Abstracts from the Coalition for Education in the Outdoors 15th Biennial Research Symposium

Held at

YMCA Blue Ridge Assembly
Black Mountain, North Carolina
February 11-13, 2022

Compiled and Edited by
Kendra Liddicoat, University of Wisconsin-Stevens Point
Sharon Todd, SUNY Cortland

State University of New York College at Cortland
P.O. Box 2000
Cortland, New York 13045
https://www2.cortland.edu/departments/recreation/ceo/

Preface

Welcome to the 15th Biennial Coalition for Education in the Outdoors Research Symposium. Whether you are using this compilation as an attendee or reading it after the event, we are glad to include you in the work of the Coalition.

The Coalition for Education in the Outdoors (CEO) was established in 1987 at the State University of New York (SUNY) at Cortland by a group of outdoor educators from around the United States. It served as a network of organizations, businesses, institutions, centers, agencies, and associations linked and communicating in support of the broad purpose of education in, for, and about the outdoors.

The founders of CEO envisioned it could play an important role in addressing the research needs of the field. In its early years, CEO formed a research committee, which led to the organization of these biennial research symposia and the refereed publication, *Research in Outdoor Education.* Indiana University's Bradford Woods was chosen as the site of the first symposium in 1992 and hosted the event through 2018.

Due to a series of unfortunate circumstances, including the COVID-19 pandemic, the 15th symposium was delayed until 2022. A reinvigorated research committee chose the YMCA's beautiful Blue Ridge Assembly in Black Mountain, North Carolina, as the host of the symposium and teamed with 2nd Nature TREC (Training, Research, Education and Consulting) to handle the administrative details of running it. Although a separate *Research in Outdoor Education* journal is no longer in publication, the *Journal of Outdoor Recreation, Education, and Leadership (JOREL)* will publish a Special Issue in late 2022 focusing on the 15th Biennial CEO Symposium.

The aim of the symposium is to assist outdoor educators in advancing the philosophical, theoretical, and empirical bases of outdoor education. It does so in several ways. First, the symposium enables scholars to present their work to one another and, through this book of abstracts and refereed journals, to others in the field. Second, the symposium fosters conversation and builds a sense of community among researchers in outdoor education. Many on-going research partnerships were formed at a CEO symposium. Third, the symposium provides a forum to address areas of new or ongoing concern to researchers and scholars in outdoor education.

Thirty years after its inaugural meeting, the purpose of the CEO Research Symposium has remained the same. Fortunately, the event is still not too large and retains the informal and highly interactive atmosphere that people valued from the start. It attracts scholars and practitioners from a wide variety of academic disciplines and outdoor education professional settings. It has maintained a loyal attendance and drawn researchers from across the country and around the world eager to present and discuss their findings on a diversity of relevant topics.

This year's symposium includes three special features. First, Dr. Corliss Outley from Clemson University and Founder and Director of the Race, Ethnicity, Youth and Social Equity (REYSE) Collaboratory, is delivering a keynote address titled *Stand Up! Race, Freedom Calls and Outdoor Education*. Second, eight of the original founders of the CEO Research Committee are joining us for a fireside chat, which will be facilitated by Dan McCole (Michigan State University). This stellar group includes Deb Bialeschki, Camille Bunting, Chris Cashel, Alan Ewert, Mike Gass, Karla Henderson, Leo McAvoy, and Andy Young. Third, we are pleased to announce the recipient of the Coalition for Education in the Outdoors Graduate Student Research Scholarship: Louis Allen (Ohio University), who was chosen in a blind review of accepted abstracts with a graduate student as the lead author. This scholarship was funded by proceeds from the raffle held during the 2018 symposium. A similar raffle will be held at this symposium, with publishers such as Human Kinetics and Teachers College Press donating books as prizes.

We owe thanks to many people who make this event possible. The CEO Research Committee and the authors, all listed later, are the ones who bring this program to life. Andrew Bobilya (Western Carolina University), Brad Daniel (2nd Nature TREC), Brad Faircloth (University of North Carolina-Asheville), Kendra Liddicoat (University of Wisconsin-Stevens Point), Tim O'Connell (Brock University), Jim Sibthorp (University of Utah), and Sharon Todd (SUNY Cortland) helped greatly in the initial stages of putting the program together. Kendra, assisted by Jim, also did yeoman's work in coordinating the review of abstracts. Finally, our thanks go to SUNY Cortland President, Erik Bitterbaum, and Provost, Mark Prus, for their continued support of the Coalition for Education in the Outdoors.

Sharon Todd and Andrew Bobilya
For the CEO Research Committee

Coalition for Education in the Outdoors Research Committee

***Emeritus committee members**

*M. Deborah Bialeschki, American Camp Association	Kendra Liddicoat, University of Wisconsin-Stevens Point
Andrew Bobilya, Western Carolina University	*Leo H. McAvoy, University of Minnesota
*Camille J. Bunting, Texas A&M University	Timothy O'Connell, Brock University
*Christine Cashel, Oklahoma State University	*Karen Paisley, University of Utah
Alan Ewert, Indiana University	Keith C. Russell, Western Washington University
Michael Gass, University of New Hampshire	Jim Sibthorp, University of Utah
*John Gookin, National Outdoor Leadership School	Sharon Todd, SUNY Cortland
*Karla Henderson, North Carolina State University	*Anderson B. Young, SUNY Cortland

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"Stand Up! Race, Freedom Calls and Outdoor Education"
Dr. Corliss Outley

Keynote Address
Friday, February 11, 2022, 7:30 p.m.
Blue Ridge Center Region Room

Everyone deserves the opportunity to experience quality environmental and outdoor learning. Yet, for many the right to live, work, learn and play in the outdoors has been limited. The inclusion of all cannot be the work of one person or even one organization–individuals must work together to intentionally change policies, pedagogy, curriculum, culture, and systems.

Dr. Corliss Outley is a Professor at Clemson University in the Department of Parks, Recreation and Tourism Management and currently serves as the Founder and Director of the Race, Ethnicity, Youth and Social Equity (REYSE) Collaboratory. She is a community-engaged scholar, focusing on improving community structures, systems and environments to reduce inequalities through the application of strengths-based and empowerment approaches to youth development. Dr. Outley has conducted a series of investigations in the areas of positive youth development outcomes outside of school hours as an expert in racial/ethnic identity and cultural behaviors, health disparities, social justice and built and physical environmental influences.

REYSE COLLABORATORY
AT CLEMSON® UNIVERSITY
FOR THE STUDY OF RACE, ETHNICITY, YOUTH & SOCIAL EQUITY

Panel Members of the Fireside Chat with Founders of CEO

Saturday, February 12, 2022, 7:15 p.m.
Weatherford Hall Meeting Room

Join Dan McCole (Michigan State University) as he facilitates a fascinating discussion among the following eight individuals, considered by many to be the influential founding members of the Coalition for Education in the Outdoors Research Committee:

Deb Bialeschki

Camille Bunting

Chris Cashel

Alan Ewert

Mike Gass

Karla Henderson

Leo McAvoy

Andy Young

Louie Allen, Recipient of the CEO Graduate Student Research Scholarship

Louie Allen is a graduate teaching assistant at Ohio University in Athens, Ohio. Born in Cincinnati, he received his B.S. in Recreation Studies and minor in business from OU in 2015. Afterwards, Louie worked as a climbing and trekking guide for the Sierra Mountain Center in Bishop, California, and is an AMGA certified Single Pitch Instructor, Assistant Rock Guide, and Apprentice Alpine Guide. Louie has returned to OU to pursue research on career development and change in American mountain guiding alongside studies in sport coaching and athletic performance for climbers and alpinists. He is grateful for the guidance of the OU Recreation Studies faculty, and for the support of his ever-patient family.

Louie's abstract, "Scope of practice in American mountain guiding: How rising standards impact mountain tourism practitioners at different levels of professional development," is co-authored by Bruce Martin, Andrew Szolosi, Holly Raffle (Ohio University), and Mark Wagstaff (Radford University). Chosen as the top-rated abstract in a blind review of accepted abstracts with a graduate student as the lead author, Louie's presentation is scheduled for Session I, which begins at 3:55 p.m. on Friday, February 11.

His scholarship was funded by proceeds from the raffle held during the 2018 symposium. A similar raffle will be held at this symposium, with publishers such as Human Kinetics and Teachers College Press donating books as prizes. Please support this worthy cause!

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SYMPOSIUM SCHEDULE OF EVENTS

Friday, February 11, 2022

12:00 – 2:00 p.m. Check-in at YMCA Blue Ridge Assembly – *Blue Ridge Center Lobby*

2:30 **Meet and Greet – *Blue Ridge Center Region Room***
Facilitator: Mark Wagstaff (Radford University)

3:00 **Opening Session – *Blue Ridge Center Region Room***

Words of Welcome	Sharon Todd, CEO Research Committee
Land Acknowledgement and Site Logistics	Brad Daniel, 2nd Nature TREC and Danielle Tocaben, YMCA Blue Ridge Assembly
Symposium Overview	Andrew Bobilya, CEO Research Committee

3:55 **Research Presentation Session I – Nature-based Recreation – *Blue Ridge Center Region Room***
Presider: Sharon Todd (State University of New York Cortland)

Each research-presentation session features several papers and ample time for discussion. These sessions, like the entire symposium, are intended to be highly constructive and interactive. Each presenter is allotted 20 minutes and asked to reserve about 5 minutes for discussion. The schedule permits additional discussion of the papers and their implications before adjournment.

4:00 **Assessing Place Attachment and Mobility in Nature-based Recreation Development**
W. Hunter Holland, Kathleen K. Holland (University of North Carolina Wilmington), Nicholas Farline (City of Valdez, Alaska), and Sierra Stellhorn (University of North Carolina Wilmington)

4:20 **Health and Outdoor Adventure Recreation: A Mixed Method Study**
Ryan Zwart (Montreat College) and Alan Ewert (Indiana University)

4:40 **Understanding Hikers' Behavioral Intent Towards Leave No Trace in Great Smoky Mountains National Park**
David Schafer, Andrew J. Bobilya (Western Carolina University), Ben Lawhon (Recreation Solutions Group), Jeremy Schultz (Western Carolina University), and W. Brad Faircloth (University of North Carolina-Asheville)

5:00 **Scope of Practice in American Mountain Guiding: How Rising Standards Impact Mountain Tourism Practitioners at Different Levels of Professional Development**
Louie Allen, Bruce Martin, Andrew Szolosi, Holly Raffle (Ohio University), and Mark Wagstaff (Radford University)

5:20 **General Discussion**

6:00 **Dinner – *Blue Ridge Center Dining Hall***

7:15 **Issues and Challenges in Outdoor Education Research: Setting our Agendas at CEO – *Blue Ridge Center Region Room*** **(**CEO Research Committee)

7:30 **Keynote Address – *Blue Ridge Center Region Room***
Stand Up! Race, Freedom Calls and Outdoor Education
Corliss Outley, Professor, Department of Parks, Recreation and Tourism Management, Clemson University and Founder and Director of the Race, Ethnicity, Youth and Social Equity (REYSE) Collaboratory

9:00 **Evening Social – *Blue Ridge Center Robertson Room***
Sponsored by Brad Daniel on behalf of 2nd Nature TREC, the Friday Night Social will include hors d'oeuvres, beer, wine and soda. (Symposium attendees can continue to enjoy the Blue Ridge Center lobby and the campfires outside the Center, as well as the patio and common areas in Weatherford Hall.)

Saturday, February 12, 2022

8:00 a.m. **Breakfast – *Blue Ridge Center Dining Room***

8:40 **Research Presentation Session II – Lasting Influences and Impacts – *Blue Ridge Center Region Room***
Presider: Denise Mitten (Prescott College)

8:45 **The Life Significance of an Outward Bound Expedition: 50 Years Later**
Brad Daniel (2nd Nature TREC), Andrew J. Bobilya (Western Carolina University), and W. Brad Faircloth (University of North Carolina-Asheville)

9:05 **What Are the Elements that Make a Youth Expedition a "Life-changing" Experience?**
Maria-José Ramirez (MJ Performance Consulting) and Pete Allison (The Pennsylvania State University)

9:25 **The Relationship between Connection to Nature, Childhood Experiences with Outdoor Recreation, and Interest in the Outdoor Recreation Profession**
N. Qwynne Lackey (State University of New York Cortland), Lisa Meerts-Brandsma (Weber State University), and Jeff Rose (University of Utah)

9:45 **The Relationship of Gender and Childhood Experience with College Students' Situational Fears in the Outdoor Environment**
Sharon L. Todd, Anderson Young (State University of New York Cortland), Morgan Costello (Bucknell University), and Timothy O'Connell (Brock University)

10:05 **Exploring the Professional Identity of Environmental Educators Using Elicited Metaphor and Narrative Analysis**
Regina Patton, Kendra Liddicoat, Rebecca L. Franzen, and Christian Diehm (University of Wisconsin-Stevens Point)

10:25 **General Discussion**

10:35 **Refreshment Break – *Blue Ridge Center Region Room***

10:45 **Research Presentation Session III – Program Participant Outcomes – *Blue Ridge Center Region Room***
Presider: Kendra Liddicoat (University of Wisconsin-Stevens Point)

10:50 **Backpacking Veterans: Bolstering Sense of Belonging, Happiness, and Stress-coping**
Guy Ilagan (The Citadel), Jill Ilagan (private practice), Annie Simpson (Medical University of South Carolina), Tara Hornor (The Citadel), Robin Jocius (University of Texas Arlington), and Jesse Brooks (The Citadel)

11:10 **Exploring the Influence of Adventure Education Elements in a University Setting on Student Outcomes**
Ashlie Anderson, Alec Machacek, W. Hunter Holland, Tamlyn Shields, and Sarah Brownlee (University of North Carolina Wilmington)

11:30 **The Value of Autonomy and Unaccompanied Independent Student Expeditions in Outdoor Adventure Education**
Michael Riley (Northland College), Jim Sibthorp (University of Utah), and Shannon Rochelle (National Outdoor Leadership School)

11:50 **Indigenous Storytelling, Cherokee Traditional Ecological Knowledge, and Place-based Education**
Rosemary A. Kinch, Andrew J. Bobilya, Sara Duncan, Brad Daniel, and Janis K. Brannon (Western Carolina University)

12:10 **General Discussion**

12:30 p.m. **Lunch and Free Time – *Blue Ridge Center Dining Hall***

Have a topic you'd like to chat about with others? Feel free to announce a theme and invite folks who have similar interests to meet and eat lunch together!

CEO Research Committee – please meet in the Robertson Room for lunch.

Saturday, February 12, 2022 (continued)

1:55 Research Presentation Session IV – Psychological Aspects of Participation – ***Blue Ridge Center Region Room***
Presider: Bruce Martin (Ohio University)

2:00 **A Beginner Climber's Mentality: Confirmation of Attentional Shifting in Novice Athletes**
Andrew W. Bailey and Luke Holmes (University of Tennessee, Chattanooga)

2:20 **Motivations, Personality Types and Fears of Long-distance Hikers**
Anja Whittington (Radford University) and Jay Raymond (West Virginia University)

2:40 **Women's Motivations and Meanings of Outdoor Leadership: College Student Trip Leaders**
Ryan K. Hines (Northern Michigan University) and Denise Mitten (Prescott College)

3:00 **Activity Specific Factors of Motivation for College Student Trip Leaders**
Ryan K. Hines (Northern Michigan University)

3:20 **Why Take a Chance: Towards a Framework for Motivation for Outdoor Adventure Activities**
Alan Ewert (Indiana University), Curt Davidson (California State University, Long Beach), and Ryan Zwart (Montreat College)

3:40 **General Discussion**

3:50 Group Photo – ***Blue Ridge Center Lobby***

4:00 Refreshment Break – ***Blue Ridge Center Hallway Outside Region Room***

4:15 Research Presentation Session V – The Profession – ***Blue Ridge Center Region Room***
Presider: Pete Allison (The Pennsylvania State University)

4:20 **Private Property, the Commons, and Sustainable Outdoor Adventure Education**
Paul Stonehouse (Western Carolina University)

4:40 **The COVID-19 Effect: Examining Organizational Resilience in OAEE**
Forrest Schwartz (Prescott College), Erik Rabinowitz (Appalachian State University), Alan W. Ewert (Indiana University), Aaron M. Leonard (Prescott College, Sierra Club), and S. Anthony Deringer (Texas State University)

5:00 **Overview of the Current Landscape of Outdoor Programs in Higher Education**
Jeff Turner (Georgia College and State University), Jeremy Jostad (Eastern Washington University), Elizabeth Andre (Northland College), Brent Bell (University of New Hampshire), KC Collins (Brevard College), Kellie Gerbers (Westminster College), and Will Hobbs (Brevard College)

5:20 **Navigating the Professoriate in Contemporary Academia: A Co/Autoethnography of Seven Outdoor Educators/University Faculty**
Dan McCole (Michigan State University), Andrew J. Bobilya (Western Carolina University), Betsy Lindley (Utah Valley University), Tom Holman (Southeast Missouri University), Paul Shirilla (University of Wisconsin-River Falls), Jeff Jacobs (Camp Henry), and Leo H. McAvoy (University of Minnesota)

5:40 **General Discussion**

6:00 Dinner and Raffle Drawings – ***Blue Ridge Center Dining Hall***

7:15 Evening Forum – ***Weatherford Hall Meeting Room***

Fireside Chat with Founders of CEO Panel

Panel Members: Deb Bialeschki, Camille Bunting, Chris Cashel, Alan Ewert, Mike Gass, Karla Henderson, Leo McAvoy, and Andy Young

Facilitator: Dan McCole (Michigan State University)

About *Journal of Outdoor Recreation, Education and Leadership (JOREL) CEO Special Issue*
Guest Editors: Andrew Bobilya, Lisa Meerts-Brandsma, and Jayson Seaman

Symposium summary and evaluation
CEO Research Committee

Saturday, February 12, 2022 (continued)

9:00 Social – ***Weatherford Hall***

Sponsored by the Coalition for Education in the Outdoors, the Saturday Night Social will include live music, hors d'oeuvres, beer, wine and soda. (Symposium attendees can continue to enjoy the patio and common areas in Weatherford Hall, as well as the Blue Ridge Center lobby and the campfires outside the Center.)

Sunday, February 13, 2022

8:00 a.m. Breakfast – ***Blue Ridge Center Dining Hall***

Thank you for being here. See you in 2024.
Travel safely.

Research Presentation Session I:
Nature-based Recreation

Friday, February 11, 2022
3:55 – 5:40 p.m.

Assessing Place Attachment & Mobility in Nature-based Recreation Development

Dr. W. Hunter Holland, Dr. Kathleen K. Holland, University of North Carolina (UNC) Wilmington; Nicholas Farline, City of Valdez, Alaska; Sierra Stellhorn, UNC Wilmington

Background

A more diverse population than ever is pursuing nature-based recreation (Outdoor Foundation, 2017; Geng et al., 2021). This elevated desire for nature-based recreation experiences is partially driven by a breadth of personal and social beneficial outcomes associated with participation (Holland et al., 2018; Thomsen et al., 2018). Often, participation is pursued via public recreation areas (i.e., parks and protected areas). In 2019, the National Parks Service managed a record number of visitors at 1.4 billion (Lu et al., 2021). Likewise, state and community managed recreation areas have seen increased visitation in recent years placing an increased pressure on park employees to satisfy public recreation demands.

Nature-based park managers and staff face a vast range of challenges in responding to this immense demand for recreation opportunity (Cumming, 2016). Research emphasizes the importance of intentional design, responsible use, and evidence-based management in leveraging novel nature-based environments and building human capacity (Holland et al., 2021; Holland K. et al., 2021). The success of nature-based park management efforts rely upon visitor use data to evaluate the values and preferences associated with park development, management alternatives and proposed policies (Loomis, 2000; Sessions et al., 2016).

