapeutic interventions. Finally, we describe a river trip we conducted on Utah's Green River through Dinosaur National Monument with a group of 13 veterans (10 men and three women) coping with PTSD. Based on the findings of that trip, we conclude by outlining a research agenda to further examine river running's promise as a therapeutic medium for veterans coping with PTSD.

Understanding PTSD

Post-traumatic Stress Disorder (PTSD) was first recognized by the American Psychiatric Association as a diagnosable condition in 1980 when it was introduced into the *Diagnostic and Statistical Manual of Mental Disorders,* Third Edition (American Psychiatric Association, 1980).

Three categories of symptoms typically develop following exposure to a traumatic event: 1) re-experiencing; 2) avoidance and numbing; and 3) hyperarousal. Each of these symptoms is distinct and affects different areas of psychological functioning.

The first cluster of symptoms, re-experiencing, refers to the persistent emergence of thoughts and feelings associated with the traumatic event. These include intrusive images, distressing nightmares, acting and feeling as if the event were occurring again, and psychological distress and/or physiological reactivity when confronted with reminders of the traumatic event (American Psychiatric Association, 2000).

The second cluster of symptoms, avoidance and numbing, involves both the persistent avoidance of stimuli associated with the trauma, and the numbing of general responsiveness in ways uncharacteristic of the individual prior to the trauma (American Psychiatric Association, 2000). Examples of avoidance include efforts to keep one's self from coming into contact with thoughts, feelings, conversations, activities, places, or people that remind the individual of the trauma. Symptoms of numbing include the inability to remember aspects of the event, decreased interest in pleasurable activities, feelings of detachment from others, restricted range of affect, and a sense of shortened future.

The final cluster of symptoms is hyper-arousal. This category refers to persistent symptoms of increased physiological arousal that were not present prior to exposure to the traumatic event. Examples of hyper-arousal include sleep difficulties, irritability, anger, difficulties concentrating, hypervigilance, and an exaggerated startle response (American Psychiatric Association, 2000).

PTSD is caused by a wide range of occurrences that can be grouped into three general categories: intentional human, unintentional human, and acts of nature (Schiraldi, 2000). The intentional human category is the most difficult to recover from and is described as "malicious and deliberate man-made events." These types of incidents are the most degrading and cause the most shame. The unintentional human category describes events such as accidents and technological disasters, while acts of nature are rated as the least complex and can be resolved more quickly than reactions generated from the other two categories (Schiraldi, 2000). The intentional human category befits combat veterans not only because they themselves are victims of intentional trauma, but because they have often perpetrated their own share of intentional trauma on others.

PTSD rarely occurs as a sole diagnosis (Adshead, 2000). Some of the most common conditions co morbid with combat-related PTSD are depression (Goodwin, 1987), substance abuse (Donovan, Padin-Rivera, & Kowaliw, 2001; Vieweg et al., 2006), and physical injury (Hoge et al., 2008). The association between these conditions and PTSD presents a daunting challenge to clinicians and patients seeking effective treatment options (Donovan et al., 2001) since "co morbid disorders not only complicate treatment but in some cases might also exacerbate PTSD itself" (Foa et al., 2000, p. 546).

Shortcomings of Conventional Treatment Approaches

Psychological treatment administered in the immediate aftermath of trauma, commonly known as "crisis intervention" or "debriefing," has been described in several studies as ineffective (Foa & Meadows, 1997; Foa et al., 2000; Stein, Kerridge, Dimsdale, &

Hoyt, 2007). This inefficacy may largely be due to the patient's still active state of shock and a focus on physical health. Combat veterans have a significantly increased probability of severe injury or disfigurement as compared to other trauma survivors (Grieger et al., 2006). Since the start of OIF and OEF, for example, head, neck, and brain trauma have been reported in one in four deployed troops, making traumatic brain injury a signature wound of OIF and OEF combat veterans (Hoge et al., 2008). Given the higher probability of severe bodily injury in soldiers with combat-related PTSD, the primary focus of both the patient and the medical staff is physical recovery and pain management rather than treatment for psychological trauma (Stein et al., 2007). This is especially so in cases of severe disfigurement, amputation, or mobility limitation. In such cases, immediate treatment following a combat-related incident requires that the patient's acute physical injuries be stabilized to increase the likelihood of survival. Unfortunately, this may result in a delay of psychological treatment until a much later date.

