



Science

FINDINGS

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"Science affects the way we think together."
Lewis Thomas

Beyond the Battlefield: Public Lands as Healing Spaces for Military Veterans



A military veteran expedition in the Blue Ridge Mountains. Photo courtesy of North Carolina Outward Bound School ©2020.

"In nature, nothing is perfect, and everything is perfect. Trees can be contorted, bent in weird ways, and they're still beautiful."

—Alice Walker, author and activist

In 1948, Earl V. Shaffer became the first person to hike the entire 2,190 miles of Appalachian Trail since its completion in 1937. The World War II veteran famously claimed he did it "to walk the war out of my system." In the 1960s, Outward Bound offered

one of the first programs specifically designed for military veterans, which often took place in national forests and parks.

The idea of nature as healing and restorative is not new, but in the past decade the concept has received renewed attention. As investment in scientific research to evaluate the effectiveness of nature-based therapy for reducing stress and trauma symptoms has grown, so too has the number of programs serving veterans.

"We know that a lot of the nature that can be so beneficial to people's health exists on public lands, so there's a lot of opportunity

IN SUMMARY

A growing body of evidence shows that nature-based therapy can help reduce stress and trauma symptoms. In recent years, the number of outdoor programs for veterans who experience post-traumatic stress has grown. These programs engage with public lands—both practically and symbolically—to create opportunities for transformative personal and professional experiences for veterans. Yet, there is little understanding about the diverse social, therapeutic, geographic, and activity dimensions of these programs on public lands, or how they are coordinated within and across agencies.

To shed light on the role that public land management plays in providing outdoor experiences for veterans, Lee Cervený and Monika Derrien, scientists with the U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, collaborated with David Havlick at the University of Colorado at Colorado Springs. The scientists interviewed public land managers, outdoor program providers, program participants, researchers, and health professionals. They also analyzed program providers' online promotional materials.

Public land managers can use this information to support healing for military veterans and others who are recovering from trauma. The scientists shared their insights about the diversity of program models and partnerships found in the United States with leaders from organizations working in Ukraine that support veterans and others affected by war.



A ropes course for military veterans in North Carolina. Photo courtesy of North Carolina Outward Bound School ©2020.

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there,” says Monika Derrien, a research social scientist with the U.S. Department of Agriculture, Forest Service, Pacific Northwest (PNW) Research Station.

“Whether it’s wilderness or another natural setting that inspires awe, program providers really value national forests and other public lands for their healing attributes,” says Lee Cervený, also a research social scientist with the PNW Research Station.

Cervený and Derrien, who both study the human dimensions of natural resource management (including people and their relationships to nature) teamed up with David Havlick, a geographer at the University of Colorado at Colorado Springs, which supports a large military student body. The three set out to explore outdoor programs for veterans

from the perspective of public land managers. Few studies have explored the role that public land management plays in providing outdoor experiences for veterans, including how such programs are coordinated within and across agencies; what types of activities are offered; and the diverse social, therapeutic, and geographic dimensions of outdoor programs that are available to veterans.

The trio of scientists assessed the range of experiences offered by outdoor programs for veterans on public lands. They interviewed public land managers, outdoor program providers, program participants, researchers, and health professionals to identify obstacles and opportunities for accessing programs on public lands and to evaluate how well programs serve diverse veterans. Their analysis of the information they collected yielded insights that may be helpful to those wanting to develop or improve partnerships among veterans’ groups and public land managers. These partnerships could support healing for military veterans and others who are recovering from trauma.

What Makes a Landscape Therapeutic?

Key to health care is an environment in which physical and mental healing can take place—a therapeutic setting. Just what defines an outdoor place as therapeutic is hard to put a finger on because settings vary, and experiences can be subjective. A place that is relaxing and comforting to one person may feel unsettling to another.

“Places are not necessarily therapeutic in and of themselves,” Havlick says. “What creates therapeutic experiences is how people, other living things, and the surroundings interact.”

In other words, what makes a landscape therapeutic comes down to a combination of people, location, nature, and experience.



The Greatest Generation sculpture, shown here, is one of 13 installations honoring veterans in the Living Memorial Sculpture Garden in the Klamath National Forest. The garden is maintained by the local Kiwanis Club in partnership with the USDA Forest Service. USDA Forest Service photo.

Five transformative qualities can improve quality of life for veterans through programs on public lands: restoring, caretaking, volunteering, skill building, and serving to protect. Restorative experiences can help manage stress or trauma through outdoor experiences. Caretaking activities, such as cultivating native plants or restoring habitat, can promote healing. Volunteer work to protect public places offers a way for veterans to continue public service. Employment programs that develop skills through outdoor work can build confidence and help to ease the transition to civilian life. Work programs, like the Veterans Fire Corps, that include physical labor and protecting communities and natural resources may have meaningful parallels to military service. As one interviewee in their study said, “Put down the gun and pick up the chainsaw.”