Place attachment is a commonly used framework to investigate the bond between people and places (Gustafson, 2014; Jorgensen & Stedman, 2001). Numerous studies have associated forms of place attachment as influential towards civic activities within residential areas in the form of sustainable and ecological behaviors (Guardia & Pol, 2002; Vorkinn & Riese, 2001), increased use of public areas (Pitas et al., 2018), decrease uncivilized behaviors (Brown, Perkins, & Brown, 2003) and increased pro-environmental behaviors (Carrus et al., 2014; Devine-Wright & Clayton, 2010; Vaske & Kobrin, 2001).

Researchers frequently use a two-dimensional frame of place attachment including place dependence and place identity (Plunkett et al., 2019; Williams & Vaske, 2003). Place dependence refers to the potential of an environment to satisfy users' needs by supporting their desired activities (e.g., hiking or sight seeing) (Halpenny, 2010). Place identity is the degree to which an environment becomes part of ones' personal identity or self-image (Hauge, 2007; Trentelman, 2009). An increasing amount of research emphasizes the use of place attachment as a framework to enhance the process of land-development planning (Brown & Raymond, 2007; Kudryavtsev et al., 2012).

Empirical studies often neglect the importance of measuring differences in attachment associated with varying levels of stakeholder mobility (Lewicka, 2011). Mobility refers to the degree of migrancy an individual experiences (e.g., how long they have lived in one location). An underlaying assumption in research is that there "exist an opposition between mobility and attachment – that place and territorial bonds lose their importance to mobile persons and/or that people with strong attachment to place are unwilling to move" (Gustafson, 2014, p. 38). However, increasing research emphasizes that strong bonds exist for both immobile and highly-mobile societies and that researchers should allocate further attention towards understanding these unique forms of attachment (Giuliani et al., 2003; Gustafson, 2009; Lewicka, 2011).

Thus, we explored stakeholders' residential mobility as an influential variable associated with forms of place attachment regarding a newly obtained property to be developed into

a community-nature park. To explore this line of interest, we focused on the following research questions: Q1) What forms of place attachment do stakeholders maintain regarding the property of interest for nature park development? Q2) How, if at all, do forms of place attachment differ within varying mobility groups?

Methods

Meals Hill (MH), the property of interest, is 184 acres of public land located near the Valdez Ferry Terminal in Valdez, AK. The land is permanently protected by a conservation easement. An electronic qualitative survey was constructed and administered over 5 weeks in summer of 2020. To investigate place attachment, respondents were asked to explain their beliefs in the significance of MH for themselves and the City of Valdez (2 separate open-ended questions). To identify stakeholders' degree of mobility, we asked respondents to indicate how long they had resided in Valdez (in years). An open coding technique was used to analyze place attachment responses and create place attachment categories (only categories indicated by ≥25% presented). Responses indicating how long stakeholders had resided in Valdez were coded into mobility groups constructed in 5-year intervals (e.g., 6-10, 11-15) and frequencies and percentage were computed. This study received IRB approval (#21-0157) in Summer 2020.

Results

Our working sample included 289 surveys. Females composed 59%. Respondents ranged in age from 18 to 76 years old (M = 43). *White, not of Hispanic descent* was the most frequently indicated race (89%). Forty-four percent of respondents had resided in Valdez for 10 years or less with 26% residing ≥5 years (Table 1).

Table 1 *Respondents' Degree of Mobility, Mobility Code & Percent*

Mobility (Years)	Code	Percent	Mobility (Years)	Code	Percent
>1-5	1	26	26-30	6	8
6-10	2	18	31-35	7	4
11-15	3	9	36-40	8	7
16-20	4	12	41-45	9	5
21-25	5	8	46≤	10	4

Q1: Forms of Place Attachment (Place Dependence & Place Identity) for the Entire Sample

The three most frequently indicated place dependence categories for individuals included scenic views (indicated by 64%), proximity to town (indicated by 52%), and recreation opportunities (indicated by 32%). Few respondents (2%) indicated forms place identity bonds with the property of interests. These forms of attachment were categorized as *lineal descent* and capture identities oriented around family history, connections with community founders, and experiences held on the property as children. The three most frequently indicated place dependence categories for the city included increases community beauty (indicated by 28%), showcases community (indicated by 28%), and accessible nature opportunities (indicated by 17%). Eight percent of respondents indicated forms place identity bonds for the city with the property of interests. These forms of attachment were categorized as Valdez as a recreation destination and captures respondents' views of the city's identify being influenced by the pastimes provided by the property of interests (e.g., hiking trails, snowshoeing).

Q2: Forms of Individual Place Attachment (Place Dependence & Place Identity) by Mobility Groups

Scenic views were strongly identified as a form of place dependence among respondents. All 10 mobility groups (C1 – C10), indicated a ≥30% place dependence of scenic views. Further, 8/10 (80%) indicated a ≥50% place dependence with scenic views. Proximity to town was also

found to hold a strong bond. Nine of the 10 mobility groups (90%) indicated a ≥30% place dependence with the property's proximity to town. Further, 8/10 (80%) indicated a ≥50% place dependence with the property's proximity to town. Mobility group C10 (respondents who had resided in Valdez 46≤ years) did not indicate place dependence upon the proximity of the property to town by 30 or more percent of respondents (indicated by 27%). Lastly, 6/10 mobility groups (60%) indicated forms of place dependence with the property for recreational opportunities. Mobility groups C4, C7, C9 and C10 did not indicate place dependence upon recreational opportunities by 30 or more percent of respondents. Lineal descent as a form of individual place identity was indicated by 2% of the total sample. None of the 10 mobility groups indicated lineal descent by ≥30%.

Q2: Forms of City Place Attachment (Place Dependence & Place Identity) by Mobility Groups

Conservation of the natural environment (indicated by ≥30%) and opportunities for new recreation (indicated by ≥30%) were the two most frequently indicated forms of place dependence for the City of Valdez (indicated by 4/10 mobility groups). Lastly, 1/10 mobility groups (C3) identified showcases community as a form of place dependence (indicated by 32%) for the property of interest. Valdez as a state recreation destination was indicated as a form of place identity for the City of Valdez by 8% of the total sample. None of the 10 mobility groups indicated this form of place identity by ≥30%.

Discussion

This study investigated forms of place attachment held by stakeholders of a newly obtained property to be developed into a community nature park. Further, we explored how forms of place attachment differed, if at all, within varying stakeholder mobility groups. Place attachment proved a capable framework for capturing stakeholders' forms of place dependence. However, forms of place identify were rarely provided by stakeholders. This finding may be influenced by public awareness of the intended development of the property of interest. Notable differences were not identified between stakeholder mobility groups. These findings may justify larger sample sizes resulting in fewer mobility groups (e.g., years >1 – 10). The findings from our study justify further investigation into the use of place attachment in better understanding stakeholders' values (place dependence and identity) during forms of public engagement phases in nature-based recreation development.

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Correspondence concerning this article should be addressed to Dr. W. Hunter Holland, University of North Carolina at Wilmington's Parks and People Research Lab. E-mail: hollandw@uncw.edu

Health and Outdoor Adventure Recreation: A Mixed Method Study

Ryan Zwart, Montreat College
Alan Ewert, Indiana University (Emeritus)

Background

Outdoor Adventure Recreation (OAR) activities offer myriad outcomes and benefits from participation. Previous research has shown that OAR participants are able to identify, perceive, and accurately report the effects and benefits of their participation (Ewert et al., 2014; McCurdy et al., 2010; Pretty et al., 2005; Thomsen et al., 2018). The health benefits of outdoor experiences, both active (Pasanen et al., 2014) and inactive (Hamann & Ivtzan, 2016; Park et al., 2007; Park et al., 2010), have been well-research. Blonna (2006) identifies six forms of health and well-being including emotional, environmental, intellectual, social, spiritual, and physical. The preponderance of research in the health and wellness field synthesizes these forms into two primary categories, physical/physiological and mental/psychological. This study considered the health outcomes attributed to highly active OAR participation using three popular OAR activities: mountain biking (MTB), rock climbing (RC) and white-water paddling (WW; including white water kayaking, white-water canoeing, and whitewater rafting).

Methods

The study consisted of an initial survey solicitation. Surveys were distributed *in-situ* at OAR activity locations (trailheads, river put-ins, or climbing crags) or areas associated with significant OAR activity (campgrounds, gear stores, restaurants, etc.). Surveys were collected from a variety of OAR dense locations, such as the North Carolina and Northern Michigan regions. During the survey participants were asked to include their phone number to consent to a follow-up phone interview for more contextual and focused qualitative topics.

This study used the Perceived Health Competency scale (PHCS; Smith, Wallston, & Smith, 1995) and Perceived Health Outcomes of Recreation scale (PHORS; Gómez, Hill, Zhu, & Freidt, 2016) to consider participants' understanding of how OAR activities influenced their health. PHORS consists of three factors: Improved condition (IMPV), prevention of worsening condition (PREV), and the realization of a psychological experience (PSYC). The PHCS measures perceived health competence. Both PHORS and PHCS used a 5-point Likert scale from *strongly disagree* (1) to *strongly agree* (5). A phone interview conducted later asked questions such as, "Do you feel your OAR participation has enhanced your health? If so, how? If not, why not?" and "Do you feel health is your primary reason for participation?"

Results

Total sample size was $N = 288$ with 179 males, 102 females, 2 identified other, and 3 non-respondents for gender. Women comprised 31% of RC, 27% of MTB, and 34% of WW who completed the online survey. First, exploratory factor analyses on both instruments resulted in factor loading consistent with the previous literature. The PHCS contained eight items in one factor. The PHORS separated into three factors: 7 items in PSYC, 5 items in PREV and 4 items in IMPV. Next, a MANOVA was used to compare dependent variables (PHCS, PSYC, PREV, and IMPV) as influenced by independent variables of OAR activity type (MTB, RC, and WW).

The result of the MANOVA (Table 1) found that there was a significant statistical difference between at least one of the dependent variables when considering the three independent variables of activity type. The MANOVA test statistic for Wilk's Lambda = .769, which was significant at the .05 alpha level ($F = 7.872$, $p < .001$, $n_p^2 = .123$).

Tests of between-subjects effects found a significant difference between PREV and IMPV by activity. PHCS and PSYC were not significantly different when compared by activity.

PREV differences were between MTB (M = 3.95) when compared to RC (M = 3.26) and WW (M = 3.15). This suggests that MTB reported significantly higher interest in using their activity as prevention for potential negative health outcomes in the future. Participants' perceptions were that participating in mountain biking reduced the possibility of negative health outcomes such as diabetes, weight gain, heart attack, and general illness. There was also a significant difference between MTB (M = 4.48) and RC (M = 4.50) as compared to WW (M = 4.12) regarding IMPV. Both RC and MTB identified that their participation improved personal health outcomes such as overall fitness, overall health, muscle strength, flexibility, etc.

Table 1

MANOVA Test of Between-Subjects Effects

Dependent Variable/Factors	Df	*P*	F-test	n^2
PHCS	2	.206	1.589	.011
PSYC	2	.816	.204	.001
PREV	2	.001	20.677	.127
IMPV	2	.001	8.189	.054

df - Degrees of Freedom, P - Probability Value, F-Test represents an F-distribution under null hypothesis, $n^2$is partial eta squared ratio of variance, offering effect size

The interviews outlined the role of health in OAR participation. OAR was a primary reason for participating. Participants noted additional benefits for health such as contributing to holistic health, being an alternative exercise form, and chance for a lifelong activity.

Discussion

Participants consistently "agreed somewhat" or "strongly agreed" that health was an important factor to their OAR participation. PHCS and PSYC did not hold statistically significant findings when compared by activity. Means for factors ranged within the activity types from 3.85 – 3.78 for PHCS, 4.49 – 4.47 for PSYC, 3.16 – 3.95 for PREV, and 4.18 – 4.49 for IMPV. Again, these were on a five-point Likert scale, implying a higher than neutral perspective on health association with OAR participation. These mean scores identified that most participants "agreed somewhat" or "strongly agreed" with these factors, identifying positive associations with the health scales. These findings are also congruent with previous research that suggest that OAR participants specifically recreate in natural and wilderness areas for enhanced physical and psychological health outcomes (Thomsen et al., 2018).

These data also highlight the concept of health improvement and maintenance. MTB specifically reported significantly higher importance of PREV and IMPV, a finding consistent with previous literature that found MTB provides both cardiovascular and osteogenic effects (Warner et al., 2002). Additionally, as reported by Lion et al. (2009), participants in this study acknowledged benefits of balance, coordination, and proprioception obtained from mountain biking. RC also found their activity to bring about health improvements. Participants identified the activity as increasing both muscle strength and muscle endurance as well as enhancing flexibility. Siegel and Fryer (2017) report similar findings from their study on youth rock climbers. RC participants also noted lowered obesity and body mass index and motivates a more active lifestyle (Aras & Akalan, 2016; Siegel & Fryer, 2017).

Physical and psychological health continue to be an area of concern in today's world and research on effective and accessible interventions is imperative. This study showed that some OAR activities may have a great effect on generating specific health outcomes. However, all activities resulted in positive associations with overall perceptions of health. Clearly, OAR has the capability of being a successful health intervention strategy.

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Correspondence concerning this abstract should be addressed to Dr. Ryan Zwart, Montreat College, PO Box 1267, 310 Gaither Circle, Montreat, NC 28757.
E-mail: ryan.zwart@montreat.edu

Understanding Hikers' Behavioral Intent Towards Leave No Trace in Great Smoky Mountains National Park

David Schafer, Western Carolina University
Andrew J. Bobilya, Western Carolina University
Ben Lawhon, Recreation Solutions Group
Jeremy Schultz, Western Carolina University
W. Brad Faircloth, University of North Carolina-Asheville

Background

Leave No Trace (LNT) is one of the most widely used educational messages for environmentally responsible outdoor recreation (Coulson et al., 2021). While previous LNT-related research has focused primarily on backcountry users, there has been a push to incorporate day-users into contemporary research (Lawhon et al., 2013, 2017; Taff et al., 2014). Additionally, there is a need for replication across a wider geographic area in the United States (Coulson et al., 2021). Visitation rates to U.S. national parks have steadily increased since 2014. In 2016, total visitation rates to National Park Service (NPS) lands were roughly 330 million, with an estimated increase in 1.2 million visitors per year through 2026 (Bergstrom et al., 2020).

Resource degradation is a primary concern related to increased visitor use of U.S. public lands. This can manifest in vegetation loss, soil compaction and erosion, degradation of water quality, and wildlife disturbance (Hammit et al., 2015; Marion et al., 2016). The expanded use of LNT Principles to educate visitors across various public lands means that further research should be conducted in order to improve its efficacy. Given that the Great Smoky Mountains National Park (GRSM) is the most popular National Park in the country with 12.1 million visitors in 2020, (Visitation Numbers, 2021) there is a need to replicate previous LNT research in the Park. Therefore, the purpose of this study was to explore hikers' behavioral intentions towards LNT Principles in the GRSM. This study replicated previous LNT research in order to provide important information for parks and protected areas in the eastern U.S. and to inform educational efforts by GRSM staff and the Leave No Trace organization.

Previous researchers have attempted to discern factors regarding visitor understanding of LNT including: 1) attitudes towards LNT, 2) perceived effectiveness of LNT practices, 3) perceived difficulty of practicing LNT, 4) self-reported knowledge of LNT practices, and 5) behavioral intent of towards practicing LNT. These factors were chosen because they were found to be meaningful indicators of visitor understanding of, and intent towards practicing LNT (Lawhon et al. 2013, 2017; Vagias & Powell, 2010). Previous studies were predominantly conducted in the western U.S. (Lawhon et al., 2013, 2017; Taff et al., 2014). While research from other geographic locations can be used to guide LNT messaging in the eastern U.S., it is beneficial to study visitors on eastern public lands such as the GRSM.

Methods

This study was conducted in collaboration with the Leave No Trace organization and used a modified version of the Leave No Trace Attitudinal Inventory and Measure (LNT AIM; Coulson, 2021; Lawhon et al., 2013, 2017; Vagias & Powell, 2010). The purpose of the LNT AIM is to measure attitudes regarding specific practices addressed by the LNT Principles (Vagias et al., 2012). The Theory of Planned Behavior was used as a framework to create the LNT AIM. It was developed using accepted scale procedures (DeVellis, 2003). A Confirmatory Factor Analysis (CFA) was also used to test for consistency of model selection and item measurement (Vagias et

al., 2012). The LNT AIM is believed to accurately assess visitors' attitudes and behavioral intent towards LNT practices.

The LNT AIM uses a seven-point Likert-type scale for questions based on the Seven LNT Principles. Participants' responses were used to gather data on the following: 1) attitudes towards LNT, 2) perceived effectiveness of LNT practices, 3) perceived difficulty of practicing LNT, 4) self-reported knowledge of LNT, and 5) behavioral intent of towards practicing LNT. The purpose of gathering data on these five variables was to determine which (1-4) has the most influence on visitor behavioral intentions towards LNT (Lawhon et al., 2013; 2017). Previous studies have shown that these factors can be accurate predictors of whether visitors will engage in LNT practices (Lawhon et al., 2013; 2017).

Data collection for this study took place 11/1 – 12/5/2021. The study population included day hikers and backpackers within the GRSM. Only those age 18 and older who provided verbal consent were asked to complete the survey ($N = 410$). Data collection sites included trailheads at Alum Cave, Newfound Gap, Deep Creek, and Elkmont. Sites were chosen due to their popularity, ease of access by hikers, geographic distribution in the park, and in consultation with the GRSM staff. A total of 302 hikers consented (73% response rate), and the final sample ($n = 285$) included respondents who completed the entire survey.

Multiple regression models were estimated to determine the unique contributions of the independent variables (attitudes towards LNT, perceived effectiveness of LNT, perceived difficulty of LNT practices and self-reported knowledge) on visitor behavioral intent towards LNT. The dependent variables were the 7 behavioral intent LNT AIM items.

Results

Means and standard deviations for all variables fall within the expected ranges (Table 1), compared to previous samples (Coulson et al 2021; Lawhon et al., 2017).

Table 1
Descriptive Statistics for the LNT AIM

	N	Min	Max	Mean	SD
Attitude	298	1.50	5.14	3.37	.63
Perceived Effectiveness	300	3.80	7.00	5.91	.74
Perceived Difficulty	294	1.00	6.00	1.93	.74
Knowledge	302	.00	6.00	3.81	1.44
Behavioral Intent Item 1	302	2.00	7.00	6.12	1.22
Behavioral Intent Item 2	300	1.00	7.00	6.13	1.27
Behavioral Intent Item 3	301	1.00	7.00	6.65	.97
Behavioral Intent Item 4	302	1.00	7.00	2.69	2.17
Behavioral Intent Item 5	300	1.00	7.00	5.58	1.83
Behavioral Intent Item 6	301	1.00	7.00	2.03	2.04
Behavioral Intent Item 7	301	1.00	7.00	4.36	1.96

Note: Behavioral intent items can be viewed in Table 2

Reliability estimates for three of the predictor variables were shown to be within acceptable range ($\alpha = .61$-$.81$). Reliability for knowledge was not estimated as it consisted of a single item. Regression coefficients and R^2 estimates for the 7 regression models are presented in Table 2.

Table 2

Regression Coefficients and R^2 Estimates Predicting Leave No Trace Behavioral Intent

Behavioral Intent	Attitude	Perc Eff	Perc Diff	Knowledge	R^2
Preparing for all types of weather, hazards, and emergencies	-.07	.09	-.28**	.19**	.18
Staying on designated or established trails	-.07	.17*	-.21**	.14*	.16
Carry out all litter, including food scraps	-.06	.17*	-.11	-.03	.06
Not removing natural objects from the area	.11	-.06	.00	-.05	.03
Having a small campfire in an existing fire ring	-.14	.23*	.10	.08	.09
Not feeding, following or approaching wildlife	.25**	.19*	.03	.05	.05
Taking breaks away from trails and other visitors	.07	.30**	-.07	.00	.09

Note: * $p \leq .05$, ** $p \leq .001$

Each of the four factors influenced hikers' behavioral intent to varying degrees. Attitudes towards appropriate behavior significantly predicted "Not feeding, following, or approaching wildlife", $\beta = .25$, $p \leq .001$. Perceived effectiveness significantly predicted 5 of the 7 behavioral intent items, ranging from $\beta = .30$, $p \leq .001$ to $\beta = .17$, $p \leq = .05$. Perceived difficulty significantly predicted "Preparing for all types of weather", $\beta = -.28$, $p \leq .001$; and "Staying on designated trails", $\beta = -.21$, $p \leq .001$. Lastly, knowledge significantly predicted "Preparing for all types of weather", $\beta = .19$, $p \leq .001$; and "Staying on designated trails", $\beta = .14$, $p \leq .05$. R^2 ranged between .18 and .03, indicating that 3-18% of the variance of behavioral intent in this sample was explained by the 4 predictor variables.