Most longer term combat-related PTSD programs employ an eclectic treatment approach that includes supportive counseling, exposure to trauma-related stimuli, relaxation training, and skill building components intended to assist patients in symptom management" (Donovan et al., 2001). In this regard, Adshead (2000) reports that patients treated with a combination of psychotherapy and pharmacotherapy experienced more pronounced symptom improvement. Meta-analytical studies of psychological treatment efficacy in PTSD, however, have yielded inconsistent findings. Some studies have found that psychological therapies are more effective than pharmacotherapy (Adshead, 2000), while others reveal significant PTSD resistance to psychotherapeutic treatment (Vieweg et al., 2006).

Adding to the difficulty of establishing effective treatment programs for PTSD is the stigmatization associated with the disorder. In a study by Lapierre et al. (2007), only 16% of OIF and 13% of OEF veterans with PTSD sought help for their symptoms. Hoge et al. (2004) report that the military's unique culture discourages seeking help. Soldiers with PTSD fear how they will be perceived by their fellow soldiers and commanding officers. Moreover, troops that scored highest for mental health disorders were twice as likely to fear being stigmatized (Hoge et al., 2004). Wright et al. (2007) also implicated the military culture in their findings. Of the soldiers who reported suffering PTSD, few admitted to the functional impairment criterion of the diagnosis, which may be viewed as incompatible with continued military service.

What is commonly missing from these treatment approaches is a focus on healthy lifestyle behaviors that can facilitate a transition back into civilian life (LePage & Garcia-Rea, 2008). The stigmatization associated with clinical treatment for PTSD and the general reluctance of many combat veterans to seek assistance in traditional medical settings also suggest the need to develop alternative treatment approaches that are not associated with hospitals, rehabilitation centers, or other clinical settings. In a recent study reported in the *American Journal of Drug and Alcohol Abuse*, for example, 97 homeless veterans with substance dependency were evaluated. The veterans recorded their

recreational, social, coping/spiritual, and substance recovery activities. Results revealed that higher numbers of "Healthy Lifestyle Behaviors" (HLBs) were directly associated with lower relapse rates. The researchers concluded that "Beyond traditional recovery behaviors, three major domains of Healthy Lifestyle Behaviors have been identified: leisure/recreation, social/family, and coping/spiritual" (LePage & Garcia-Rea, 2008, p.171), and that these HLBs were better predictors of healing than recovery behaviors.

A Role for Therapeutic Recreation

Treating the whole person is a particularly appropriate charge for therapeutic recreation professionals. Therapeutic recreation programs can provide a more balanced approach to the rehabilitative process, enhancing or even replacing many other forms of treatment. According to the U.S. Department of Veterans Affairs (2009), the goal of the recreational therapist is to:

> …provide treatment services and recreation activities to individuals with disabilities, illnesses, or other disabling conditions … to treat or maintain the physical, mental, and emotional well-being of clients … and…reduce depression, stress, and anxiety. They also help individuals recover basic motor functioning and reasoning abilities, build confidence, and socialize effectively to enable greater independence … reduce or eliminate the effects of illness or disability … and … help integrate people with disabilities into the community (p. 1).

Instead of focusing solely on mental health, the recreational therapist is concerned with assisting the client in discovering how her or his own interests and activities can promote healing. In this case, the professional challenge is to better understand how outdoor recreation can serve as a context for such therapeutic discoveries. This requires examining what the literature says about nature's inherently restorative power as well as what the literature says about the prospects for nature-based therapeutic interventions.

Nature as Co-Therapist

Therapy has traditionally been viewed as a human-to-human process practiced within the confines of a building. Ecotherapy proposes that personal health and healing are directly related to the health of the natural environment (Buzzell & Chalquist, 2009). Therapy thus becomes a three-way relationship between the client, therapist, and nature, where nature itself is considered a co-therapist and educator (Clinebell, 1996). The therapeutic process is seen as a continuum moving from ill-health to well-being and progressing through three main stages: 1) raising consciousness of an individual's place in the natural world and dependence on that world; 2) encouraging the individual to transcend her or his own personal problems and develop a sense of being part of a bigger "whole," thus allowing spiritual awareness of a relationship with the natural world; and 3) developing a self-directed need to be caring and to preserve and respect the natural world and develop a lifestyle that will aid in this process (Burls, 2007).

Nature thus becomes a sanctuary for the healing process, partially because it is nonjudgmental. Nature can receive all of a client's pent-up emotions and energies, no matter how raw or primitive. If therapeutic interventions are combined with nature's healing power, perhaps therapeutic recreation can expand its scope of practice and impact. Incorporating nature into the therapeutic process this way allows the clinician to draw from any number of therapeutic approaches and use them in conjunction with nature. Meanwhile, nature's overarching lesson that everything is cyclical puts an individual's singular ego-centered stories into a bigger perspective (Howe-Murphy & Charboneau, 1987).