Commemoration through monuments, gardens, grave sites, historic battlefields, or living memorials on public lands are meaningful ways to honor veterans’ service and sacrifices, with the added benefit conferred by natural settings. Connections between public lands and military service can also be symbolic and deeply personal. As one program provider said, “I think it’s one of the winning messages of public lands: ‘Look, what we fought for was these lands, right?’”

Understanding the dynamics that create healing experiences in nature as well as the diversity of programmatic offerings can help public land management agencies design programs and permitting systems that benefit veterans. The study team identified seven main types of existing formal outdoor programs for veterans:

- Supported activities, such as long-distance hiking.
- Guided activities, such as fly fishing or whitewater rafting.
- Retreats for relaxing or doing outdoor activities.
- Job training programs, such as trail building or wildland firefighting.
- Public service or environmental stewardship, such as disaster relief or riparian restoration.
- Plant-oriented care, such as horticultural therapy.
- Animal-assisted therapy.

Aspects within each program type can vary, including the amount of physical activity as well as the duration and frequency of the experience. This variation is important for meeting the needs of diverse participants.

KEY FINDINGS

- Outdoor programs for veterans represent an important and increasingly well-established set of opportunities for therapeutic experiences on public lands. Public land management agencies are already instrumental in serving veterans directly and indirectly through partnerships or permits for external operators, such as outfitters and guides.
- Components of therapeutic landscapes include social connections, natural surroundings, physical activity, the duration and frequency of the experience, some form of therapeutic activity, as well as land management policies and practices.
- Seven existing types of outdoor programs for veterans include supported outdoor activity; guided outdoor activity; retreat; outdoor job training; stewardship or service; horticulture, farming, or gardening; and animal-assisted therapy.
- Despite intentions to increase participant diversity, marketing materials featured predominantly white, male, able-bodied veterans.

*A canoe expedition for veterans in Florida.
Photo courtesy of North Carolina Outward Bound School ©2020.*



Barriers to Access

Looking through a lens of diversity, equity, and inclusion reveals gaps among who is (and is not) served by outdoor programs for veterans on public lands. In addition to interviews, the scientists also analyzed content on program provider websites. They scrolled through numerous images and videos to evaluate how inclusivity and diversity are communicated. The evidence suggests that most programs do not represent participants outside of the typical white, male, able-bodied demographic.

No websites presented images that were predominantly female. However, one interviewee said their organization had been able to increase female participation from 1 to 30 percent by making a focused appeal

to women. Women, gay, lesbian, or gender non-binary veterans with posttraumatic stress disorder (or who have experienced military sexual trauma) may require specialized supportive programming, especially given the history of discrimination in the military.

Veterans of color were not well represented in the promotional materials. Only one site contained images that were predominantly people of color. This demographic may face cultural as well as practical barriers to participation. Some public lands that host veteran outdoor programs may be associated with cultural legacies that leave participants feeling alienated or excluded. More intentional efforts to promote diversity and inclusivity could help create space for people whose identities may not traditionally be associated with outdoor experiences.

Help for Ukrainians Affected by War

In 2023, the USDA Forest Service International Programs partnered with Metta, a Ukraine-based nongovernmental organization (NGO), to host the Ukraine Nature-Based Therapy Symposium. More than 200 participants, which included trauma therapists, nature-based therapy experts, NGOs, veterans, and community groups attended the virtual meeting. Research presented by Lee Cervený and Monika Derrien, research social scientists with the USDA Forest Service, Pacific Northwest Research Station, prompted discussion about how outdoor programs for U.S. military veterans could be adapted to work in Ukraine.

Forest Service International Programs program manager Bella Gordon says the collaboration with Metta has resulted in several different types of outreach and training activities related to nature-based therapy for veterans. Metta launched a pilot mountain therapy program for veterans, families of the fallen and missing, and first responders. More than 300 individuals participated in 17 day-long excursions that included various elements of nature-based therapy and group therapy. The Forest Service is now working with Metta to develop a train-the-trainer model for service providers in Ukraine who want to learn and introduce nature-based therapy into their practices.

A backpacking expedition for veterans in North Carolina. Photo courtesy of North Carolina Outward Bound School ©2020.

LAND MANAGEMENT IMPLICATIONS

- An agency's ability to facilitate outdoor programs for veterans is shaped by organizational practices, policies, and regulations. These factors influence program duration, settings, group size, permit needs, and insurance/liability coverage.
- Strategic partnerships may enable public land agencies to expand benefits to veterans and spur broader societal benefits.
- A diversity, equity, and inclusion framework for evaluating outdoor programs can be used by land management agencies and program providers to assess barriers to access to the outdoors for veterans.
- This research can inform the development of nature-based programming in nations affected by war, displacement, and other loss.

In addition to gender identity and racial and ethnic background, veterans may also face barriers to access related to financial resources, time, and proximity to natural locations.