Discussion

Consistent with previous research (Lawhon et al., 2013, 2017), perceived effectiveness had the greatest range of influence on GRSM hikers' behavioral intent towards LNT, followed by perceived difficulty. However, knowledge was found to be a more meaningful predictor GRSM hikers than in previous studies (Coulson et al., 2021; Lawhon et al., 2013, 2017). This may indicate that GRSM hikers may have differences in understanding and motivations toward LNT than recreational users from other public land areas.

Park personnel may use this greater understanding of GRSM hikers' behavioral intent towards LNT to create specific messages that target these factors. For example, since perceived difficulty and knowledge were found to be highly significant for the item "Preparing for all types of weather, hazards, and emergencies" (i.e., Principle 1 of LNT: Plan Ahead and Prepare), Park staff may want to frame educational language for planning ahead and preparing in a way that emphasizes those factors. This could lead to better practice of LNT by hikers in the park, minimizing recreation-related impacts in GRSM, and potentially improving visitor experience.

This study is limited by low R^2 estimates for these models, ambiguous wording of some LNT AIM items, and the use of 1 LNT AIM item to estimate knowledge. Future research could 1) examine other factors (e.g., emotions or norms; Lawhon et al., 2017) that contribute to behavioral intent, 2) conduct qualitative interviews with participants to better understand their

interpretation of the items, and 3) assess knowledge of LNT using more robust measures. Additionally, longitudinal research could examine how knowledge of LNT and its effects on behavioral intent change over time (Backman et al., 2018).

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Correspondence concerning this article should be addressed to David Schafer at: dschafer1@catamount.wcu.edu

Scope of Practice in American Mountain Guiding: How Rising Standards Impact Mountain Tourism Practitioners at Different Levels of Professional Development

Louie Allen, Ohio University; Bruce Martin, Ph.D., Ohio University;
Andrew Szolosi, Ph.D., Ohio University; Holly Raffle, Ph.D., Ohio University;
Mark Wagstaff, Ed.D., Radford University

Background

In early 2022, the American Mountain Guides Association (AMGA) will implement strict Scope of Practice (SOP) regulations in an effort to bring the American mountain guiding industry into alignment with international standards of compliance promoted by the International Federation of Mountain Guiding Associations (IFMGA). These new regulations are the result of several decades of effort to legitimize the American guiding industry and to align it with standards of compliance that are demonstrated by more developed, industry leading mountain guiding communities such as those in France and Switzerland. Any AMGA professional member found to be working outside of their SOP once these regulations are implemented risks losing their associated credentials and professional membership in the AMGA.

The purpose of this study was to identify American mountain guides' reactions to impending SOP regulations at various stages of professional development using the Outdoor Leader Career Development Model (OLCDM) (Wagstaff, 2016). In particular, the researchers sought to address the following questions:

1. What factors cause current mountain guides to exhibit avoidance or approach attitudes towards the profession, and in what ways do impending Scope of Practice regulations impact these attitudes and potential resulting behaviors?
2. How do perspectives differ among American guides at varying stages of professional development as defined by the OLCDM (Wagstaff, 2016)?
3. What specific strategies can the AMGA and other industry players use to support career development within the framework of the new SOP regulations?

Methods

The researchers used an interpretivist methodological approach in conducting the study. The primary researcher conducted semi-structured interviews both in person and virtually with 23 American mountain guides who were at various stages of the AMGA training process. Guides were asked to participate via three public posts to AMGA Professional Member and Information Exchange Forums on Facebook. Snowball sampling techniques were then used by asking participants to identify other possible candidates who fit within the various categories of the OLCDM (Wagstaff, 2016). Guides represented four distinct regions of the United States and ranged in age from 23 to 70 years. Data collection occurred from July through October 2021. All interview recordings were transcribed into Microsoft Word documents, resulting in 489 pages of transcriptions. Results were organized by survey item using Google Sheets for manual analysis. Cases were organized into the five career development categories represented in Wagstaff's Outdoor Leadership Career Development Model (2016). Categorical placements were determined by considering each participant's level of AMGA education and certification, role in the industry, roles in an employing organization, and breadth of professional experience.

Results and Discussion

The data revealed numerous factors that influence both avoidance and approach attitudes among the participants in this study, as well as numerous ways in which the pending SOP regulations have impacted these attitudes. Five factors that influenced approach attitudes were identified: (*1) alignment of personal and professional values*, (2) *affirmation of job-specific abilities*, (3) *experiences within the outdoor industry*, (4) *modeling referent others*, and (5) *identification of a professional niche*. Four factors that influenced avoidance attitudes were identified: (*1) evaluation of barriers, (2) seeking legitimate career*, (3) *burnout*, and (4) *desiring more from a lifestyle*. AMGA SOP implementation was found to have eight key impacts on approach and avoidance attitudes. Favorable impacts included (1) *structuring and standardizing the industry, (2) motivating professionals, (3) creating intention*, and (4) *legitimizing the career path*. Unfavorable impacts included (1) *complicating the roles of the AMGA, (2) complicating and excluding roles of professionals, (3) pressuring professionals,* and *(4) manufacturing barriers*.

Professionals at lower stages of development at times exhibited an *industry orientation* when discussing SOP implementation and were encouraged by the ways implementation legitimizes the career path and offers structure and accountability. Later stage professionals, particularly those classified as *career professionals*, exhibited self-orientation and were primarily concerned with the ways SOP implementation might impact their own business practices (e.g., hiring, client acquisition, and assigning work). Notably, these observed orientations are inconsistent with those identified by Wagtaff (2016).

Guides identified *Community Level* and *Industry Level* resources that are helpful in navigating the new SOP framework as well as their career development in general. *Community Level* resources included local networking, regional professional organizations, employer decisions, and informal mentorship received from coworkers and colleagues. *Industry Level* resources included continued participation in AMGA training, additional continued education in natural sciences, language, tech usage, and avalanche education among others. The AMGA SOP documents and related route catalogs were identified by participants from multiple developmental categories as useful resources, although these resources were at times also criticized as complicated and difficult for guides to understand.

Multiple recommendations were offered by and derived from participant responses. The AMGA and other industry stakeholders should consider the following to support career development of mountain guides within the new SOP framework:

- The industry should clarify the value of different levels of AMGA training vis-à-vis recommended wage structures and assignment frameworks that reference AMGA SOP regulations. These should reference specific abilities acquired at each training level.
- The industry should continue to pursue credential-based permitting from public and private land managers to enhance the value of AMGA credentials.
- The AMGA's enforcement of SOP should be more clearly defined and more quickly enacted to help professionals understand and anticipate consequences some currently view as vague or "toothless" and therefore unimportant.
- The AMGA should discontinue its practice of "giving away" educational content to the public, which effectively diminishes the value of instructor/guide credentials and the role of instructors/guides in delivering educational content.
- The industry should consider the formation of trade associations and more structured local organizations to advocate for American guides.

- Finally, stakeholders in American mountain guiding should identify clear frameworks for providing and obtaining mentorship.

Conclusions

While all participants exhibited approach and avoidance attitudes, the actual impact of SOP implementation on direct behaviors remains to be seen. Guides frequently indicated that SOP impacts that inhibited their ability to maintain their industry niche or devalued their existing credentials would cause them to strongly consider leaving the industry altogether. Guides described the implementation of the new SOP regulations as highly divisive, in some cases suggesting it could result in industry-wide rejection of the AMGA education program. However, they also expressed a desire for unity within the industry as it grapples with the issues at hand.

Future research should further explore the study's unexpected findings regarding the self- and industry-orientations of early- versus late-stage professional development in Wagstaff's (2016) OLCDM. Additionally, specific metrics that validate AMGA/IFMGA certification should be identified, such as prevalence of field-based accidents among certified and uncertified professionals. These may directly challenge organizational regression–the unintentional undoing of change as a result of ineffectiveness or frustration–in regard to SOP implementation. Assessment of real impacts and behaviors demonstrated by guides following SOP implementation are essential in order to evaluate implementation strategies and vulnerability to regression, which may provide insights for successfully navigating future industry change.

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Corresponding Author: Louie Allen, 513.373.6229 (cell); JA014210@ohio.edu (email).

Research Presentation Session II:
Lasting Influences and Impacts

Saturday, February 12, 2022
8:40 – 10:35 a.m.

The Life Significance of an Outward Bound Expedition: 50 Years Later

Brad Daniel, 2nd Nature TREC
Andrew J. Bobilya, Western Carolina University
W. Brad Faircloth, University of North Carolina-Asheville

This study examined the long-term impact (i.e., life significance) of an Outward Bound (OB) course up to 50 years after the expedition experience. The theoretical framework of significant life experience (SLE) research was adapted for this study because it seeks to understand the long-term importance of earlier life experiences and how past events continue to influence people's feelings, attitudes, beliefs, behaviors, or actions (Chawla, 1998). While SLE began in environmental education, Daniel (2003) adapted the approach for research on the impact of wilderness expeditions in order to examine "to what extent the lessons are transposed into other life contexts and whether these changes are long-lasting or short-lived" (p. 5). Many short-term impacts of OB programming have been identified, but few studies have looked at the long-term outcomes (Allison et al., 2021) despite calls to do so (e.g., Kellert, 1998; Vogl & Vogl, 1990). Daniel (2003, 2007) called for more studies to investigate the wilderness expedition experience through the lens of personal life history since significant experiences are often used as reference points in a person's narrative or life story (Bruner, 1987).

Several long-term retrospective studies have been conducted over the last 20 years to investigate the life significance of outdoor programs (Allison, 2021; Asfeldt & Hvenegaard, 2014; Daniel, 2003, 2007; Gassner et. al., 2006; Takano, 2010; Wigglesworth & Heintzman, 2020). These studies generally support the notion that outdoor programs often have positive long-term impacts on participants' lives. Daniel (2003) studied participants on an Outward Bound-type program and found that 90% considered the long-term impact to be significant in their lives. Contributing factors included the novelty and/or uniqueness of the expedition experience, the timing of the event in their life, the natural setting, and the tendency to use lessons and memories in later life experiences. Gassner et al. (2006) concluded that Outward Bound Singapore's 21-day challenge course had a significant long-term impact on past participants' personal and professional life many years after the experience. In a study by Takano (2010) on youth expedition participants, 99% said their experience was significant, and 96% noted that it had influenced their lives. More recently, Wigglesworth and Heintzman (2020) found that interpersonal and social skills were often used in other contexts long after a summer outdoor course experience, and Allison et al. (2021) concluded that a wilderness expedition can be a "life-changing" experience, assuming it is well organized. Lessons learned are often revisited later in life around such areas as stepping out of comfort zones and meeting challenges (Allison, 2021) and the significance of the event often increases as it is connected to other life events (Daniel, 2003, 2007). These studies constitute a small but growing body of research on the life significance of various outdoor program experiences. However, no known research has been conducted with alumni of OB investigating the life significance of participation in an OB wilderness course. Therefore, the purpose of this study was to discover what informants remembered about their OB experience(s) up to 50 years post expedition, what they learned, and whether it played a significant role in their lives subsequently.

Methods

This study used a retrospective design based on Daniel's 2003 study of an OB-type expedition. The current study used a survey to sample the autobiographical memories of OB participants up to 50 years after their experiences. A retrospective approach was chosen because

it "provides the researcher with a larger sample than one would ordinarily have in this type of research, a greater ability to examine effects over longer periods of time, and data from many kinds and ages of people" (Kellert, 1998, p. 14). Participants were chosen based on criterion sampling (Creswell, 2009) and they all went on one or more Outward Bound courses between 1967 and 2017. A stratified random sample (by course year and gender) was selected from the North Carolina Outward Bound School (NCOBS) database, which also included course participants from other OB USA schools. Overall, 72% of the respondents had taken an NCOBS course while 28% took courses at other OB schools. Respondents (n=180; 24% response rate) represented 46 different years of the possible 50-year span.

The survey, mail and internet, collected information useful for sorting and comparing responses: ethnicity and gender identity; number of total OB courses taken; age at the time of first OB course; year, location, and length of first OB course; and number of organized wilderness experiences taken before or after the OB experience. The current study focuses on responses to several of the open-ended questions including: 1) What were the most important takeaways for you (if any) from your Outward Bound course(s)? 2) Did your Outward Bound course(s) make a difference in your life in any way? 3) Has your opinion of what your Outward Bound course(s) meant to you changed or remained the same since completing the course(s)? 4) How influential was/were your Outward Bound course(s) on your growth and development when compared to other life experiences? Study participants were asked to explain and provide examples for each of the questions.

The surveys were coded and analyzed for content using the constant comparative method (Corbin & Strauss, 1990) to allow emerging themes to be compared with new data and modified accordingly. An additional researcher coded 20% of the responses to check intercoder reliability (Lincoln & Guba, 1994). In order to examine the likelihood of response and/or self-selection bias, a random sample of non-respondents were interviewed to discover 1) if they received the survey link and/or mailing; 2) if they did, why they chose to not participate; and 3) whether they considered their OB experience to have been positive, negative, or neutral. These follow up interviews helped inform an understanding of both the accuracy of the contact information and whether those who had positive experiences were more inclined to respond.

Results and Discussion

The findings of this study indicated that past OB participants value their experiences highly and that a majority still draw upon various lessons learned. When asked what their most important takeaways were from their OB course, the following themes emerged: a) increased awareness, b) appreciation for nature, c) increased group development and teamwork skills, d) sense of accomplishment, e) relationship development, f) an openness to new and unfamiliar challenges, and g) the influence of the OB course structure and teachings. Participants spoke about their general increased awareness including their capabilities, leadership skills, awareness of others, and that their OB course served as a reference point for their life. Many participants also mentioned how their experience gave them an increased appreciation for nature and activities they could do in the outdoors. Group development and teamwork skills were significant takeaways including adaptability, flexibility, cooperation, and group reliance. Many participants also mentioned a sense of accomplishment which included pride, self-confidence and related self-acceptance, edgework (the idea that I can do more than I thought I could), perseverance, courage, and self-reliance. Relationship development was significant for many participants and included things like a sense of camaraderie, communication skills, patience, trust, and empathy.

Participants also recognized the importance of challenge and found themselves being more open to new and unfamiliar challenges which included risk, uncertainty, and adventure. Finally, participants mentioned the influence of the structure of their OB course and related teachings including developing tenacity, a service orientation, and the ability to live in the moment.

Just over 90% indicated that their OB course(s) had made a positive difference in their lives. Five percent said it had not made a difference and 5% were not sure. The themes mentioned most often were a) sense of accomplishment resulting in increased self-confidence; b) increased self-awareness of individual strengths, characteristics and limitations; and c) a shift in perspective whereby they saw life, people, and/or situations in new ways. The OB course experience was most often described as a reference point in life as participants reflected on what they had learned when facing new situations and overcoming fears, limitations, and challenges. Many respondents reported being inspired and motivated to try new experiences, visit new locations, and to trust and work with others more effectively. Participants also noted that their course had changed them in specific ways by helping them to become more patient, compassionate, empathetic, determined, and focused.

When asked if their opinion of their Outward Bound course(s) had changed, over 60% initially had a positive opinion of their OB experience that had not changed. Thirty-one percent said that their opinion had changed in that the meaning became richer and deeper over time as they connected and applied what they learned to other life situations. In comparison to other influential life experiences, 19% of the respondents ranked their OB experience somewhere in their top 10 influential life experiences with respect to personal growth and 7% described it as their most influential experience. Other participants described their experience as very influential (27%), somewhat influential and important (16%), or not very influential (8%). Several themes emerged as to why the course was influential: a) the experience promoted greater confidence and courage, b) the experience occurred at a time related to their stage of development or a key life circumstance, and c) the experience provided life lessons and skills that were transferred to other life contexts. Other reasons mentioned included increased self-awareness, learning to overcome challenges, and deciding to get out of my comfort zone and try new things.

The findings of this study support previous studies that found that outdoor programs often produce positive long-term effects (e.g., Allison, 2021; Asfeldt & Hvenegaard, 2014; Daniel, 2003, 2007; Takano, 2010; Wigglesworth & Heintzman, 2020). More specifically, these findings support the importance of the timing of the event in relation to one's life stage (Daniel, 2003, 2007), the use of the lessons and skills in subsequent personal and professional life (Gassner et al., 2006; Wigglesworth & Heintzman, 2020), the value of learning to step out of comfort zones, pursue new experiences, and confront challenges (Allison, 2021) and the potential for the event's significance to increase as it is connected to other life events (Daniel, 2003, 2007). Finally, these findings support Bruner's (1987) notion that significant experiences are often used as reference points in a person's narrative or life story, and this was consistent for the OB course experience across responses to all four questions.

Limitations of the study include reliance on autobiographical memories and the potential self-selection bias of respondents. This study adds to our understanding of the long-term impacts of OB expeditions and similar programs. Additionally, these findings can inform expedition program design, staff training, and future research on long-term impacts.

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Correspondence concerning this article should be addressed to Brad Daniel at: bdaniel@2ndnaturetrec.com

What are the Elements that Make a Youth Expedition a "Life-changing" Experience?

María-José Ramírez, MJ Performance Consulting
Pete Allison, The Pennsylvania State University

Background

Since its beginnings, youth expedition organizations have aimed to promote personal and social development in young people. Youth expeditions founders such as Robert Baden-Powell, Murray Levick, and Kurt Hahn had similar aims. They promoted experiences in nature, working in teams, outside traditional classroom settings, which, they believed, promoted character building, allowing youth to grow in positive ways and become valuable members of society. Youth expedition organizations still aim to promote personal and social development in young people, but what elements foster this development?

In a literature review, Stott et al. (2015) identified five processes associated with the influence of expeditions: (1) genuine independence, (2) group isolation and self-sufficiency, (3) person-centered leadership, (4) positive responses to stress, and (5) a physically demanding activity that promotes resilience, confidence, and self-reliance. Daniel (2003), Gassner (2006), Takano (2010), Asfeldt and Hvenegaard (2013), Marshall (2016) and Wigglesworth and Heintzman (2017) researched the elements that influenced participants' development in the long-term (8-36 years of retrospection) in different youth expeditions contexts (e.g., Outward Bound, Operation Raleigh, Class Afloat, expedition courses at universities). Some of the elements identified were the uniqueness of the experience, the period of life when the expedition was taken (emerging adulthood), the natural environment, facing challenges, toughness of climate/weather, personal and group reflection, and living and working with a diverse group of people, adding additional ones to the processes cited by Stott et al. (2015).

The field of youth expeditions has been criticized for a lack of robust theoretical models and theories that explain how these programs influence individual change (Allison & Von Wald, 2013; Smith & Walsh, 2019). Often the models used in experiential education such as the experiential learning theory proposed by Kolb (1984) (Smith & Walsh, 2019) have been refuted for their lack of scientific and philosophical foundations, as well as their inability to account for the holistic learning processes involved (Houge Mackenzie, Son, & Hollenhorst, 2014; Seaman, 2008). To provide a framework to understand adventure recreation and subjective wellbeing, Houge Mackenzie and Hodge (2019) presented a conceptual model integrating the basic psychological needs of Self-Determination Theory (SDT) (Ryan & Deci, 2017) to understand how adventure recreation fosters subjective wellbeing. The model is in the concept stage, so they called for longitudinal designs and qualitative studies. Aligning with previous research, the aim of this long-term retrospective study was to explore the processes that had a long-term influence in participants' lives that will help to explain how youth expeditions facilitate (to varying degrees and in multiple ways to) "life-changing" experiences.