There is increasing evidence of nature's positive impact on human well-being (Kaplan, S., 1995; Kaplan & Kaplan, 1989). Indeed, there is now general consensus within the scientific community that access to, and utilization of, nature in conjunction with therapeutic interventions can promote and maintain both mental and physical health (Sneep, 2007). Scientific studies have examined humankind's relationship with the natural world in ecology, biology, leisure studies, environmental psychology, and medicine. Researchers have come to the conclusion that humans are dependent on nature not only for material goods (e.g., food, water, and shelter), but just as importantly for satisfying psychological, emotional, and spiritual needs (Burls, 2007).

How dependent humans are on nature, and what kinds of benefits can be gained from interacting with nature, are questions researchers are just beginning to investigate, but there is mounting evidence to suggest that an ecological approach emphasizing immersion in nature can promote and maintain mental health (Burls, 2007). The employment of nature-based therapy in this way challenges the dominant worldview of Western science that humans are separate from nature. Therapeutic recreation programming based on ecological theory is the intentional use of nature as a treatment intervention (Scholl, Dieser, & Davison, 2005).

Working with nature thus adds another variable to the therapist-client relationship; that is, the role of nature itself in therapeutic change (Jordan, 2009). This falls into two categories: passive receiving of the healing and restorative beauty of nature, and active engagement whereby therapy is conducted utilizing the resources of the natural environment as in adventure, wilderness therapy, and ecotherapy (Jordan, 2009). By incorporating nature into therapy and therapy into nature, the therapeutic process becomes a relational phenomenon, not only to other humans but also in relation to the natural world itself. By working in a relational way with nature, new internal landscapes begin to emerge in interaction with the natural external landscape which reflects, sustains, challenges and supports the individuals on her or his therapeutic journey (Jordan, 2009).

Nature-Based PTSD Studies

To date, little research has been conducted on nature-based outdoor recreation experiences for veterans coping with PTSD. In a 1996 Outward Bound study, 219 inpatient veterans diagnosed with PTSD participated in a five-day outdoor adventure experience.

Adventure experiences were defined as experimental challenges, outdoor adventure pursuits, therapeutic camping, and/or wilderness therapy. Following their experience, participants rated it by responding to questions specifically designed to measure trust, positive affect, empowerment, and perceived control over depression. Results of the study reflected five reported areas of impact: 1) increased positive feelings and perceptions of self-esteem and self-confidence, and feeling able to accomplish more physically; 2) the ability to enjoy life again; 3) rediscovering enjoyment in the outdoors, a setting that many had not enjoyed since the war; 4) overcoming negative emotions and being more in control; 5) and enhanced relationships with others, as observed by the facilitators (Hyer, Boyd, Scurfield, Smith, & Burke, 1996).

An earlier study of PTSD treatment was conducted at the U.S. Department of Veterans Affairs Medical Center in Salem, Virginia. This program utilized a short-term, intensive treatment approach, incorporating adventure-based counseling and psychodrama as components of inpatient treatment. Multiple levels of psychological function were assessed by administration of several survey instruments prior to and immediately following treatment. Responses of 24 inpatients who were participating in the program were compared with responses of 24 patients who were on a list awaiting entry into the program. All treatment and waiting list comparison group subjects received weekly PTSD outpatient group therapy. Results indicated that in the inpatient treatment group there were significant declines in feelings of hopelessness, guilt and shame, loneliness, and emotional expressiveness. The non-treatment subjects reported no positive changes in any area of psychological function. (Ragsdale, Cox, Finn, & Eisler, 1996).

The emerging themes drawn from these recreation-based studies include: acceptance of the diagnosis of PTSD and its secondary symptomology; enhanced understanding of implications and on-going effects of PTSD on the lives of veterans; improved adjustment to the diagnosis through modifications or changes in leisure lifestyles; perceptions of limited opportunities open to veterans within the community; primary reliance on other veterans as close friends and associates; loss of the ability to be happy; and not being clear about what leisure actually entails (Kleiber, Hutchinson, & Williams, 2002). In sum, more research is needed to better document the therapeutic benefits of nature-based outings for veterans with PTSD.