Once-in-a-lifetime experiences at an iconic destination or route (such as hiking the Pacific Crest Trail) can be logistically challenging for some veterans due to the cost or need to take time off from work. Fortunately, veterans healing from trauma may not need to venture far from home to experience the mental health benefits of nature.

"We heard a lot of program providers talk about finding nature that people can incorporate regularly into their lives," Derrien says.

As one program provider told the researchers, "It's almost like there's a dose that needs to occur in order to get the effects. ... The more often you do it, the most regular you do it, the better the benefit."

While scientists caution against prescribing specific "doses" of nature, Derrien suggests the analogy of a "Nature Pyramid," a concept similar to the Food Pyramid, both popularized

by Tim Beatley, can be a useful way to think about spending time in nature.

"The base of a nature pyramid would include spaces that you might pass through on your way to work, or on a walk with your dog, in a neighborhood park, or in your backyard," she says.

To help develop new programs, partnerships, contracts, or permitting systems that are more inclusive, the scientists created a list of questions about access, equity, diversity, activity, timing, and support to consider.

- Are programs offered in settings that are accessible, welcoming, and open to intended participants?
- Is equity supported through affordable program fees or scholarships?
- Does the program have a balanced representation of gender, race, age, and ability in program staff, participants, or board members, or a diversity, equity, and inclusion statement?
- Is the activity suitable for different skill levels?
- Do schedule options accommodate different family or work obligations?
- Do staff have proper training and certification to assist participants with a range of abilities or needs?

A Path Forward

Improving collaborations between program providers and public land managers could increase the safety of program participants and providers, prevent resource damage, and enhance the experiences for diverse public land users, including veterans.

Program providers and land managers alike described challenges navigating regulations and policies across multiple agencies related to fees, permits, or insurance requirements for groups or individuals. If the red tape is too sticky, providers may avoid interacting with public land managers altogether, or operate on public lands without permits or a risk





A canoe expedition for veterans in Florida's Everglades. Photo courtesy of North Carolina Outward Bound School ©2020.

management plan. Some program providers said that they perceived an agency bias against group outdoor activities, which may stem from a legacy of viewing groups as a threat to nature and solitude.

New policies and agreements designed to streamline bureaucratic processes could facilitate coordination between agencies. One land manager that the team interviewed said agencies need “agreements with organizations that can provide [veteran] services, and work that out at a national level so that it’s easier for us at the regional or forest level and district level to tap into those agreements.”

A Map for New Partnerships

Considering the role of public lands as therapeutic landscapes offers an opportunity to manage them through partnerships as essential components of human health and well-being for everyone. However, Cerveny and Derrien noted a lack of national and regional policies that emphasize institutional partnerships to support outdoor programs for veterans.

The U.S. Task Force on Outdoor Recreation for Veterans, established by the Veterans Comprehensive Prevention, Access to Care, and Treatment (COMPACT) Act of 2020, is working to change this. The task force is charged with reducing barriers to access for veterans and formalizing connections between the U.S. Department of Veterans Affairs (VA) and public land management agencies. Headed by the VA and the U.S. Department of the Interior, the group includes seven federal agencies and four veteran services organizations.

“We heard time and again that being in the outdoors did something for [veterans] that therapy and medication was not able to,” says Toby Bloom, the Forest Service’s national program manager for travel, tourism, and interpretation as well as a member of the task force. “When these veterans were presented

with the opportunity to have some time in the outdoors through these programs, either in solitude or in collaboration with other veterans, they said something clicked and they felt like themselves again.”

Cerveny and Derrien’s findings may serve as a roadmap for navigating new partnerships to facilitate public lands access and benefits for veterans.

“A better understanding of the rich ecosystem of programs that are out there,” Derrien says, “offers an opportunity for the healthcare community and partner organizations to serve as matchmakers between veterans and the places and outdoor experiences that might be best suited to their needs.”

Task force recommendations include strengthening partnerships with healthcare providers, veteran service providers, and other institutions including nonprofits. For small, nonprofit providers that don’t have the capacity to manage federal agreements, partnerships could help ease that administrative burden. For example, a collaborative network with a single coordinating entity could provide umbrella agreements for member organizations.

Another simple yet effective partnership strategy is to work with Veterans Affairs to ensure that veterans know about existing free outdoor programs, such as the America the Beautiful Lands Pass. When veterans leave the military, their separation packet could include the pass, which provides entry to national parks and other federal recreation areas, along with information about outdoor programs on public lands.

Writer’s Profile

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Other task force recommendations include actions related to education, programming, outreach, infrastructure, grants, and research.

With better awareness of the ways public lands can be transformative for veterans, and the barriers that inhibit access, land managers and policymakers can guide future program development and partnerships to serve U.S. military veterans.

*“One touch of nature
makes the whole world kin.”*

—William Shakespeare

Further Reading

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