Methods

Research setting: The British Exploring Society (BES) is a UK based youth charity founded in 1932 by Surgeon Commander George Murray Levick. BES organizes expeditions for young people aged between 16 and 25 years old. BES expeditions can be considered a representative case in the youth expedition field, and through analytical generalization, the findings of this study are relevant to similar youth organizations (Yin, 2014).

Participants: Subjects included 26 people who had gone on their first BES expedition 29 to 66 years ago. All participants were from the UK. Seventeen of them were male, reflecting the fact that women did not begin to participate in BES expeditions until 1980.

Data management and analysis: After a first inductive phase of data analysis useful for semi-structured interviews (Schulz, 2012), a deductive approach was incorporated in a second phase using Self-Determination Theory (Ryan & Deci, 2017) as Houge Mackenzie and Hodge (2019) proposed. An intercoder agreement of 0.97 was calculated with two volunteer coders. For accuracy and reliability of the findings, the analysis was returned to 13 participants for member checking who agreed with the results.

Results and Discussion

Four themes were identified: affordances for relatedness, autonomy, competence, and 'contact with nature'.

Theme 1: Affordances for relatedness – This theme refers to experiences that allow people to feel or perceive they connect intimately with others, feel cared for, secure, and experience a sense of belonging to a community (Baumeister & Leary, 1995; Ryan & Deci, 2017). Most interviewees (96%) mentioned it as one of the aspects of the expedition that influenced them the most. There are many experiences that fostered a sense of relatedness in the expedition such as engaging in social situations, 'interacting with diverse others', and cooperating and relying on fellow explorers.

Theme 2: Affordances for autonomy – This theme was reported by 96% of interviewees and refers to experiences that allow people to feel or perceive that they are the cause and regulator of their behavior (Ryan & Deci, 2017). Ryan and Deci maintain that people experience more autonomy in contexts that provide choices when they experience genuine decision-making, are responsible for themselves, are allowed to make mistakes, have freedom, and their feelings are acknowledged. Several experiences during the expedition foster autonomy such as by being responsible for oneself, raising the money to go on the expedition, being in a remote location (and therefore having to be self-sufficient), as well as experiencing internal motivation and the instructors' leadership style.

Theme 3: Affordances for competence – This theme refers to the experiences that allow people to have optimal physical and social challenges and their ability to overcome them (Ryan & Deci, 2017). Ninety-two percent of interviewees expressed that the expedition provided experiences in which they felt competent. Competence was experienced in different ways. During the expedition, participants overcame physically demanding activities or personal challenges, experienced mastery, developed outdoor skills or public speaking.

Theme 4: Contact with nature – The beauty and the sense of 'awe' generated by the natural landscape and the surroundings as well as the appreciation of natural processes such as the seasons and animals seen during the expedition was reported by 58% of interviewees as a significant element of their expedition experience.

Implications

A challenge of previous research has been the focus on outcomes as well as the disperse range of experiences, processes, and elements of outdoor adventure education programs report. Most past studies were not cumulative and argued for their own set of relevant experiences, elements, or processes, resulting in discrepancies. Based in data from the field linking the individual experiences on expeditions to a robust theory (self-determination theory) provides

practitioners with an actional framework to facilitate environments that promotes relatedness, autonomy, competence and contact with nature, so long-term influences of expeditions are more likely.

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Correspondence concerning this article should be addressed to Dr. María-José Ramírez, www.mjperformanceconsulting.com. E-mail: hola@mariajoseramirez.cl

The Relationship between Connection to Nature, Childhood Experiences with Outdoor Recreation, and Interest in the Outdoor Recreation Profession

N. Qwynne Lackey, State University of New York (SUNY) Cortland
Lisa Meerts-Brandsma, Weber State University
Jeff Rose, University of Utah

Background

The outdoor recreation industry in the United States has experienced increased demand. For instance, during the COVID-19 pandemic, 7.1 million more Americans participated in outdoor recreation (OR) than in any previous year (Outdoor Foundation, 2021). Despite the high demand, OR and education organizations have struggled to recruit and retain high-quality professional leaders (e.g., Hall & Jostad, 2020; Smith, 2019), and recreation-related programs at universities across the country are, on average, struggling to maintain enrollment and promote their public image (Pitas et al., 2018). Likewise, even though a record number of young people are participating in OR, the intensity and average number of these OR outings per participant are declining (Outdoor Foundation, 2021). Because there is an assumption that higher levels of OR participation lead to higher levels of interest in outdoor recreation careers (ORCI), these declines may exacerbate staffing challenges in the future, leading to concerns about program quality, safety, and sustainability. Thus, to continue meeting the high demand for quality recreation services, it is necessary to determine how those in the OR profession can encourage young professionals to pursue careers in the OR industry.

One approach in addressing this complex question is to examine the relationship between connection to nature, childhood experiences in OR, and interest in the outdoor recreation profession. Connection to nature (CTN) is one's affective and experiential view of the degree to which they are connected with the nonhuman natural world (Mayer & Frantz, 2004). Previously, CTN has been shown to be a significant predictor of pro-environmental behavior (Whitburn, Linklater, & Abrahamse, 2019), preferences for and participation rates in OR (Rosa et al., 2020), and decisions to enroll in college environmental studies courses (Mayer & Frantz, 2004). However, the relationship between CTN and ORCI is underexplored. Similarly, while childhood experiences in nature have been linked to adult CTN and pro-environmental behavior, the relationship between childhood experiences with OR, CTN, and ORCI has not been examined. Therefore, the purpose of this study was to examine the following hypotheses developed from this literature:

1. CTN is positively related to ORCI.
2. Childhood participation rates in OR are positively related to ORCI.
3. Childhood participation rates in OR are positively related to CTN.
4. CTN mediates the relationship between childhood participation rates in OR and ORCI.

We also explored the relationships between groups with different self-identified racial identities and socioeconomic status (SES), considering if differences in these factors influenced the connections between CTN, ORCI, and childhood participation rates in OR.

Methods

Online survey data methods were selected for this study. The full survey was developed using Qualtrics software and included a variety of Likert-scale measurements and multiple choice, opened-ended, and demographic questions. The measurements most relevant to this study included Mayer and Frantz's (2004) 14-item CTN scale, a single Likert-scale item about interest

working in the OR profession, and two Likert-scale measurements asking participants to indicate the frequency with which they participated in 10 OR activities identified by the Outdoor Foundation as a youth or child. These OR participation rates were categorized as either organized or unorganized.

The survey was distributed to a panel of survey participants living in the United States by Qualtrics. The overall study of which this study is a part included research questions that explored differences in barriers to the OR profession between populations with different racial identities and SES. Therefore, survey quotas were established to yield a sample with nearly equal representation of participants from six racial identity groups and participants with low and non-low SES. Qualtrics returned 483 complete survey responses.

Results

A multiple regression analysis was conducted using SPSS (version 26) on the sample to test hypotheses 1 and 2 with racial identity and SES as additional predictors. The overall equation was significant ($F(9,482) = 9.51$, $p < .001$) with an R^2 of .153 (adjusted $R^2 = .137$). Connection to nature ($\beta = .39$, $t(482) = 3.79$, $p < .05$), childhood participation rates in organized OR ($\beta = .154$, $t(482) = 2.20$, $p < .05$), and childhood participation rates in unorganized OR ($\beta = .275$, $t(482) = 3.42$, $p < .01$) were significant, positive predictors of ORCI. The nature of these relationships did not differ significantly by racial identity, but SES was a significant predictor of ORCI ($\beta = -.42$, $t(482) = -3.95$, $p < .001$). Participants with higher SES were less likely to be interested in OR careers.

The multiple regression equation for the test of hypothesis 3 with racial identity and SES variables was also significant ($F(8,482) = 8.30$, $p < .001$) with an R^2 of .123 (adjusted $R^2 = .108$). Childhood participation rates in unorganized OR was a significant, positive predictor of CTN ($\beta = .21$, $t(482) = 6.32$, $p < .001$). However, childhood participation rates in organized OR was a significant, negative predictor of CTN ($\beta = -.12$, $t(482) = -4.22$, $p < .001$). This relationship was not significantly affected by SES. Participants with American Indian or Alaska Native ($\beta = .16$, $t(482) = 2.42$, $p < .05$) or Latino or Hispanic racial identities ($\beta = .15$, $t(482) = 2.33$, $p < .05$) were significantly more likely to have higher CTN than participants with other racial identities.

Mediation analyses using PROCESS by Hayes were conducted to test hypothesis 4, analyzing childhood participation rates in unorganized and organized OR separately. There was an indirect effect of unorganized OR on ORIC through CTN ($b = .0272$, BCa CI [.0026, .0579]. The effect was significant yet small, accounting for approximately 5% of the total effect. There was also a significant indirect effect of organized OR on ORIC through CTN that suppressed the total effect of organized OR on ORIC ($b = -.0479$, BCa CI [-.0866, -.0167]. This effect was also significant and small, accounting for approximately 11% of the total effect.

Discussion

While it is reasonably assumed that higher levels of CTN and OR participation (organized or unorganized) during childhood lead to higher levels of interest in OR as a profession, these assumptions have not been well examined. This study is a step toward a greater understanding of these relationships, which may help OR professionals prioritize resources and tailor experiences to better promote the development of new professions. As hypothesized, CTN and childhood participation in organized and unorganized OR were found to be positive predictors of ORCI for participants in this study. However, collectively, these variables

explained only a small portion of the variance, which indicates that other factors play an important role in developing ORIC that were not accounted for in this study. Further studies might segment OR to better understand if childhood participation in specific OR activities have differential outcomes for both CTN or ORIC.

Additionally, while racial identity did not play a significant role in predicting ORIC, SES was a significant predictor of ORIC. Regardless of racial identity, participants in this sample with lower SES, which in this study was determined by whether a participant was eligible to receive free or reduced-price lunches in school, were more likely to be interested in pursuing a career in OR. These data are insufficient to explain why this relationship exists, but participation in unorganized OR may play a role. In this sample, participants with low SES were more likely to participate in unorganized OR during childhood than participants with higher SES. It may also be that careers in OR are perceived as being insufficient in terms of financial, cultural, or social capital and that people coming from higher SES backgrounds do not see OR as a viable career path. It is also interesting to consider why most OR professionals are anecdotally reported to be White if there are no significant differences in ORCI between people with different racial identities. This finding supports the idea that other factors, such as cultural experiences (Finney, 2014), could impact whether a person chooses to enter the profession. Additional research is needed to examine what other types of barriers might dissuade and/or prevent people of various racial identities from entering the OR profession.

Lastly, this study provided insight into the relationships between childhood participation rates in OR and CTN. While higher rates of participation in unorganized OR predicted higher CTN, participation rates in organized OR predicted lower CTN. One possible explanation for this difference may be the different levels of self-directed exploration that are typically included in these different types of OR experiences. Organized OR is often highly structured, with a high emphasis on social development and task outcomes. Relative to unorganized OR, these qualities in organized OR may not allow participants to engage in self-directed exploration of nature, which has been observed to be an important factor in the development of CTN (e.g., Beery, Chawla, & Levin, 2020). While additional research is needed, this suggests that spending time in outdoor environments is not sufficient in promoting CTN. How time is spent in nature is perhaps more critical, and this can have major implications for programs that seek to promote the development of CTN during childhood.

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Correspondence concerning this article should be addressed to Dr. Qwynne Lackey, Department of Recreation, Parks and Leisure Services, SUNY Cortland. E-mail: qwynne.lackey@cortland,edu

The Relationship of Gender and Childhood Experience with College Students' Situational Fears in the Outdoor Environment

Sharon L. Todd, State University of New York (SUNY) Cortland
Anderson Young, SUNY Cortland
Morgan Costello, Bucknell University
Timothy O'Connell, Brock University

Background

Time spent outdoors positively impacts health in multiple ways (Twohig-Bennett & Jones, 2018). However, these benefits are often more difficult for women to attain due to gender norms, lack of skills gained during youth, low self-esteem, and fear (Khajavei, 2017). Ewert (1988) and Ewert and Young (1992) found that social-based fears were more anxiety-producing than physical-based ones for college students in outdoor environments, with females recording significantly higher levels of fear. Todd, Kovatchitch and Young (2018) and Costello (2021) verified females' higher levels of fear during an outdoor education practicum. However, compared to 30 years ago, their results showed that college students were more anxious about physical fears than social ones, perhaps reflecting less time spent outdoors as children. Similarly, Ward and Hobbs (2006) found that not only did gender affect perceptions of fear in collegiate outdoor programs, but also levels of experience and comfort in the outdoors were negatively associated with levels of fear. The current study replicated the 2018 (Todd, Kovatchitch, & Young) and 2021 (Costello) studies by examining males' and females' situational fears at the beginning, middle, and end of an outdoor education program. In addition, the researchers extended these studies by not only adding another year of fear data, but also by measuring perceptions of childhood experiences and comfort levels in the outdoors as a possible causal-comparative factor.

Methods

A total of 125 students (83 females and 42 males) completed a two-week Outdoor Education Practicum in the Adirondacks during May 2018 (46 students), June 2019 (39 students), and May-June 2021 (40 students). The first five days of the course simulated a centralized camp with activity blocks focusing on outdoor skill instruction, feedback, and refinement; students then applied these skills on a 6-day canoe trip in New York's Adirondack Park in small groups to simulate a decentralized camp model. For the final two days, they reunited as a large camp to debrief the experience.

All but one student (response rate = 99.2%) agreed to complete a version of the Situational Fear Inventory (SFI) (Ewert, 1988) three times – pre (the first day of the course), mid (after in-camp instruction), and post (after the canoe trip) – by marking slashes on 100-millimeter lines anchored by "not at all anxious" to "very anxious" for 22 physical and 20 social potentially fearful situations. During the 6-day canoe trip, students also recorded data in daily journals in response to specific quantitative and qualitative prompts. For this particular study, the qualitative data from 2018 and 2019 were examined for relevance. Finally, prior to the course in 2019 and 2021, students also completed the childhood portion of the Outdoor Experience and Comfort Index (OECI) (Feille, n.d.) by indicating whether 23 outdoor-related statements did or did not describe their childhood.

Quantitative data were analyzed using a repeated measures ANOVA with situational fears as dependent variables and gender as the independent variable. Specifically, a 2 x 3 mixed-

design ANOVA was calculated to examine the effects of gender (female and male) and time (Day 1, Day 4 and Day 12) on situational fears. As a follow-up, paired-sample t-tests were utilized to examine how gender impacted fears over time. To enrich and complement the quantitative data, researchers conducted content analysis of qualitative journal data to detect themes related to fear. Although deductive coding was utilized, emergent themes were also tracked. Finally, independent t-tests compared mean OECI scores between females and males. Pearson product moment correlations were then used to analyze the association between childhood experience and fear.

Results

When comparing fear scores, the repeated measures ANOVA indicated that a significant time x gender interaction was present ($F(2,242) = 3.58$, $p < .05$), with an effect size of .03 (partial eta squared). In addition, the main effects for time ($F(2,242) = 54.43$, $p < .001$) and gender *(*$F(1,121) = 10.66$, $p < .001$) were both significant, with effect sizes of .31 and .08, respectively. Fear decreased over time for all subjects (Day 1 $M = 31.9$, Day 4 $M = 28.9$, and Day 12 $M = 18.7$). Upon examination of the data, it appears that females recorded higher levels of fear than males on pre-, mid- and post-tests of the SFI. However, the declines in fear were greater for females than males. Although females' initial fear levels were nearly 14 points higher than males, that gap closed to 11 points after the in-camp portion and to 7 points following the canoe trip. In addition, males' scores only decreased significantly from pre (22.7) to post (13.9), but females' scores decreased significantly over each point in time (pre = 36.6, mid = 32.7, post = 21.2). Similar patterns of results were also evident when testing social fears and physical fears. However, while females reported higher physical than social fears, males tended to record the opposite. Moreover, females' social fears declined to a greater degree following in-camp instruction (pre to mid), and their physical fears declined more steeply during the canoe trip (mid to post).

Analysis of qualitative journal data revealed themes related to physical, social, and overall fear. When journal data were compared by gender of author, more females than males journaled about fear (e.g., more than 80% of females wrote about overall fear but only half the males did). While sources of physical fears were similar across genders, females were more anxious about their physical ability while males expressed fears of external factors. Common sources of social fears revolved around not making friends or apprehension about tripmates, but females expressed more fear about group dynamics and males were more anxious about leadership roles.

Males and females did not differ on mean scores for the OECI. As predicted, higher levels of childhood outdoor experience and comfort were significantly correlated with lower levels of fear ($r = -.47$, $p < .001$). That association was more pronounced for physical fears ($r = -.46$, $p < .001$) than social fears ($r = -.41$, $p = .001$).

Discussion

Consistent with past research, this study verified that outdoor education practica can effectively help college students reduce physical and social outdoor-based fears. Furthermore, childhood exposure to the outdoors is positively related to young adults' comfort levels in the outdoors. While instruction mitigates fear levels (especially for females), this study found that applying skills on extended wilderness trips is even more effective in reducing fears for all participants. More research, however, is needed to determine how females' perceptions of fear

are formed and influenced. For instance, emergent themes from both males' and females' journals reflected underlying societal gender norms, plus females often described how the experience increased their confidence and self-esteem to help reduce their fears. Making gender norms an open and discussed topic could increase awareness of the seemingly unintentional effects of these preconceptions.

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Correspondence concerning this abstract should be addressed to Dr. Sharon L. Todd, Department of Recreation, Parks and Leisure Studies, SUNY Cortland, P.O. Box 2000, Cortland, NY 13045. E-mail: sharon.todd@cortland.edu

Exploring the Professional Identity of Environmental Educators Using Elicited Metaphor and Narrative Analysis

Regina Patton, University of Wisconsin-Stevens Point
Kendra Liddicoat, Ph.D., University of Wisconsin-Stevens Point
Rebecca L. Franzen, Ed.D., University of Wisconsin-Stevens Point
Christian Diehm, Ph.D., University of Wisconsin-Stevens Point

Background

Professional identity, as defined in this research, is "a way of being and a lens to evaluate, learn and make sense of one's professional practice" (Trede et al., 2012, p. 374). Much research has been done on professional identity and how it develops, but none has been done specifically on environmental educators' professional identity. To fill this gap, this study set out to investigate the professional identity of both experienced and novice educators in the environmental education field. An emerging strand of identity research employs the use of elicited metaphors as a way of exploring the complex concepts of identity and self (Nguyen, 2016; Thomas & Beauchamp, 2011; Zhu & Zhu, 2018). Elicited metaphor studies have shown that the process of generating personal teaching metaphors to help develop teacher professional identity increases the participants' self-reflection, critical awareness, questioning and problem-solving skills, understanding of new situations and their personal development as teachers (Wan & Low, 2015). Zhu and Zhu (2018) found that the expansive nature of metaphors allowed for students to better "capture the trajectory" (p. 501) of their ongoing professional identity development. Therefore, the primary goal of this research was to explore and recount the narratives and meanings of environmental educators' professional identity using elicited metaphors and narrative inquiry, particularly expressed as composite poetic portraitures.

The main research questions of this study were: 1) What themes of identity and transformation arise from the identity narratives and metaphors of environmental educators? 2) How does a novice environmental educator's identity change across time and experience during a semester-long practicum course? 3) How do the identity narratives and metaphors of experienced environmental educators differ from those of novice environmental educators?

Methods

We collected professional identity data from two sample sets of subjects. The first group were a cohort of novice, undergraduate university students taking a 12-credit, full semester Environmental Education and Interpretation capstone Practicum course. The students were Environmental Education and Wildlife Education majors, and we met with them face-to-face, once at the beginning of their environmental education practicum course, and once at the end of it. The second group of subjects were experienced environmental educators currently working in the field and members of environmental educator professional organizations, with data collected through an online discussion group. Several previous studies on educator identity suggest that professionals have three sub-identities: an actual identity, or who the educator currently is; the norm identity, or what kind of educator they think one should be; and the ideal identity, or their hopes and goals of the kind of educator they want to become. The exercises in this study were designed specifically to draw out the subjects' personal professional metaphors and narratives of those three professional sub-identities.