A Collaborative Pilot Project

Method

Based on mounting scientific evidence that experiences in nature can have restorative effects on the human psyche (Kaplan & Kaplan, 1989; Kaplan, 1995), the University of Utah's Department of Parks, Recreation, and Tourism sponsored a four-day river trip on the Green River in Dinosaur National Monument in the summer of 2010 for 13 veterans coping with PTSD. The trip was supported by O.A.R.S., a river rafting company, and the Veterans Medical Center in Salt Lake City.

The Veterans Administration professional staff, consisting of therapeutic recreation specialists, psychologists, and social workers, selected the veterans

to go on the trip based on the anticipated therapeutic benefits the trip might have for them. The veterans included ten men and three women coping with PTSD who served in Vietnam, Central America, Iraq, Afghanistan, and other remote locations throughout the world at various times since the 1960s. Six staff members from the Veterans Medical Center (three recreation therapists, a psychologist, a social worker, and a nurse), four faculty members from the University of Utah's Department of Parks, Recreation, and Tourism, and seven O.A.R.S. river guides accompanied the veterans on the trip, resulting in a total of 30 trip participants.

The flotilla consisted of five oar boats, two paddle boats, and two inflatable kayaks. The trip embarked at the Gates of Lodore in Colorado and disembarked three days later at Split Mountain campground in Utah. Each day was marked by arising at dawn, breakfast, dismantling camp, a morning float, lunch, an afternoon float, setting up camp, day hikes, dinner, and an evening campfire with time for reflection, music and song. By design, we wanted to see what impact the river, and in a larger sense, nature, had on the veterans. There were no formal therapy sessions and no structured conversations about PTSD. We did not intend this to be a "clinic in the woods." On the contrary, we encouraged the veterans to relax, enjoy the Green River, and otherwise soak up the scenery—in other words, to take in nature without forethought or afterthought of intended or expected outcomes.

We instructed the veterans to keep a journal and to record whatever thoughts seemed important to them throughout the trip. We also told the veterans we would collect their journals upon conclusion of the trip, read the journals for their insights, and report those insights while maintaining the veterans' privacy. The Veterans Administration staff and University of Utah faculty members were also instructed to record their observations of the veterans on the trip for subsequent review. Upon conclusion of the trip, the veterans' journals were collected, analyzed by the Veterans Administration staff and University of Utah faculty members, and then returned to the veterans. The recorded observations of the Veterans Administration staff and University of Utah faculty members were also collected and reviewed for triangulation purposes.

It is important to reiterate the exploratory nature of what we are reporting here. The purpose of the pilot project was to generate research questions, not to answer them. With the veterans' assistance, we gathered anecdotal observations and reportings, and then interpreted them after the trip via a series of meetings involving the Veterans Administration staff and University of Utah faculty members who were present on the river trip. We were looking for recurring themes in the observations and reportings. The challenge then became one of tying those themes to the extant PTSD literature and identifying future research needs to further examine the promise of river running as a therapeutic medium for veterans coping with PTSD.

Results and Discussion

We first examine the results of this pilot project through the lens of PTSD symptomology. Recall that three cat-

egories of symptoms typically develop following exposure to a traumatic event: 1) re-experiencing; 2) avoidance and numbing; and 3) hyper-arousal (American Psychiatric Association, 1980).

Re-experiencing. Re-experiencing refers to the persistent emergence of thoughts and feelings associated with the traumatic event. These include intrusive images, distressing nightmares, acting and feeling as if the event were occurring again, and psychological distress and/or physiological reactivity when confronted with reminders of the traumatic event (American Psychiatric Association, 2000). The veterans on this trip reported that re-experiencing occurred at various times and places along the Green River's corridor. The terrain reminded one woman of Iraq. Another man continually scanned the horizon for the enemy. One veteran with sleep apnea hardly slept at all, because he left his CPAP machine at home. Still others expressed a general discomfort in sleeping out on the ground. Yet these symptoms dissipated as the veterans acclimated to the river experience. Indeed, almost all of them reported a sense of peace and relaxation on the trip, especially after the first day or two on the river:

> I've been having some trouble at home living with my brother. I have a lot on my mind about all that. This trip has been so nice to just get away and give us a break from each other. It's been a riot, couldn't be better. These veterans deserve the world after what they've been through. I don't think my brother understands that these men and women served their country for his freedom. That just gets me so mad when I think about it. But out here, I'm surrounded by other veterans who get it, you know? Each of these people went through hell, me included, and it's about time they are able to take a little relaxing break away on a river.