First, we asked subjects to choose a random image from a bank of 48 images (provided by the researcher using experiential learning Chiji Cards) as a visual metaphor that best

expressed the statement, “This image represents who I currently am as an educator.” Images selected and participant narratives about how that image related to their current professional identity were collected as data. Secondly, we asked subjects to “tell the story of a significant time when you felt like an educator.” Recorded narrative data were collected from this exercise. Thirdly, we asked the subjects to “create a professional identity metaphor for the kind of educator you want to become, using the pattern A is B.” Written narrative data were collected from this exercise.

Metaphor and narrative data were analysed using the five categories of the major aspects of portraiture research: 1) emergent themes, 2) relationships, 3) contexts, 4) voice, and 5) aesthetic whole (Lawrence-Lightfoot & Davis, 1997). Finally, based on previous research using poetic portraitures to express narrative results (Brooks, 2017; Cahnmann, 2003; Dixson et al., 2005; Hill, 2005; Travis, 2020), two poetic portraitures were compiled using direct quotes from participant narrative, one composite poem of the novice educator narrative and one composite poem of the experienced educator narrative.

Results

From an overall sample of nine practicum students, common professional identity metaphor themes included seeking and giving direction, unlocking potential, performance, hope for the future, self-doubt, and educators as vessels of knowledge. Participant quotes reflecting these themes and metaphors were utilized to create a composite “novice environmental educator” poetic portraiture.

From an overall sample of seven experienced environmental educators, professional identity themes included not being taken seriously, metamorphosis, hope for the future, resilience, difficulty advancing in the field, and a diminishing job market. Participant quotes reflecting these themes and metaphors were utilized to create a composite “experienced environmental educator” poetic portraiture.

When comparing the professional identity metaphors of these two sample groups, novice environmental educators expressed more individualized metaphors about personal performance and skills (How will I do in this profession?), whereas experienced environmental educators used broader metaphors about the landscape of the profession itself (What challenges does our profession face, and how can it be improved?). It is interesting to note that both groups identified with the theme of hope for the future.

Utilizing narrative analysis and pulling directly from quotes made by the subjects expressing professional identity metaphors, themes, and narrative, two composite poems were created, one for each subject group, to express and capture their collective professional identity.

Discussion of Study

A recent research study on the educational background of environmental educators revealed that 76.5% do not have formal schooling in education or environmental education (Gupta et al., 2019), which may lead to particular challenges concerning their professional identity development. It is our hope that the exercises used in this research and the data collected and expressed through poetic portraitures might be utilized to enhance the professional identity development of future environmental education students, as well as educators in other non-formal environmental educator settings like camps, nature centers, and parks.

For future research, it would be interesting to utilize the poetic portraitures produced in this study with environmental educators who were not a part of the study to see if the themes and

identity metaphors resonate with them or have impact on their own identity exploration. For example, the practicum identity portraitures created could be presented to future practicum students as a vehicle for discussion on how they might experience or express their professional identity development.

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Lead Author contact information:
Regina Patton, ripleypatton@gmail.com, 503-388-1740

Research Presentation Session III:
Program Participant Outcomes

Saturday, February 12, 2022
10:45 a.m. – 12:20 p.m.

Backpacking Veterans: Bolstering Sense of Belonging, Happiness, and Stress-coping

Guy Ilagan, Ph.D., Associate Professor, The Citadel
Jill Ilagan, Psy.D., Private Practice
Annie Simpson, Ph.D., Medical University of South Carolina
Tara Hornor, Ph.D., The Citadel
Robin Jocius, Ph.D., University of Texas Arlington
Jesse Brooks, Graduate Student, The Citadel

Background

U.S. military veterans attend higher education in increasing numbers, yet, often without a sense of attachment to their university. Student veterans' maturity, leadership ability, resilience, diversity, and life experiences clearly enrich the educational environment (Cate et al, 2017; Institute for Veterans and Military Families, 2019; Student Veterans of America, 2017; Zoli et al, 2015). However, student veterans report a lower sense of belonging within higher education institutions as compared to other student populations, with over 53% of student veterans perceiving that colleges and universities do not recognize the value of their military service (Barry et al, 2019; Zoli et al, 2015). This gap presents a potential barrier to success because students' sense of belonging is a critically important factor in student achievement and retention in colleges and universities (Kuh et al, 2010).

Ribbe, Cyrus, and Langan, (2016) reported that overnight outdoor adventure orientation programs assisted college students in their adaptation to college. Colleges are utilizing wilderness programming in increasing numbers to bolster students' sense of connectedness to others and to assist in the transition to college (Bell, Gass, Nafziger, & Starbuck, 2014; O'Connell, Lathrop, & Howard, 2019). Happiness and stress-coping are also variables related to success and well-being in college and have been reported as bolstered among college students who engaged in wilderness backpacking events (Ilagan et al., 2016; Ilagan et al, 2020). Schlossberg's Transition Theory's 4S Model (situation, self, support, and strategies) provides a robust framework for viewing student veterans' social support, happiness, and stress coping through a combination of important factors (Griffin & Gilbert, 2015; Schlossberg, 1995).

The purpose of this mixed-methods exploratory study was to learn of possible gains in sense of belonging, happiness, and stress-coping for student veterans over a three-day wilderness backpacking event. We endeavored to address two research questions:

1.) Following a three-day backpacking trip, will participants report increases in sense of belonging, happiness, and stress-coping at levels significantly greater than non-backpacking peers?
2.) What aspects of the backpacking trip will participants attribute to any perceived gains in sense of belonging, happiness, and stress coping?

Methods

Participants were nine male U.S. veterans who were students at a master's comprehensive granting institution in the southeastern United States. Participants were enrolled in undergraduate and graduate programs and ranged from ages 25 to 32. Participants in the control group, who did not attend the backpacking trip, were selected to match the gender and college level of those in the experimental group (5 male veteran undergraduates and 1 graduate student).

The three quantitative data collection instruments employed for pre-and post-trip administration were the Oxford Happiness Questionnaire (OHQ; Argyle, Martin, & Crossland,

1989), the Sense of Belonging Scale – Revised (SBS; Hoffman, Richmond, Morrow, & Salamone, 2002), and The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983; Cohen & Williamson, 1988). In addition to the quantitative questionnaires, investigators posed nine qualitative prompts in a post-trip interview to better understand the aspects of the experiences that participants attributed to any gains in sense of belonging, happiness, and stress-coping scores. The investigators received IRB approval from the lead researcher's university.

Quantitative data analyzed involved comparing pre- and post-test means for the experimental and control groups. Cohens's d was utilized to estimate and describe the standardized mean difference between the two groups (Lakens, 2013). Qualitative responses were analyzed using the constant comparative method (Strauss & Corbin, 1990) in which categories and themes emerge from the data during line-by-line readings designed to identify and label concepts and themes. In a collaborative and recursive process, members of the research team discussed, refined, and condensed codes to develop unambiguous and mutually exclusive categories, which were then condensed into themes.

Results

Within the backpacking group the pre-post effect size was d=1.38 for belonging, d=1.61 for happiness, and d=0.86 for stress-coping. In comparison, within the control group little or small effect sizes were found for differences in pre-post scores for belonging (d = 0.44), happiness (d = 0.23), and stress-coping (d = 0.15), and in some cases the pre-post effect was indicative of worsening of scores. When estimating the effect difference between the backpacking and control groups' pre-post scores, large effect sizes were found with the backpacking group having improved scores across the board for belonging (d = 1.47), happiness (d = 1.90), and stress-coping (d = 1.11). Qualitative analysis showed that backpackers' themes for increases in social belonging were camaraderie, community knowledge, veteran experiences, and emotional support. Themes for happiness gains were camaraderie and unplugging. Themes for bolstered stress-coping were unplugging, nature, and similarity to military experience. The remarks most frequently recorded were around the themes of belonging (bonding, networked knowledge, and emotional support - "camaraderie") and stress-coping ("I just started turning my phone on do not disturb").

Discussion

The present investigation included the intervention of a three-day wilderness backpacking trip for student veterans. The three-day backpacking trip was associated with improved belonging, happiness, and stress-coping scores for the backpacking group. The control group showed no or minimal gains in belonging, happiness, and stress-coping. The qualitative data revealed aspects of the trip that were most related to any gains in belonging, happiness, and stress-coping scores for the backpacking group. Themes of social support and stress-coping were chief among responses.

While the number of U.S. military veterans in higher education grows, a knowledge gap exists about the interpersonal and intrapersonal experiences of these students. The present study contributes to the knowledge base of student veterans and provides outcomes for a small sample of these students who engaged in a three-day backpacking trip. The authors hope that institutions of higher education that serve veterans students will offer opportunities for multi-day outdoor recreation to enhance the coping and psychological well-being of their student veterans.

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Correspondence concerning this article should be addressed to Dr. Guy Ilagan, Zucker Family School of Education, The Citadel, Charleston, SC 29409. gilagan@citadel.edu

Exploring the Influence of Adventure Education Elements in a University Setting on Student Outcomes

Ashlie Anderson, University of North Carolina (UNC) Wilmington
Alec Machacek, UNC Wilmington
Dr. W. Hunter Holland, UNC Wilmington
Tamlyn Shields, UNC Wilmington
Sarah Brownlee, UNC Wilmington

Background

Participation in adventure education has been associated with a range of individual and group development outcomes including increased physical and mental health, pro-social behaviors, and increased academic performance, among others (Hattie et al, 1997; Holland et al., 2020; Richmond et al., 2018; Thomsen et al., 2018). In a review of literature aimed at identifying the unique influence of adventure education elements on participant outcomes, novel learning contexts (i.e., wilderness environment), unique social interactions (e.g., small groups, team-based learning initiatives), facilitated leadership roles (e.g., leader of the day, navigator, scribe), and physical and emotional forms of challenge were components most frequently associated with individual and group development outcomes (Holland et al., 2018). However, not all experiences are alike and often participants are exposed to unique adventure education elements. Further research is needed to examine the contribution of each educational element.

The educational approaches of adventure education are commonly described as experiential forms of learning (Bell & Holmes, 2011; Gassner & Russell, 2008). Experiential Learning Theory suggests that learning best occurs when following an iterative cycle. The sequence often starts with attempting a task or experience, reflecting upon this encounter to identify what worked and what was learned, and then drawing conclusions and identifying broader lessons before applying these lessons in a new experience or context (Kolb & Fry, 1974). These adventure education experiences are process-oriented and emphasize students' reflections and development of abstractions that can be transferred to new and often more complex contexts.

Aimed at increasing equitable opportunities in adventure education, programmers and educators alike have adapted historically nature-based experiences to urban contexts (community centers, K-12 education, universities) (Garst, Gagnon, & Whittington, 2016; Glazier & Bean, 2018; Holland et al., 2021). These adaptations include condensed duration, the use of built environments, and the inclusion of virtual learning elements, among others. University classrooms are one example of an adapted adventure education element within an urban context (Richmond & Sibthorp, 2019). These courses commonly emphasize experiential learning methods and expose students to novel learning environments, unique social interactions, and opportunities for reflection in hopes of fostering virtuous character traits and group development (Kaiseler, Kay, & McKenna, 2019). While the outcomes of adventure education experiences consistently include intra- and interpersonal factors, the programming elements of these experiences vary greatly. This study aimed to explore the unique outcomes and influential educational elements of a university-based adventure education experience. Thus, we focused on the following two research questions:

Q1: What, if any, outcomes do students associate with participation in a 10-week university adventure education course?
Q2: What programming elements do students associate with outcomes received?

Methods

We administered mixed-method surveys prior to and following a 10-week adventure education course to explore the range of outcomes and influential programming elements that students associated with participation. To investigate student outcomes, we asked students qualitatively if they associated any outcomes with their participation. Next, we asked students to indicate the degree of influence pre-determined programming elements had on outcomes received on a closed scale from 1 (not at all influential) to 7 (very influential). Previously published influential elements of adventure education experiences were adopted from the Holland et al. (2018) review of influential adventure education programming elements associated with outcomes. Students were provided an "other" option for factors not included.

We conducted a content analysis of responses, and coded and categorized all outcomes until saturation was achieved. Next, we reviewed the outcomes and developed corresponding definitions and guidance for coding. Two researchers coded a subsample of outcomes independently. Lastly, all outcomes were re-coded utilizing the agreed-upon coding scheme. Means and standard deviations were computed for all programming elements' influences.

Results

Students indicated a range of personal development outcomes received. An increased desire to participate in outdoor recreation (44.4%), increased self-efficacy regarding adventure recreation (22.2%), and increased self-awareness (22.2%) were most frequently indicated. Further, connection to outdoors, increased hard-skills, learning valuable life lessons, developing coping strategies, and increased self-confidence were indicated as additional outcomes received by <20% of participants. Regarding influential elements of adventure education, students indicated that being in nature, the emotional and physical challenge, and unique social interactions experienced during the course held the greatest degree of influence on outcomes received (Table 1).

Table 1

Degree of Influence of Adventure Education Elements in a 10-Week University Course

Course Elements	Degree of Influence (M)	Course Elements	Degree of Influence (M)
Being in Nature	6.08	Trip Planning Projects	5.08
Emotional Challenge	5.77	Participating in Reflection	4.92
Physical Challenge	5.69	Leadership Jobs	4.69
Social Interactions	5.62	Small Group Size	4.15

1 (Not at all Influential) to 7 (Very Influential)

Discussion

This study investigated the outcomes and influential elements of a 10-week university adventure education course. The findings from this study support previous literature associating increased desire to participate in outdoor recreation activities, self-efficacy, and self-awareness (Hattie et al, 1997). Students' increased desire to participate in these activities may be a result of

the novel non-traditional learning context. Further, students increased self-efficacy may be associated with the experiential teaching and learning methods used in the course. This course intentionally used the natural environment to support students' reflection on experiences and construction of abstractions to be experimented with in subsequent contexts (a well-documented educational approach associated with students' increased self-efficacy). Exposure to natural learning environments was the most frequently indicated influential element of the 10-week university adventure education course. Previous literature has indicated the natural learning environment supports student advancements via deconstructing social barriers, facilitating group advancement, and elevating collaborative forms of leadership (Thomsen et al., 2018). Lastly, students' increased self-awareness may be a result of facilitated reflective assignments (e.g., group debriefs, student journals, quiet time). Preceding literature has emphasized the power of reflective practices in advancing participants' self-awareness (Holland et al., 2018). The findings from this study support the continued use of adventure education courses in advancing college students' personal and social development. Further research should investigate diverse durations, environmental elements, and social interactions influential to student outcomes.

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Correspondence concerning this article should be addressed to Ashlie Anderson at E-mail: ashlie.anderson75@gmail.com

The Value of Autonomy and Unaccompanied Independent Student Expeditions in Outdoor Adventure Education

Michael Riley, Northland College
Jim Sibthorp, University of Utah
Shannon Rochelle, National Outdoor Leadership School (NOLS)

Outdoor adventure education (OAE) programs use a variety of pedagogical techniques to promote intrapersonal, interpersonal, and skills-based development in program participants. One prominent technique employed by OAE programs to support student development is the cultivation of volitional autonomy (autonomy; e.g., Deci & Ryan, 2013) through the use of "experiences in which participants have a measure of choice and control over the planning, execution, and outcomes of their learning" (Daniel et al., 2014, p. 4). During OAE programming, these experiences are often sequenced so that students are offered greater autonomy and are given more choices as the course progresses and they gain requisite competencies (Sibthorp et al., 2008). Autonomous experiences provide participants with opportunities to have a degree of choice and control over course-related activities and enable them to pursue personally relevant learning (Daniel et al., 2015).

Research has articulated the benefits of autonomy in outdoor programming (e.g., Chang, 2017), and scholars have found that autonomous student experiences in OAE are germane for learning and their educational value is high (Bobilya et al., 2014). Proponents argue that ASE provide learning opportunities for program participants that would not necessarily be possible if greater levels of instructor supervision or lower levels of autonomy were provided (Daniel et al., 2015). One major type of ASE that has received particular attention across the literature is the independent student expedition (ISE; Sibthorp et al., 2008). The ISE is a 1- to 10-day long mini-expedition, during which groups of four to six students live and travel in the wilderness unaccompanied by their instructors (Daniel et al., 2014). The ISE enables students to plan and carry out a section of the course without direct supervision or oversight from course instructors (Sibthorp et al., 2008), and it provides students with opportunities to apply the technical, leadership, and risk management skills they learned throughout the course to the challenges encountered during the experience (Daniel et al., 2014).

While research suggests that ISE have the potential to foster personal growth and/or promote group development (Bobilya et al., 2014), they continue to remain controversial due to concerns about risk, liability, and participant safety (Davidson, 2004). Therefore, the purpose of this study is to examine the value of autonomy and unaccompanied ISE experiences in OAE for emerging adult participants by identifying the distinct pedagogical contribution of ISE to student learning in OAE.

Methods

A convergent design mixed methods approach (Creswell & Plano Clark, 2018) was used to address this study's research questions. Quantitative measures of autonomy satisfaction, autonomy frustration, task cohesion, goal conflict with instructors, goal conflict with fellow course mates, sense-of-belonging and group functioning were collected from NOLS semester students on two separate occasions to compare participants' ISE experiences to their experiences during the week prior to ISE. Qualitative data were gathered similarly, and these data were used to identify the distinct pedagogical contribution of ISE to student learning in OAE.

Results

Respondents reported significantly higher autonomy satisfaction during their ISE experience than during the week prior to ISE. Moreover, these NOLS semester students reported significantly lower levels of autonomy frustration during ISE than during the week preceding ISE. Participants reported significantly higher levels of task cohesion during the ISE than during the week before the ISE began. The ISE experience exhibited a medium effect (d =.60) on students' reported task cohesion. These NOLS semester students reported significantly less goal conflict with their peers while participating in the ISE versus the week leading up to the ISE. On the other hand, the difference between reported goal conflict with instructors during ISE and the week prior to ISE was not significant. Respondents reported significantly higher levels of sense-of-belonging with members of their ISE group than when they were with all of their course mates in the week prior to ISE. Similarly, the group functioning valence scores were significantly more positive during the ISE experience rather than in the week preceding ISE.

Qualitative data indicated that the distinct pedagogical contribution of ISE to student learning in OAE is its ability to promote both intra- and interpersonal learnings. Developing self-confidence in one's capabilities, capacities, and judgments and self-efficacy in one's ability to enact the behaviors needed to meet the performance standards required for successfully addressing the challenges associated with the ISE experience were the primary intrapersonal learnings reported by participants. On the other hand, learning how to create a positive group culture, collectively solve encountered problems, and work collaboratively to make decisions that were amenable to all group members were the primary interpersonal and teamwork skills learned during the ISE. Having to enact these newly or recently learned skills in an environment where instructors were not physically present was the instrument that reinforced them and helped buttress participants' confidence and self-efficacy in their interpersonal skill sets and intrapersonal abilities.

Discussion

The provision of autonomy (Deci & Ryan, 2013; Ryan et al., 2016) is one particular mechanism used by OAE providers to cultivate participant learning and development. Research has consistently demonstrated the benefits of autonomy for participants in outdoor programming (e.g., Sibthorp et al., 2008), and data indicated that these emerging adult-aged participants were developmentally primed for the growth that can occur through autonomous experiences. Participants' developmental readiness and desire for autonomous experiences enabled them to capitalize on the autonomy offered to them during their ISE, and have consequential and meaningful learning experiences.