Avoidance and numbing. The second cluster of symptoms, avoidance and numbing, involves both the persistent avoidance of stimuli associated with the trauma, and the numbing of general responsiveness in ways uncharacteristic of the individual prior to the trauma (American Psychiatric Association, 2000). The veterans' journal entries included several references to ways in which the river trip permeated the "numbing" and led to a feeling of greater engagement with the here and now.

Settling in to "river time" and "living in the moment" were oft repeated descriptions of the soothing effect that came from acclimating to the river's steady downstream flow:

> I came out here to practice what my psychologist is teaching me. She says I need to learn to 'live in the moment.' That's my only goal for this trip. I keep practicing it wherever we are, especially if I'm feeling anxious. So my job at camp when I'm waiting for everyone else and I'm ready to go on the raft is just to wait and watch the trees and the clouds. That's all that's required of me.

Paddling the kayaks and boats also seemed to serve as an antidote to avoidance and numbing. Successfully negoti-

ating Disaster and Triplett Falls, as well as many lesser rapids, heightened feelings of self-efficacy and recharged the veterans' batteries for dealing with life's everyday challenges:

> It especially happened when I was in the solo kayak. It was a spiritual experience for me. I felt connected to my Higher Power through the river. This is the best time I've had in many years. I'm going to tell my friends and family all about it. I haven't had this level of fun in a very long time. Boredom is one of my main triggers. I feel motivated to want to get in better shape, maybe exercise better. Maybe I'll eat better, too. I feel motivated to make some good changes in my life that I always just talk about.

Campsite socializing was an additional highlight of the trip. Pitching horseshoes and tossing oversized washers into tin cups burrowed into the sand provided a playful context for small group interactions, congenial conversations, and good-natured ribbing. Client/clinician relationships metamorphosed into friendships bonded by the shared river experience, and the four-day adventure brought with it a sense of normalcy for many of the veterans that was absent in their everyday lives. As one of them remarked in a post-trip letter, "the trip made me realize that I could experience joy again."

Hyper-arousal. This category refers to persistent symptoms of increased physiological arousal that were not present prior to exposure to the traumatic event. Examples of hyper-arousal include sleep difficulties, irritability, anger, difficulties concentrating, hyper-vigilance, and an exaggerated startle response (American Psychiatric Association, 2000). Several participants reported less of a need to take their medications on the trip:

> At home I usually take anxiety pills and sleeping pills at night. Out here, I haven't had to take either one. The music around the campfire was enough to lull me right to sleep. And we are so active during the day with rafting and hiking and such that I have no trouble going to sleep at night. That makes me very happy.

Based on this anecdotal evidence, it appears as though the river trip reduced PTSD symptomology. Re-experiencing diminished over time, avoidance and numbing were replaced with joyful involvement in the trip's downstream progress, and hyper-arousal was counteracted by the fatiguing effects of heightened physical activity and peaceful surroundings. The research challenge is to better specify the importance of the natural setting vis-a-vis, or in combination with, the activity occurring there.

Ecotherapeutic Considerations

The results of this pilot project also shed some light on the ecotherapeutic process as a continuum moving from ill-health to well-being and progressing through three main stages: 1) raising consciousness of an individual's place in the natural world and dependence on that world; 2) encouraging the individual to transcend her or his own personal problems and develop a sense of being part of a bigger "whole," thus

allowing spiritual awareness of a relationship with the natural world; and 3) developing a self-directed need to be caring and to preserve and respect the natural world and develop a lifestyle that will aid in this process (Burls, 2007).

While it would be naïve to conclude that a four-day river trip on the Colorado/Utah border resulted in a life-changing attitude adjustment for veterans coping with PTSD, their anecdotal reports do suggest that the seeds for such change may have been sown on the trip. Nature's healing power was evident on the Green River. Paraphrasing novelist Sherwood Anderson (Anderson, as quoted in Stegner, 1997), interacting with the bigness outside them allowed the veterans to reconsider their place in the vast scheme of things and put their own individual lives in perspective. Immersion in nature leads to self-reflection and introspection. It provides a "time out" from everyday stressors and as well as breathing room in which to contemplate one's own circumstances in relation to everything else (Howe-Murphy & Charboneau, 1987).

Many of the veterans also talked about the Green River in metaphorical terms. They understood that the river flows continuously, just like their lives. While there are obstacles along its course, hazards that can grab them, hold onto them, and sometimes do them in, the current, like life itself, carries them into the future. Their challenge, as they saw it, was to find a path down the river as free as possible of hazards, but when mistakes were made or when hazards were unavoidable, the challenge was to draw on their inner strengths to negotiate them.