Data suggested that the ISE reinforced previously learned and practiced outdoor and technical skills, while concurrently allowing participants to exercise intrapersonal (e.g., practicing perseverance) and interpersonal (e.g., making group decisions) competencies. Qualitative data indicated that the ISE played a greater role in solidifying skills and capacities gained earlier in the NOLS semester then spurring on new learning. These findings are congruent with Chang's (2017) conclusions that ISE is a useful vehicle for growing and reinforcing nascent learning and developmental outcomes gained earlier in the course. Having to exercise these newly learned skills in an environment where instructors were not present helped reinforce them and bolster participants' confidence and self-efficacy in their burgeoning technical, interpersonal, and intrapersonal skill sets. Daniel et al. (2014) noted that autonomous student experiences, like the ISE offered by NOLS, originated during a different socio-cultural and historical era;

consequently, their applicability to modern learners needs to be continually reassessed and reevaluated. Data from this study suggested that the ISE experience offered by NOLS is applicable for today's OAE students. The learning tasks associated with ISE required participants to think critically and solve complex problems, work collaboratively, communicate effectively, and take advantage of self-regulated learning opportunities. When combined these inherent features of the ISE are valuable tools for promoting participant learning and development.

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Correspondence concerning this article should be addressed to Michael Riley, Northland College at: mriley@northland.edu

Indigenous Storytelling, Cherokee Traditional Ecological Knowledge, and Place-based Education

Rosemary A. Kinch, Western Carolina University
Andrew J. Bobilya, Western Carolina University
Sara Duncan, Western Carolina University
Brad Daniel, Western Carolina University
Janis K. Brannon, Western Carolina University

Indigenous storytelling, a transactional communication between narrators and audiences, can be expressed through the narrations of Traditional Ecological Knowledge or TEK (Pierotti & Wildcat, 2000). These narratives by Indigenous societies such as the Eastern Band of Cherokee Indians (EBCI) demonstrate and explain their ecological literacy and sustainable relationships with their local outdoor environments (Berkes et al., 2000). TEK stories impart this authoritative information while simultaneously empowering the story's participants in co-creating their interpretations and connections (Aftandilian, 2011; Hall, 1973). The EBCI and other Indigenous communities demonstrate their interrelatedness with nature by acknowledging their interdependence with it (Cherokee Preservation Foundation, 2014; Datta, 2018; Lowan-Trudeau, 2012; Pierotti & Wildcat 2000). TEK stories align with and provide support for the ethical strategies of contemporary environmental advocacy (Berkes et al., 2000). The EBCI, here used interchangeably with the term "Cherokee," are members descended from the original Cherokee peoples, indigenous to the southeastern North American continent (Cherokee Preservation Foundation, 2014).

Place-based education integrates the experiential relationships between humans and nature to encourage growth in values, comprehension, and skills in environmental sustainability (McKeon, 2012; Sabet, 2018). TEK narratives inherently possess the interactive agency and equal responsibility with local places that place-based education also prioritizes (Aftandilian, 2011; McKeon, 2012). Advancing informed environmental sustainability through place-based instruction for students requires a cooperative engagement that prioritizes tribal knowledge and practices (Gruenewald, 2003; McKeon, 2012). However, Eurocentric philosophies have historically restricted this interaction with Indigenous societies and their TEK by defining tribal identities as non-members of society or as the Other (Bechtel, 2016; Roberts, 2012). By integrating environmental experiences with TEK, place-based learning can synthesize those narratives with evolving place-based concepts into interdisciplinary sustainability, dissolving artificial barriers that may limit ecological meanings for students (McKeon, 2012). To date, no known research has investigated the integration of EBCI TEK narratives with place-based curricula for middle school students. TEK narratives have the potential to articulate place-based learning which can foster environmental well-being for local communities and yet little research has explored this pedagogy. Therefore, the purpose of this study was to explore middle school students' perceptions of their local environment following a place-based educational experience that integrated EBCI TEK narratives.

Methods

Following Western Carolina University's Institutional Review Board approval in October 2021, participants were selected based on criterion sampling (Creswell & Creswell, 2018) which included enrollment in a North Carolina public charter school's sixth, seventh or eighth grade classes. Participants (n=18) completed a field trip to the Nikwasi Mound in Franklin, NC, during

November 2021. This school practices a place-based curriculum and pursues collaborative opportunities with the EBCI community. This field trip experience was available for the school's 60 middle school students and was integrated into their fall semester requirements. Due to the precautions regarding COVID-19, only approximately one-third of the middle school population attended the trip. The experience was designed by school faculty and EBCI members. Students were divided into four small groups of mixed grades. Each group rotated through the activities: a) TEK storytelling, b) EBCI apple orchard history, c) EBCI historical water source and its quality control, and d) Cherokee math and science. Three EBCI members, a Cherokee storyteller, a Matriarch, and a staff member, in addition to school faculty, facilitated the trip. The EBCI storyteller shared TEK narratives with each group for one hour. Additionally, the apple orchard, its history and future, water and its quality, math, and science were experienced through the lenses and language of the EBCI's traditional Cherokee ways of being. The primary researcher observed the field trip activities.

This study employed a qualitative approach and structured the analysis of open-ended questions through narrative inquiry, whereby experiences are interpreted, interacted with relationally, and expressed intertextually (Marshall & Rossman, 2016). Narrative inquiry closely examines the evolving relationships and meanings that develop between stories and their audiences (Clandinin & Rosiek, 2007; Hall, 1973). Students who attended the field trip completed a series of open-ended reflection questions using an online Qualtrics survey during a class session the week following the field trip. Those students' responses without consent/assent were removed before analysis. The reflection questions were informed by the Cherokee TEK narratives and the school's place-based lessons. Participants were asked to complete eight questions. Sample questions included: 1) describe the experience, 2) what lesson activities they enjoyed the most and why, 3) what they would like to investigate more deeply, 4) how the Cherokee TEK narratives explain human relationships with nature, 5) how to practice respectful interactions with natural environments; and finally, to share any additional thoughts about the experience. These questions invited the students' interpretations about the integration of the TEK narratives with the place-based lessons during the field trip.

Data analysis followed a narrative inquiry approach, exploring participants' reflections on their experiences and discovering what interpretations and relationships emerged for them (Marshall & Rossman, 2016). A close reading of the survey responses was followed by considering what initial meanings were present and organizing those meanings using in vivo terms (Creswell & Creswell, 2018). These concepts were evaluated for similarities and differences. The relationships between the coded meanings were interpreted and then categorized into themes. To enhance the trustworthiness of the findings (Creswell & Creswell, 2018), an independent intercoder coded 20% of the data. The primary researcher and intercoder then discussed the codes and reached 100% agreement.

Results and Discussion

Three themes emerged as students reflected on their experience: cultural literacy, well-being, and respecting nature. Cultural literacy was described as the desire to gain knowledge about the EBCI and Cherokee culture by the students. Overall, participants liked their interactions with the different activities, described them as "super fun," and said they wanted to learn more about Cherokee stories, history, and relationships. Students chose the TEK storytelling as their favorite, most enjoyable more than any other activity (66.67%). These findings support the primary goals in TEK narratives and place-based education which include

enjoying learning experiences and gaining skills and knowledge for younger generations (Cherokee Preservation Foundation, 2014; McKeon, 2012). One student stated that the EBCI were "normal people," expressing his disagreement with historical Eurocentric scripts positioning Indigenous cultures outside of society (Bechtel, 2016; Roberts, 2012).

Well-being was the second theme that emerged as students noted how Cherokee TEK narratives consider nature's position to people. Students shared how nature is not isolated from humanity; it is a part of everyday life and defining the priority of those relationships is essential for human existence. One student stated, "Cherokee Stories use animals in real life ways to make them (sic) involve the nature." Connecting their everyday realities with nature, its inhabitants, and its environments support findings from previous studies which integrated TEK stories and place-based education (Gritter et al., 2016; McKeon, 2012). Students described TEK understandings by the EBCI as "important," requiring "taking care of all the land around you," as the Cherokee engage an interdependent relationship with nature rather than just "using" it. Learning how Indigenous stories support practicing a sustainable way of living was interpreted by these students as positive for both humans and the environment (Nesterova, 2020).

Respecting nature was the final theme, as students explained how the field trip activities and TEK promoted the protection of nature through learning about its value and developing their knowledge in survival and stewardship. Reflecting on the Cherokee narratives, students said the EBCI "respected the earth and were stewards"; they "give back to nature its self (sic)"; and "that if you respect nature, nature will respect you." The students' understanding from this experience supports previous research which integrated TEK narratives with place-based lessons (Somerville & Hickey, 2017). When asked how they could respect nature, all 18 students described sustainable practices such as "pick up trash"; "leave no trace"; and "waste less water and help nature"; and "respect them (the EBCI) and their living areas." One student, reflecting on his interaction with the Cherokee stories, expressed a primary goal of place-based education: "It is a (sic) experience that you really have to listen for yourself to see all the meaning behind it." By integrating TEK with place-based lessons, this field trip experience demonstrated how Indigenous meanings, well-being for humans and nature, and respecting nature through stewardship are nurtured (Nesterova, 2020).

This study contributes to related literature and enhances our understanding of the benefits of integrating TEK narrative experiences with a place-based education program, particularly one with similar characteristics. Formal and non-formal educators are encouraged to consider how their curricula might be enhanced through the integration of TEK narrative experiences with placed-based programming. Further research is recommended with similar and different grade levels, in different academic contexts and collaborating with diverse Indigenous communities and place-based lessons, to better understand the characteristics that best contribute to the enhanced learning noted in the students' reflections who participated in this field experience.

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Correspondence concerning this article should be addressed to Rosemary Kinch at: rakinch1@catamount.wcu.edu

Research Presentation Session IV:
Psychological Aspects of Participation

Saturday, February 12, 2022
1:55 – 3:50 p.m.

A Beginner Climber's Mentality: Confirmation of Attentional Shifting in Novice Athletes

Andrew W. Bailey, University of Tennessee, Chattanooga
Luke Holmes, University of Tennessee, Chattanooga

Introduction and Literature Review

Outdoor activities often involve inherent risks, thus requiring a level of physical and mental composure for successful participation. Rock climbing, in particular, is renowned as mental sport, necessitating cognitive control for problem-solving, creativity, risk-assessment, and controlled muscle movements over tenuous terrain (McGrath & Elison, 2014). These skills develop through continual participation, contributing to the successful negotiation of more difficult routes, and potentially transferring to other developmental and operational domains (Jones & Sanchez, 2017; Wagstaff, 2014). While a climb is often viewed by the route in its entirety, every route is perhaps more appropriately measured as a process incorporating many smaller components, each requiring a unique mental and physical response. When a climber approaches a route, for example, one would expect that visualization, problem-solving, and creativity would be invoked to appropriately "scout" the successful sequence of moves through the climb. However, such an outward focus while physically climbing through the "crux" move may induce heightened awareness, anxiety, and lack of flow (McGrath & Elison, 2014). Thus, the appropriate allocation of attention, inhibition of irrelevant stimuli, and cognitive flexibility to switch between various tasks are imperative to psychological and physical performance in the sport (Eysenck et al., 2007; Cavanaugh & Frank, 2014). Previous research has illustrated this phenomenon, demonstrating that a competitive climber's mental state during the crux can predict success by as much as 33% (Bailey et al., 2019). That study, however, included climbers during a competition, with higher levels of experience, and on varying difficulty of climbs. The purpose of this study was to explore the mental states of beginner climbers on the same route and determine the divergence and influence of mental states on successful negotiation of the climb.

Method

Participants in this study included 12 students enrolled in a beginner climbing course at a state university (7 female, average age = 20). These students participated in a semester of bouldering and top rope climbing instruction in the university gym, with a final outdoor bouldering trip occurring at the end of the semester. Data collection occurred during this final outdoor trip, during which participants attempted multiple beginner level routes ($\leq$ V2 rating). After multiple warm-up climbs, students were outfitted with an Emotiv Insight® electroencephalographic (EEG) headset while attempting a popular V1+ route. All students had climbed that level in the gym, and the route topped out at about 15 feet, to remain consistent with previous indoor climbing experience. Participants were video recorded during the climb for post-hoc analysis of real time changes in mental state during the climb. If participants had multiple attempts, their most successful attempt was used for analysis. EEG data were recorded at a rate of twice per second in bounded brainwave frequencies, including theta (θ = 3.5 – 7 Hz), alpha (α = 7 -13 Hz), beta (β = 13 – 30 Hz), and gamma (γ = 34 – 45 Hz). Sensors were placed on the right and left frontal lobe (F3 & F4), right and left temporal lobes (T7 & T8) and central parietal lobe (Pz) to measure amplitudes in cortical regions associated with focus (β/αF3 + β/αF4), motivation (i.e., enjoyment; β/αF4- β/αF3), arousal (i.e., state anxiety; γPz), and inward attention (associated with flow; θ/β F3 & F4, αPz). Using customized software, data were categories into unique "stages" of climbing (i.e., scouting, searching, setup, etc.) for analysis. Final analyses,

conducted on 1886 data points, included principal components analysis and analysis of variance to determine differences in mental state across climbing stages, as well as mental impact on successful route completion.

Results

Final results included data from 11 unique climbers and were largely supportive of previous research (one dataset was unusable due to noise). A Multiple Analysis of Variance (MANOVA) revealed significant differences for all four mental states over various climbing stages ($F = 8.4 – 28.6$, $p < .001$). Principle components analysis was utilized to simplify highly-correlated mental states and illustrate mental shifting over various stages (Figure 1). Consistent with previous research, arousal and focus were higher during more dynamic aspects of the climb (falling and sticking a move), while inward attention dominated during technical stages (crux, setting up for a big move, searching for holds). A final ANOVA with a dichotomous dependent variable for route completion indicated that mental state during the climb accounted for 18.5% of success for beginner climbers. Inward attention accounted for the most unique variance ($\eta_p^2 = .095$), followed by arousal ($\eta_p^2 = .05$) and motivation ($\eta_p^2 = 0.03$).

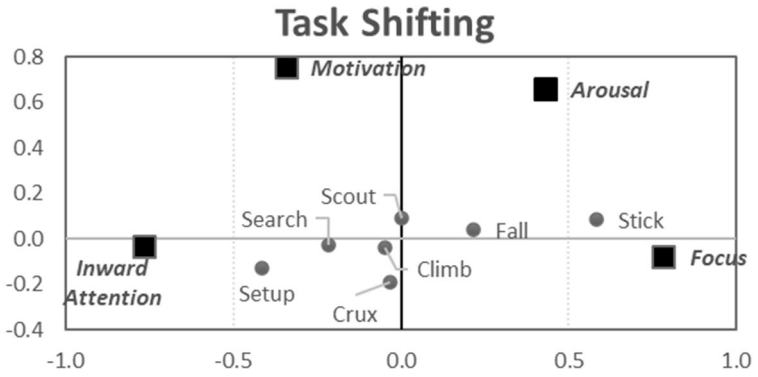

Figure 1. Principal Components Analysis for mental status during climbing stages.

Discussion and Conclusions

Adventure activities involve perceived and inherent risks, requiring physical and mental acumen for success. Skill enhancement involves rehearsing physical tasks, as well as monitoring and responding to mental feedback. Mental shifting occurs throughout various stages of the activity, and appropriate responses may facilitate successful performance (Eysenck et al., 2007). Consistent with research on experienced climbers during a competition (Bailey et al., 2019), beginner climbers demonstrate significant mental changes over the course of the climb. Heightened attention is evident during moves with high consequence (falls and sticking dynamic moves), while inhibition of irrelevant stimuli is apparent through elevated inward attention during technical sections (setups, searching, and crux). Almost 20% of successful negotiation of the climb was predictable by mental state during the climb. Future research will need to be done to confirm these findings with a large sample, on various climbs, and using indoor and outdoor facilities. A larger sample would enable researchers to investigate the unique contribution of mental states within each climbing stage to route completion, perhaps leading to more successful and intentional instruction and learning. Similar to biofeedback training in other sports (i.e., golfing; Kao et al., 2013), perhaps training for specific stages could enhance climbing performance and enjoyment for continued success over the lifespan.

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Lead author contact: Andrew-Bailey@utc.edu

Motivations, Personality Types and Fears of Long-distance Hikers

Anja Whittington, Radford University
Jay Raymond, West Virginia University

Introduction

The number of long-distance thru-hike hikers completing the Appalachian Trail (AT), a 2,190-mile foot trail in the eastern United States, has grown significantly since its inception in 1936. In the 33 years between 1936 to 1969, only 59 people completed hiking the trail. In the 2010s the rate of thru-hikers increased to approximately 8,899 (Appalachian Trail Conservancy, 2021). As the popularity of long-distance hiking increases, conducting research on this topic offers a valuable contribution to the field of outdoor recreation. Understanding hiker demographics, motivations, personality types and fears adds to the growing body of literature on long-distance hiking (Crowley, 2018; Fasczewski et al., 2020; Goldenberg et al., 2008; Goldenberg & Soule, 2014; Hill et al., 2014; Yun & Peden, 2018). The purposes of this study were to: 1) investigate the motivating factors of long-distance hiking, 2) examine the personality types of long-distance hikers, and 3) research the fears/concerns of long-distance hikers.

Methods

Researchers engaged with participants at various locations along the AT. Participants completed a survey in person or at a later date (a self-addressed stamped envelope was provided). The study was initiated in early March 2020 in Georgia but postponed due to the closure of the AT from the Covid-19 pandemic. Twenty-two surveys were collected during this time. The researchers resumed the study in 2021 in Virginia, collecting 84 surveys during April and May. A total of 106 hikers responded to this study (76 in-person, 30 mail-in). The survey consisted of a variety of closed and open-ended questions, along with a modified version of the Myers-Briggs Type Indicator (Briggs et al., 1998; Myers, Kirby, & Briggs Meyers, 2015). Closed-responses (quantitative data) were analyzed using descriptive statistics. Open-ended questions were analyzed by creating codes and themes. The open-ended personality questions were coded based on the Five-Factor Model of personality types (Costa & McCrae, 1989).

Results

Twenty-eight percent of respondents identified as female, 2% as gender other, and 70% as male. Participant's age ranged from 18 to 68 (mean=36). Ninety-six percent of participants identified as White, 54% married, 39% with family income of over $100,000, and 92% from the United States.

This study found the three main motivators for hiking the AT included physical and mental health (69%); developing relationships with friends, loved ones or others along the trail (31%); and connecting with nature (27%). Other motivators included challenging oneself (22%); reflecting on one's life (21%); being away from electronics, work, and society (18%); and feeling accomplished (17%). One participant wrote: *"getting away, the challenges and overcoming them."* Another wrote: *"personal, physical challenge, meeting new like-minded people."*

This study modified the Myers-Briggs Type Indicator to assess the personality types of long-distance hikers. Research participants chose from the following four categories where they felt their personality most aligned: Extraversion vs. Introversion; Sensing vs. Intuition; Thinking vs. Feeling; and Judging vs. Perceiving. Fifty-five percent reported Introversion, 45%

Extroversion, and 10% both. Sixty percent reported Sensing, 35% Intuition, and 5% both. Sixty-one percent reported Thinking, 33% Feeling, and 6% both. Fifty-four percent reported Perceiving, 44% Judging, and 2% both.