One of the veterans recited a popular saying among boaters that he thought could be applied to the general conduct of his life:

> The more you look at the rock, the bigger it becomes. The bigger it becomes, the harder it is to avoid. Keep your focus downstream and on the opportunities rather than on the obstacles. Boating is a lot like life. Focus on where you want to be rather than on where you don't want to be. Recognize the rock in the river but don't focus on it. Focus on the clean run and put all of your energy into accomplishing it (anonymous).

For this veteran, and for others paddling boats and kayaks, this saying seemed to have literal and figurative significance.

The anecdotal evidence highlighted here points to the promise of the ecotherapeutic process as a three-way relationship between the client, therapist, and nature, where nature itself is considered a co-therapist and educator (Clinebell, 1996). It appears to provide a promising context for healing:

> I've been on the verge of suicide for many reasons. I have been a musician since I was a kid. I've mostly played piano and guitar, but for over three years I haven't picked up an instrument. I even ripped out the radio in my car. Why? Sadness. Just too much sadness. I just was too sad and too angry to hear music. My wife pushed me to come on this trip and told me to have some fun. I'm afraid of water, but I de-

cided to come anyway. After falling out of the kayak in the rapids and not getting hurt, my fear of water just kind of left me. Also, before we even got off the bus on the first day, my recreation therapist handed me a guitar and pretty much just told me to play. . . . I was rusty, but I played. And you saw me. By the last night I was playing every song I ever knew on that guitar. This trip brought music back to me. I didn't expect that, of all things, to happen from a river trip. I want very badly to take music from this week and let it live in my life again. I'm so excited to share all this with my wife. I'm so grateful she forced me to come. I'm so grateful I met people who are real and genuine. The sadness I've felt for three years has been alleviated these four days. I feel amazing and fun and carefree, like I used to feel before serving in Iraq. I know when I go back home, all the worries and cares will come back again. I just hope something from all this sticks.

Recommendations for Future Research

Although the Green River trip was designed primarily to assess nature's impact on veterans coping with PTSD, we gathered enough anecdotal evidence floating the river in the form of the veterans' journal entries, conversations among trip participants, observations by professional staff (including recreational therapists, psychologists, social workers and faculty members), and post-trip meetings to identify several promising themes for future research. These themes closely resemble Hyer et al.'s (1996) themes and can be categorized as aspects of the river running experience that appeared to 1) reduce PTSD symptomology (re-experiencing, avoidance and numbing, and hyperarousal); 2) enhance coping skills; 3) build self-confidence and self-efficacy through the acquisition of river running skills; 4) offer a non-judgmental backdrop for exploring sensitive issues related to the trauma experienced by the veterans; 5) provide a novel context for putting veterans' lives in perspective relative to their relationship to the larger world; 6) provide a social context for veterans to experience camaraderie outside of clinical settings; 7) provide an appealing outdoor context within which to experience a sense of normalcy in veterans' lives; 8) allow veterans with PTSD to experience joy again; and 9) provide an opportunity for spouses and significant others to see veterans in a positive, nurturing light. Considered collectively, these themes all contain researchable questions, the answers to which we believe would be extremely helpful to therapeutic recreation professionals serving veterans coping with PTSD.

We also think it is important to recognize what may be the futility of attempting to separate out all the variables for analysis that are likely at work in the ecotherapeutic process. Acknowledging what Clinebell (1996) describes as a three-way relationship between the client, therapist, and nature, where nature itself is considered a co-therapist and educator, it is often difficult to determine whether it is nature, the therapist, the client, a specific intervention or activity, or all of them in combination, that explains any particular therapeutic outcome. There is a complexity in the ecotherapeutic process that defies reductionism.

Conclusion

Therapeutic recreation service appears to be well-suited to contribute to the rehabilitation of veterans coping with PTSD. The stigmatization associated with clinical treatment for PTSD and the general reluctance of many combat veterans to seek assistance in traditional medical settings suggests that therapeutic recreation services in community-based settings may be a more attractive treatment approach. LePage and Garcia-Rea's (2008) conclusion that "healthy lifestyle behaviors" focusing on leisure and recreation, the family, and the coping and spiritual aspects of life result in lower relapse rates among veterans also points toward the possibility of greater treatment efficacy in non-clinical settings. As the U. S. Department of Veterans Affairs (2009) avows, therapeutic recreation professionals are particularly well-positioned to facilitate combat veterans' transition back into civilian life. The anecdotal evidence presented in this pilot project supports that conclusion. The research challenge is to demonstrate that promise in a more formal and structured way.

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