Participants were asked to respond to the following open-ended question: "If you had to use three words to describe yourself what would they be and why." When analyzing the open-ended responses, the researchers categorized them using the Five-Factor Model of personality types. Results included 13% Openness, 36% Conscientiousness, 16% Extraversion, 17% Agreeableness, and 6% Neuroticism. Open-ended responses provided additional insights into one's personality. One participant wrote: *"I am ambitious in this hike and my life goals. Thoughtful in observation and approach towards life. Introverted as I have a social battery which though relatively large depletes with continued social interaction.*"

In the survey, participants were asked the following questions regarding fears of long-distance hiking: 1) When preparing for your hike do you have any fears or concerns? If so what are they?; 2) Do your friends/family have any concerns about your hiking?; and 3) How do you manage/negotiate these fears/concerns? Personal fears of long-distance hikers included: injury/illness (48%), weather (14%), wildlife encounters (14%), lack of food/shelter/water (12%), failure to complete the hike (9%), other people (8%), mental challenges (8%) and running out of money (6%). Fears from family members and friends included: health and personal safety-including injuries (23%); harm from other humans (17%); and wildlife encounters-predominantly being attacked by a bear (15%). Twenty-nine percent reported that their friends and family had no fears for them. One participant wrote: *"My major fear is not being able to finish the hike due to injury or illness."* Long-distance hikers negotiated these fears in the following ways: being prepared through past experience (28%); mental awareness— "mind over matter" mentality and being aware of one's surroundings (25%); communicating with family and friends via phone or social media (23%); and educating oneself and their families/friends about backpacking and the outdoors (14%). One participant wrote the ways they managed fears included: *"proper stress management, planning, avoiding defeatism and resilience."*

Discussion

This study adds to the growing body of literature on the motivations of long-distance hiking (Crowley, 2018; Goldenberg et al., 2008; Goldenberg & Soule, 2014; Hill et al., 2014; Yun & Peden, 2018). It also examined areas that are limited in the research such as fears (Coble et al., 2003; Fasczewski et al., 2020) and personality types. Further analysis for this study will include an examination of whether gender, age, socioeconomic status, distance hiked and type of hiking (solo or in groups) alters the results in any way.

Lacking in this study is diversity in regards to race and ethnicity, socioeconomic status and non-binary gender participants. Research on diversity on the AT is limited due to lack of diverse participants—demographics of long-distance hikers consist of a majority of white and often male participants (Berg, 2015; Fondren, 2016). The researchers observed these demographics while interacting and soliciting participants on the AT to participate in this study.

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Correspondence concerning this article should be addressed to Dr. Anja Whittington, Recreation, Parks and Tourism Department, Radford University, 217 Cook Hall, Radford, VA 24142. E-mail: awhittington@radford.edu

Women's Motivations and Meanings of Outdoor Leadership: College Student Trip Leaders

Ryan K. Hines, Northern Michigan University
Denise Mitten, Prescott College

Background

Colleges in the United States have offered outdoor recreation programming for students since the early 1900s (Boettecher & Gansemer-Topf, 2015). College outdoor adventure programs (COAP) are "structured outdoor programs… that have a stated purpose and an organized curriculum aimed at providing participants with opportunities to develop outdoor skills, knowledge, and experience [which] in turn enhance judgment, a prerequisite of effective outdoor leadership" (Propst & Koesler, 1998, p. 319). COAPs often offer student-led programming for enrolled students, and they require trip leaders to acquire technical skills and develop outdoor leadership techniques related to outdoor recreation and adventure activities in order to lead them (Boettecher & Gansemer-Topf, 2015). The research presented herein is a sub-section of dissertation research findings involving student trip leaders at a COAP and considers positive factors related to women trip leaders' motivations to engage *in*, and the meanings *of,* their experiences in outdoor leadership. This research builds upon our understanding of women's motivations related to and meanings of outdoor leadership.

Review of Literature

College Outdoor Adventure Programs offer students the opportunity to participate in guided adventure activities or skills courses (Flood & Parker, 2014) such as rock climbing, backpacking, whitewater canoeing and kayaking (Hines, 2020). COAPs equip students to engage in intrinsically motivated activities occurring in a small group setting in the natural environment (Flood & Parker, 2014). Much of the existing literature related to outdoor adventure and recreation in various contexts focuses on different dimensions of the participant experience (Goldenberg & Soule, 2015), whereas few studies explore the lived experience of women engaged in outdoor leadership (Allen-Craig et al., 2020) or motivations to lead outdoor adventure activities and teach related skills (Hines, 2020). COAP student trip leaders' motivations to lead in the outdoors are, to date, not as well explored as other populations and aspects related to outdoor leadership (Hines, 2020). It has long been acknowledged that the outdoors has traditionally been a male domain (Bialeschki, 1990; Henderson, 1992; Knapp, 1985). Jordan noted that there is a clear underrepresentation of women instructors and leaders in the outdoor industry (2018). Not surprisingly, women's motivations and meanings related to outdoor leadership are not pervasive in the literature (Warren, 2015), and women who are COAP trip leaders are even less represented (Hines, 2020).

Method

This study was qualitative in method and employed a constructivist paradigm as a way to explore the lived experiences of COAP trip leaders; findings in this abstract emerged from the narratives of women research participants (n=9). In a manner similar to grounded theory methodology, this narrative analysis research intended to describe, understand, and interpret the world and lived experience of research participants (Merriam & Tisdell, 2016). The guiding dissertation research question was related to COAP student trip leaders' motivations to engage in trip leading. The findings presented here relate specifically to the open-ended research question

"Are there other motivational factors that influence students' motivations to engage in outdoor adventure leadership and leadership development in college outdoor adventure programs?". One-on-one interviews were conducted in person and via telephone. Inductive reasoning was employed in analysis; multiple rounds of open coding and frequent, intuitive, and reflexive organization of emergent themes provided the findings presented herein. Interrater review and congruence of coding and interpretations of data increased reliability and reduced bias. During analysis, based on my observation and intuition, themes were coded as "gendered-perspective" when statements or phrases such as "as a woman" were observed in participants' narratives and interpreted as being in reference to study participants' lived experience as women. Findings presented here are associated with the "gendered-perspective" code and associated themes that emerged through subsequent analysis of narratives associated with that unsolicited and unexpected emergent code.

Findings

Women study participants indicated that they were motivated to lead in the outdoors because they looked up to and had women trip leaders as mentors, friends, and guides in leadership and life. Participants indicated that they were motivated to learn from, gained confidence from, wanted to be like, and became passionate about outdoor leadership through positive interactions with other women trip leaders, who also gave them a sense that they too could lead in the outdoors. A few study participants indicated that they learned from a woman mentor trip leader how to navigate the difficulties of what they perceived to be a "male dominated industry" where it is potentially difficult to gain respect and power. Study participants also noted that they enjoyed spending time in nature and leading with other women, and thus developed an empowering, patient, and respectful, yet assertive and powerful feminine leadership style learned from other women trip leaders.

Other themes that emerged in relation to women trip leaders' motivations included a positive sense of community and positive perception of the women-dominant culture and environment of outdoor leadership at the COAP of study, where at the time of data collection, most trip leaders were women. Prominent themes also include women trip leaders being motivated to empower others in the outdoors; becoming proficient, confident, and competent at and applying technical skills; being independent; creating a safe learning environment; and demonstrating skills and abilities that they perceived to be masculine, "badassery" as one participant put it. When asked about the meaning of outdoor leadership, women trip leaders noted that being passionate, being supportive, serving others, being a good listener, fulfilling the needs of and empowering others, being humble, being a role model, caring for others, and caring about the needs of the group were important to them. Meanings of outdoor leadership noted by study participants also include being empathetic, relatable, able to accept uncertainty, building community during outdoor experiences, understanding one's abilities and limitations, role definition and clarity, and others.

Discussion

Previous related research, though limited in scope, aligns well with the current findings. Women outdoor leaders were inspired by the leadership, mentorship, and role modeling from other women leaders as has been found by others (Carter & Colyer, 1999). Women with above average outdoor abilities and skills may be perceived as being unique (McNiel, Harris, & Fondren, 2012); study participants indicated that they felt that they perceived their women trip

leaders to be unique in skill, ability, and in position of power, all motivating factors. Warren (2015) suggested democratic decision making, shared leadership, collective problem solving, and participant empowerment are attributes of feminine outdoor leadership, which are themes that are relatable to what women study participants said about the meaning of leadership in the current study. Lugg (2003) suggested that women favor activities associated with trust and relationships; study participants' motivations to lead included experiencing the outdoors as a social environment where relationships can be fostered. Women trip leaders indicated that they felt "like a badass" when they were able to achieve what they perceived to be masculine accomplishments; Wright and Gray (2013) suggested that women may feel the need to overcompensate to keep up with or outdo male leaders in order to be valued. Though the current findings related to gender are unique, the roles that gender, stereotypes, and socialization may play in relation to motivation for leadership are recommended for further research.

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Lead author contact: rhines@nmu.edu

Activity Specific Factors of Motivation for College Student Trip Leaders

Ryan K. Hines, Northern Michigan University

Background

College Outdoor Adventure Programs (COAPs) generally have an organized curriculum (Propst & Koesler, 1998) and provide students opportunities to engage in outdoor recreation and adventure activities (Flood & Parker, 2014; Hines, 2020). These programs often offer student-instructed skills courses and student-led adventure trips for enrolled students (Boettecher & Gansemer-Topf, 2015; Hines, 2020). Student trip leaders must acquire and continuously develop activity specific technical and interpersonal outdoor leadership skills in order to lead trips and instruct courses for their respective programs (Boettecher & Gansemer-Topf, 2015; Hines, 2020). This abstract represents work found in a publicly defended doctoral dissertation, of which one research question explored motivations related to student trip leaders' preferred activity or skill in the context of outdoor leadership development and trip leading.

College outdoor adventure (and similarly labelled or described) programs are an emerging yet under-explored topic of research (Hines, 2020), though literature does exist relevant to students' motivations to participate in COAP programming (Bentley, 2013; Flood & Parker, 2014; Sharp & Miller, 2008; Woodworth & Cortes, 2015; Zwart, 2016) and outcomes and benefits of COAP participation (Andre et al., 2017; Breunig et al., 2010; Harper & Webster, 2010; Lovoll et al., 2016; Shellman & Hill, 2017). Literature relevant to student trip leaders' motivations for outdoor leadership and student outdoor leadership development is not well represented (Boettecher & Gansemer-Topf, 2015; Hines, 2020; Sandberg et al., 2017; Zwart, 2016), though topics such as leadership identity development (Komives et al., 2005) and motivations for student trip leading have been explored more broadly.

Methods

The current study is qualitative in nature, guided by a constructivist paradigm (such as grounded theory methodology; Merriam & Tidsell, 2016), and intentionally and practically does not employ any theoretical lens through which to conceptualize, design, or otherwise investigate the topic of study; this study intended to build knowledge towards generating new theory. The findings presented here answer research question: Are there differences in motivations among students that specialize in or have preference for leading different skills and activities? A biographical approach to analysis was applied to the narratives of two interviews gathered from each research participant (n=11), who at the time of data collection were COAP student trip leaders who had been engaged in trip leading for at least 2 years. One-on-one semi-structured interviews with research participants were conducted, audio recorded, transcribed verbatim, reviewed for accuracy, and inductively analyzed in several rounds of open thematic coding with frequent, reflexive re-organization of themes and hierarchy of parent and child codes throughout the process. Interrater review and congruence of coding and interpretations of data increased reliability and reduced bias. Several open-ended interview questions related to activity preference and experiences in leadership and teaching were asked of participants. Responses to those questions were coded as such, and subsequent analysis of this sub-set of responses revealed three unique categories of activity of leadership among study participants; factors related to motivation for activities of leadership emerged.

Findings

Based on study participant narratives, three categories of activity were delineated, and include paddling, climbing, and backpacking. The following findings represent similarities and differences and motivation for leadership of study participants' preferred activity. Similarities that were shared among the attributes for all three types of activity include motivations related to group and individual goals, social interactions, small group setting, planning and logistics, focus on safety, camping, being in the natural environment, and travel to and from the activity venue. Opportunity for conversation and social time while not actively engaged in the activity itself was also a shared motivating factor. See Figure 1 for a visual representation of interrelationships between and among activity specific motivations of leadership in this study.

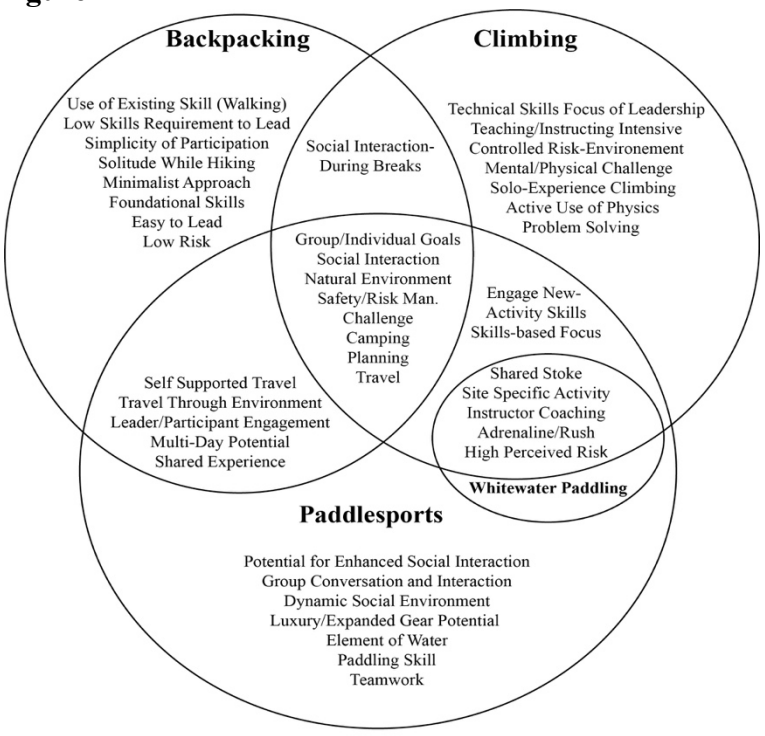
Paddlesports

Motivating factors for leadership of paddlesports include interaction with and being on the water, learning and applying new skills, teamwork, enhanced social interactions, and "more going on". Participants also noted paddle sport activities may provide greater potential for a shared experience, group conversation, and enhancement of social opportunities while engaged in the activity (on the water) such as connecting with participants and co-leaders, as facilitated by frequent opportunity to paddle side-by-side with others in the group. Also noted was the potential for one-on-one interactions, continuously changing social dynamic, and extended social interactions as facilitated by opportunities for changing the spatial arrangements of paddlers in the group under favorable conditions.

Backpacking

Motivational factors related to leadership of backpacking include few skills required to participate, the activity as a vehicle for learning basic outdoor living skills, the simplicity of the activity (walking), and ease with which study participants could learn the skills necessary to lead and teach that activity. Other attributes include physically demanding aspect of hiking with a loaded pack, being self-sufficient in the backcountry (carrying all necessary goods and equipment), necessity of a minimalist approach to equipment and food, solitude, and socializing during breaks and while camping.

Figure 1



Rock Climbing

Teaching and leadership of rock climbing has a unique set of activity specific attributes that emerged as motivating factors. Study participants who identified as climbers indicated that they enjoy the technical aspect of rock climbing, solving mental puzzles, the highly physical nature of the activity, and that in teaching and

leadership of climbing they are engaging participants in a highly controlled environment. The ability to use knowledge of physics and science as applied to climbing safety and use of technology to be in control of participant safety and learning were also noted. Other factors include use of technical equipment and teaching technical skills.

Discussion

Study findings are relevant to motivations for leadership in the population of study, though all relatable studies found through a post-finding search and review of literature detail factors of motivation for participation in different activities, not of leadership, as is reflected in this discussion. Gilbertson and Ewert (2015) noted that the challenges in determining motivations for participation in adventure activities include the dynamic nature of motivation which may vary between activities, which is supported by the current findings. As was first suggested by Hull, Stewart, and Young (1992), the findings of Ewert et al. (2013) and the current findings support the concept that for different activities, there may be different sets of motivational factors that are dependent upon the attributes or characteristics of the activity as well as potential influences of the differences among them.

For example, Ewert et al. (2013) found that social motivations were the highest predictors of all group membership among climbers, canoeists, sea kayakers, and whitewater paddlers. Gilbertson and Ewert (2015) interestingly and relatedly found that socially motivated adventure activity participants tended to choose canoeing over rock climbing; study participants indicated a more pro-social environment as a motivational attribute of paddlesports. Attributes of backpacking that align with study findings include being self-sufficient in nature, minimalist living, and social components (Bolduc, 1973). Control Theory (Weiner, 1992) suggests that locus of control is a determinant of expectancy of success. Carney (1971) suggested that in adventure recreation, control is highly valued and relates to motivations of climbing instructors in this study because of the ways in which they noted that they are motivated by their ability to control the learning environment and safely manage risk through knowledge and use of physics, safety systems, and climbing technology.

Given the clear lack of literature on the topic of motivations of outdoor leadership, broadly, more study is recommended to learn more about what motivates those who lead and teach in the outdoors, including college student trip leaders and other niche study populations. It is important to build upon our limited understanding of what motivates outdoor leaders to teach and lead in their respective skills of expertise and respective disciplines. Further study on the aforementioned and other aspects of outdoor leaders, such as lived experience, is recommended.

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Lead author contact: rhines@nmu.edu

Why Take a Chance:
Towards a Framework for Motivation in Outdoor Adventure Activities

Alan Ewert, Indiana University
Curt Davidson, California State University, Long Beach
Ryan Zwart, Montreat College

Background and Theoretical Framework

One of the interesting behaviors practiced by citizens across the globe is the pursuit of outdoor recreational activities featuring elements of personal risk and danger. These types of activities are now becoming a mainstay for many individuals, economies, and organizations. This study examined the underlying motivations and subsequent behaviors associated with risk-taking recreational activities. We used eudaimonic and hedonic motivational concepts to explore the reasons for individuals' participation in three different adventure activities occurring in eight different locations. Recruitment took place in several forms, including in-person solicitation of participants at the activity areas, which consisted of mountain biking trailheads, rock climbing areas, and whitewater sites. Data were collected from three popular outdoor adventure activities (OAAs), including mountain biking, rock climbing, and whitewater boating. Preliminary analysis employed the use of multivariate analysis of variance (MANOVA) to investigate the relationship between two independent variable sets, including (1) the activity type and (2) level of experience, gender, type of activity, and the dependent variables of the Hedonic and Eudaimonic Motives for Activities (HEMA) scale (eudaimonic and hedonic). In addition, a cumulative odds ordinal logistic regression with proportional odds was utilized to determine the effects of expertise level and activity type on reported eudaimonic and hedonic motivations. Finally, a qualitative interview process was utilized to investigate further participant responses surrounding eudaimonic and hedonic motivational perspectives.

Motivation is defined as a process that initiates, guides, and helps maintain a goal-orientated behavior (Lee, Rutkowski, & Ewert, 2020). In addition, Lee et al. suggest three components comprise the motivation complex: (a) the activation of the specific motive, (b) the persistence of that motive, and (c) the intensity of that motive. Manning (2011) points out that research on motivation in outdoor recreation has consisted of four levels: activities, settings, types of motivation, and benefits. This study focused on the benefits of participation in outdoor recreation by looking at the concepts of eudemonics and hedonics. Hedonic motives involve pleasure-seeking and comfort, while eudaimonic-derived motives are focused on factors such as self-expression or feelings of self-realization (Anic', 2014). Huta and Ryan (2010) further suggest that hedonic motives are related to subjective well-being (e.g., positive affect and carefreeness), while eudaimonic motives are more related to meaning. Given the rapid growth of OAA activities such as rafting, climbing, and adventure tourism, the results of this study may be useful in providing a deeper understanding of the behaviors associated with the reasons people engage in these types of behaviors.

Methods

This study incorporated a quasi-experimental design. Recruitment occurred in several forms, including in-person solicitation of the potential participant at the activity area, such as mountain biking trailheads, rock climbing areas, or whitewater put-in sites. Participants were approached at these locations and initially asked if they considered themselves to be a "rock climber," "whitewater paddler," or "mountain biker." If a potential respondent agreed to

participate in the study and was at least 18 years old, the researcher briefly explained the study, its purpose, and the voluntary nature of participation. Data were gathered from sites in the southeastern and Midwestern United States, including Kentucky, North Carolina, West Virginia, Michigan, and Indiana. Participants were asked to complete the 9-item Hedonic and Eudaimonic Motives for Activities (HEMA) questionnaire (Huta, 2016). The HEMA scale prompts participants by asking, "To what degree do you typically approach your outdoor recreation activities with each of the following intentions, whether or not you achieve the aim?" Study participants then ranked the following motives on a 7-point Likert-type scale from 1 (not at all) to 7 (very much). Four motivations were eudemonic-based, and five items had a hedonic focus. Participants agreeing to the study were randomly selected to participate in semi-structured interviews with interviews ranging from 15–30 minutes long. The number of interviews conducted included 10 rock climbers, 10 whitewater paddlers, and 13 mountain bikers.

Results

A total sample size of $n = 288$ resulted in a breakdown of $n = 92$ participant rock climbers, $n = 79$ whitewater boaters, and $n = 117$ mountain bikers. In addition, the data resulted in 180 males and 103 females. Using MANOVA, there were no significant differences identified between the different types of OAAs as well as differing levels of experience (i.e., mountain biking, rock climbing, and whitewater boating) and the reported eudaimonic and hedonic motivational tendencies. Although not significant, males reported higher hedonic means (4.37) than for eudaimonic motives (4.15). Likewise, females reported higher hedonic mean scores (4.31) when compared to eudaimonic means (4.19). This finding diverges from previous research where females generally reported higher levels of eudaimonic-oriented motivations when compared with males (Ewert et al., 2013). Moreover, it is interesting to note the similarity in the mean scores for both females and males.

Using a cumulative odds ordinal logistic regression with proportional odds, the variable, *expertise*, had a statistically significant effect on the prediction of whether someone reported hedonic or eudaimonic types of motivation (Wald χ^2 (2) = 7.163, $p = 0.028$). Data from the qualitative analysis indicated that hedonic types of motivations were usually expressed by users who were reporting their motivations during the activity, while eudaimonic responses were largely reported by users ascribing meaning from their experience after the activity, either recalling the experience on their own or in their social circles.

Discussion

The data from this study suggest that both levels of experience and time for reflection result in a greater propensity to gravitate toward eudaimonic motives. We offer a potential but partial explanation that suggests that greater experience and time for reflection allow participants to better understand how the activity impacts their lives beyond a short-term, exciting experience. Zajchowski, Schwab, and Dustin (2017) expand on this contention and place it into a leisure context. The reflective self is part of the individual that evaluates what they have experienced. Consequently, from the eudaimonic and hedonic perspectives, in this study, the data suggest that individuals may be influenced more by hedonic motivations rather than eudaimonic motives. Conversely, when they think back on the experience, they tend to express a more eudaimonic motivation perspective. Thus, depending on whether an individual is thinking more immediately or more reflectively after the activity, the timeframe they find themselves in may influence whether they will evaluate their motives as eudaimonic or hedonic. These findings can

factor into how OAA experiences are designed. One such consideration would be to incorporate specific space and time for participants to make meaning from the OAA engagement and may result in a more impactful and higher quality experience. Further, understanding motivation and activity selection can assist in understanding the satisfaction of recreational experiences for individuals.

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Lead Author Contact: Alan Ewert aewert@indiana.edu

Research Presentation Session V:
The Profession

Saturday, February 12, 2022
4:15 – 5:50 p.m.

Private Property, the Commons, and Sustainable Outdoor Adventure Education

Paul Stonehouse, Western Carolina University

Traditional expressions of Outdoor Adventure Education (OAE) face two significant challenges: 1) the need to serve broader, especially lower socioeconomic, portions of the population (Breunig, 2019; Warren et al., 2014); and 2) in light of global warming (Masson-Delmotte et al., in press) and the environmental crisis more generally, the imperative to provide our education through sustainable means. To address these challenges, I have argued (in press) for the urgency to adopt sustainable (socially, financially, and environmentally) OAE practices, suggesting that we need to "transition" (Hopkins, 2014) to programming that privileges: local landscapes, far more often, as a way of life (Henderson & Vikander, 2007).

Further questions arise, however, when we try to put this tripartite recommendation into practice. Chief among them is how we might gain access to these local landscapes, especially those on the outskirts of more urban areas, when so many of them are tied up in privately owned holdings. Some 60% of the US is owned privately (more if we exclude AK), and this percentage rises distinctly as one approaches more populated regions. Since purchasing local tracts of land for educational use is a financial impossibility for most OAE programs, a viable solution is to approach individual landowners to gain permission to use their lands for educational ends. This rather intimidating solution will require a significant relational investment from both the educator and landowner, and a commitment to the long process of gaining one another's trust through sustained, civil discourse. While trust cannot be won on argument alone, these discourses would be well-served by an informed perspective on the history, legal status, and moral foundation of private property. What this perspective will reveal is a rich and storied U.S. history of legal public access to privately owned land, and a long-held moral commitment of our species to holding natural resources in common. This present abstract, then, aims to examine the history, legality, and moral foundation undergirding private property and the right to access, sometimes called the "freedom to roam." As such, this abstract serves as the next conceptual step in OAE's transition towards sustainable practice.

Freyfogle (2007, p. xiv), a property law expert, notes the common understanding of private property mistakenly assumes it is an inalienable right (like freedom of speech). Instead, he claims it would be more accurate to describe it as a socially malleable construct that society uses to promote the common (view of the) good. Far from being a static, timeless right, any image of ownership necessarily reflects the dominant values of a culture, and in the U.S., our culture has been dominated by a market ideology, which has dually encouraged a right to enclose privately held lands and a right to work them intensively (see also p. xvii). This right to enclose, even unoccupied and undeveloped private land, has placed undue stress on our public lands to support the recreational needs of an increasing population. Our public lands are overrun, especially parks near population centers like Great Smokey Mountains National Park, which receives some 12 million visits per year, and now suffers from "smoke" (smog) of a different nature (Air Quality, n.d.). Currently, 80% of the U.S. lives in an urban area, and this percentage is slated to climb considerably (Urban Areas Facts, n.d.). While an obvious solution to this recreational crisis would be to "buy more public land," trends in large-parcel private ownership, exorbitant costs for the Park Service (to name one agency) that is already 12 billion behind in deferred maintenance (What is Deferred Maintenance?, n.d.), and a neo-liberal emphasis on smaller governmental spending all make this "solution" inviable. All is not lost, however! As Freyfogle notes, private property is a social construct that we created; it can be changed to

something else. In fact, a quick survey of historical orientations toward property reveals a promising path where natural resources were managed in a collective manner and shared as a "commons."

Bollier (2014) provides this history, acknowledging that the very notion of "property" is foreign to many indigenous communities, where the world itself is seen as a commons (see p. 102). Regarding written records that discuss property, Bollier (2014, p. 89) mentions the Roman Empire, which, in 535 CE, proclaimed *res communes* (a law stating that air and water were to be held in common). Bollier (2014) continues, noting the commoners' right to subsistence on privately owned lands protected under the Magna Carta in 1215 CE, and just a few years later, the Charter of the Forest, which "recognized the traditional rights of commoners to use royal lands and forest" for their needs (p. 89). Freyfogle (2003), in another work, picks up this history of the commons in America, noting that in the Antebellum period (1832-1860) land owners lived by a long-standing doctrine of "*sic utere tuo ut alienum non laedas*" or "use your own [land] so as not to injure another" (p. 5), which limited their right to exclude, and thereby provided commoners access to firewood, berries, hunting and grazing. While nearly unfathomable to our modern notions U.S. property, we must remember that the country's founding was a retaliation against the perceived maladies of English governance, with its aristocratically legislated enclosures and clearances within Wales, England, and Scotland (depicted in films like Rob Roy and Braveheart). Indeed, as Appleby (1982), a historian, remarkably holds, Thomas Jefferson's view was that governments "did not exist to protect property, but rather to promote access to property" (p. 297). This American commitment to the commons appears to have held until after the Civil War when Southern landowners, wishing to functionally "recapture" freed slaves, enacted trespassing laws that prevented common access to private property for subsistence, thereby sending many freed, but hungry and unemployed, slaves back to their former owners for work (Ilganus, 2016, p. 119). Additionally, technological advancements made fencing more available, and increased industrialization urbanized the public, leaving fewer people to advocate for access to rural lands; in the wake of this advocacy void came further legal protection for the right to exclude.

With the DNA of the country rooted in a commitment to the commons, and our notion of private property a construct that mirrors current values, could the U.S., especially its younger generations with their emphases on ecological health and the sharing economy, return to a more common view of property, and thereby begin to (re)open our local lands for respectful recreation? Bollier (2014, p. 43) believes this transition from consumer to commoner is possible! As justification, he (pp. 26-33) references the life-time effort of Ostrom, a political scientist, who studied commons across the world, and discovered hundreds of contemporary examples where communities are collectively sharing resources in a cooperative fashion. Recent findings in the evolutionary sciences similarly provide promise and suggest that cooperation is a natural process. Bollier (2014, p. 83) contends that scientists are increasingly finding evidence for cooperation within competition. Nowak (2006), a theoretical biologist, goes as far as suggesting we might add "natural cooperation" to the more common notions of mutation and natural selection. In fact, we can find cooperative promise within our own recreational community, as organizational commons like www.warmshowers.org, a free hospitality service for bicycle tourists, continue to emerge.

As noted at the outset, this abstract is part of a broader project agenda that seeks to transition OAE towards more sustainable practices. Beyond this current effort, the next phase of this research process is an empirical one. I wish to interview local landowners regarding their

motivation for enclosure, their fears about trespass, and their sense of legal rights and protections. Evaluating these local landowner perspectives in light of the historical, legal, and moral notions of private property unearthed in this present abstract's research, I hope to discover: 1) the barriers preventing landowners from welcoming recreation on their lands; and 2) recommended practices when approaching landowners for access.

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Correspondence concerning this abstract can be addressed to Dr. Paul Stonehouse, Department of Human Services, Western Carolina University, Cullowhee, NC 28723. Email: pstonehouse@wcu.edu

The COVID-19 Effect: Examining Organizational Resilience in OAEE

Forrest Schwartz, Ph.D., Prescott College (forrest.schwartz@prescott.edu)
Erik Rabinowitz, Ph.D., Appalachian State University (rabinowitze@appstate.edu)
Alan W. Ewert, Ph.D., Indiana University (aewert@indiana.edu)
Aaron M. Leonard, Prescott College, Sierra Club (aaron.leonard@sierraclub.org)
S. Anthony Deringer, Ed.D., Texas State University (anthonyd@txstate.edu)

Introduction

The COVID-19 (Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)) pandemic has impacted much of society, including those organizations involved in the fields of outdoor adventure and experiential education (OAEE). Worley and Jules (2020) describe the term VUCA to characterize the ways in which the COVID-19 pandemic has presented challenges for organizations such as those in OAEE. That is, the virus has presented OAEE organizations with an environment which is Volatile, Uncertain, Complex, and Ambiguous. In addition, the OAEE fields are particularly vulnerable to a variety of external factors including natural disasters such as wildfires and severe storms, economic downturns, and increasing restrictions on the availability of permits. Given that there are many different types of crises, and each event is likely to be unique, it is important to document as much information as possible to help the OAEE fields to become better prepared for future possibilities (Yeh, 2020). As OAEE organizations emerge from the pandemic, an examination of OAEE organizational resilience and organizational recovery is therefore essential to facilitate knowledge to deal with future challenges and issues.

Literature Review

Organizational resilience is a combination of two approaches: 1) the strategies an organization develops to resist potential unknown stress, and 2) how the organization responds to stress after an organizational crisis is recognized (Wildavsky, 1988). Researchers and practitioners have since refined Wildavsky's definition of organizational resilience, identifying a number of environmental variables and describing the subsequent methods to achieve organizational resilience (Norris et al., 2008). Resilience and crisis are entangled, overlapping and comprised of variables dependent on the crisis as well as variables that organizations may or may not be able to influence prior to and during the crisis (La Porte & Consolini, 1998). Resilience and crisis are often observed in two overlapping time samples: pre-crisis and crisis. Staff training, environmental awareness, professional network strength, internal awareness, ability to improvise or flex, and leadership development are all strategies to mitigate the effects of a crisis. Organization recovery may occur during or post-crisis and begins as program managers first identify and implement structured responses within the chaos of a crisis, stop the downward trend within their organization, and begin to build a path toward a semblance of normalcy (Kendra & Wachtendorf, 2003). However, it is important to recognize that OAEE organizational recovery is complex, not solely outcome-driven, and may result in many new and possibly innovative solutions. Returning to the status-quo is likely not feasible given the emerging post-pandemic environment.

Methods

Data for this study come from Phase 4 of a parent study examining the impacts of the COVID-19 pandemic on outdoor adventure education fields (OAEE) (Leonard et al., in press). Data were collected via online survey and examined at three points: 1) pre-pandemic; 2) pandemic; and 3) post-vaccine rollout (PVR). In this way we organized our observations and

began to make meaning of the complex set of variables that impact an organization's resistance to a crisis as well as how organizations begin to recover. In Phases 1-3, both quantitative and qualitative data collection techniques were employed to identify the on-going impacts of the pandemic on a sample of OAEE organizations (Leonard, et al., 2021). In Phase 4, we examined organizational characteristics in an effort to identify practices associated with crisis resiliency as the OAEE fields transition to a PVR setting and beyond. The following two research questions guided the current study:

RQ_1: What organizational practices are most associated with organizational resilience in regard to the impacts of the COVID-19 pandemic?

RQ_2: Are there significant differences in how respondents perceive their organization's resilience when comparing across evaluations of pre-pandemic, during, and post-vaccine rollout practices?

Findings

A repeated measures ANOVA was conducted to test differences in resilience from pre-pandemic, during-pandemic, and PVR. Results suggest a significant difference among groups, $F(2, 46) = 5$, $p = .009$, $n^2_p = .10$. Specifically there was a significant decrease in resilience from during-pandemic ($M = 2.33$, $SD = .73$), to PVR ($M = 2.09$, $SD = .79$), $t(46) = 4.48$, $p < .001$. However, there were no significant differences from pre-pandemic ($M = 2.14$, $SD = .66$) to during-pandemic, $t(46) = -1.80$, $p = .18$, and pre-pandemic to PVR $t(46) = 1.02$, $p = .57$ (see descriptive statistics). Additional factors found to be associated with organizational resilience include size of organization and years in operation. Further, the scale developed to measure organizational resiliency shows strong reliability measures and shows promise as a tool for assessing organizational resiliency.

Discussion

There can be little doubt that the COVID-19 pandemic has impacted the OAEE fields, often in dramatic and very real terms. Program closures, staff reductions, and a significant decrease in enrollment all followed the emergence of the pandemic. In this study, the impacts of COVID-19 in OAEE were examined over a three-year timespan (2019-2021). We examined organizational resilience and recovery, identifying specific actions that organizations took while emerging from the pandemic that may help the broader OAEE fields to better prepare for the unknown stressors of the future.

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Lead Author Contact Info:
Forrest Schwartz, Ph.D.
Email: forrest.schwartz@prescott.edu

Overview of the Current Landscape of Outdoor Programs in Higher Education

Jeff Turner, Georgia College and State University
Jeremy Jostad, Eastern Washington University
Elizabeth Andre, Northland College
Brent Bell, University of New Hampshire
KC Collins, Brevard College
Kellie Gerbers, Westminster College
Will Hobbs, Brevard College

Background

There is a need to better understand the current landscape of outdoor academic programs in higher education within the United States. The changing nature of higher education (e.g., tuition increases, enrollment declines, rise in online education, budget reductions) may impact outdoor programs differently than other traditional academic programs (Li, 2017). Outdoor programs are not a staple within every university program array, but outdoor programs play a vital role in the knowledge and professionalism of the outdoor industry (Taff et al., 2016).

Recent investigations into the value of an outdoor college degree identified 96 potential programs via public membership lists, directories, and professional networks (Seaman et al., 2017). Publicly available, federal data through the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS) identifies 23 institutions granting Bachelor's degrees in Outdoor Education and 240 institutions granting Bachelor's degrees in the broader area of Parks, Recreation, and Leisure. At the community college level, 30 outdoor leadership academic programs were identified from 1,023 total community colleges across the U.S. (Bell et al., 2020). However, a census of outdoor academic programs at four-year universities across the United States has never been conducted and is needed to understand the current landscape of these programs.

Methods

The population of higher education institutions was determined from data available through IPEDS, which includes data from all higher education institutions that participate in or are applicants for participation in any federal student financial aid program (such as Pell grants and federal student loans). For the purposes of this study, institutions with outdoor programs were included if they met the following criteria: 1) are based in the United States (including all 50 states and the District of Columbia, but excluding institutions based in US Territories), 2) are either public or non-profit private (excluding for-profit), 3) offer Bachelor's degrees (institutions offering only Associate's or graduate-level degrees were excluded), 4) admit first-time, degree-seeking students, and 5) are residential (institutions offering instruction solely online or through other forms of distance education were excluded). A total of 1,486 institutions were identified for inclusion in the study. During the search, four institutions were determined to have recently closed or merged with another institution leaving 1,482 institutions included in the analyses. Institutional characteristics data were obtained via the self-reporting of each institution to IPEDS and were available for at least 90% of institutions for each variable.

Researchers identified an online listing of academic program offerings for each institution. Program names were searched for any of the following six terms: adventure, challenge, expedition, experiential, outdoor, and wilderness. Any program major, specialization within a major, minor, or certificate program with any of these six terms was recorded. The

initial search was conducted between February and April, 2021. A follow-up of identified programs was conducted by two separate researchers in September 2021 to confirm the initial findings.

Results

Results show that outdoor academic programs were found at 128 (8.6%) of the 1,482 institutions. Of these, 58 institutions had an outdoor major (three of which had two separate programs) and 48 of these also had some form of specialization, minor, or certificate in addition to the major. The remaining 70 institutions did not have an academic major, but did have a specialization within a non-outdoor major (e.g., Parks and Recreation), a minor, or a certificate.

There was a great deal of diversity in the names of the 58 academic majors. The most common terms from the search list were outdoor (45 programs) and adventure (16 programs). Experiential, expedition, and wilderness were each used by a single program. Challenge was not used in any of the program names. The terms education (22 programs), recreation (21 programs), leadership (19 programs), and management (10 programs) were also commonly used. Terms used in the names of specializations, minors, and certificates were generally found at the same rate as in majors. Recreation was included in the name of 29 of the 35 non-outdoor majors that had specializations.

There was also great diversity in the types of institutions that provide outdoor academic degrees. Programs were more common in public institutions (82/564, 14.5%) than in private, non-profit institutions (46/908, 5.1%). Outdoor academic programs were more common in institutions that grant graduate degrees (120/1254, 9.6%) than in baccalaureate granting institutions (8/218, 3.7%). Programs were more common in land grant institutions (9/79, 11.4%) than in non-land grant institutions (119/1393, 8.5%).

Geography, based on regions according to the Bureau of Economic Analysis, was also an important factor. Programs were most likely in the Rocky Mountain region (CO, ID, MT, UT, WY; 18/46, 39.1%). The other regions were more consistent with each other, but the Far West region (AK, CA, HI, NV, OR, WA; 20/139, 14.4%) was slightly more likely to have programs than the Southeast region (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV; 39/390, 10.0%) and the New England Region (CT, ME, MA, NH, RI, VT; 12/126; 9.5%).

Institutions with outdoor academic programs have slightly lower median retention rates (75% versus 76%), slightly lower median six-year graduation rates (53% versus 54%), and lower median endowments per enrolled student ($9,494/student versus $17,029/student). They tend to admit a higher percentage of applicants (78% versus 70%), and a slightly greater percentage of admitted students actually enroll (25% versus 24%).

Institutions with outdoor academic programs have a greater median percentage of white students (69% versus 60%). Of note, no Historically Black Colleges and Universities (HBCUs) have an outdoor academic program. Institutions with outdoor academic programs are generally the same as those without in terms of the median percentage of women enrolled (57%).

Discussion

This is the first time a national census has been conducted on outdoor university academic programs. The purpose of this research was to identify the number of programs, location of programs, and institutional characteristics for those who have these programs. While the Rocky Mountain region has the highest average percentage of programs, it is important to note this is a result of the low number of higher education institutions in this region. If simply

looking at numbers of programs per region, the Southeast region has the highest number (39) of programs. Another interesting finding is that universities with outdoor programs are typically found at land grant institutions, those that provide graduate degrees, but also have lower median endowments per enrolled student. These data suggest outdoor programs are more prevalent at four-year comprehensive regional public institutions than private or research focused public universities.

This initial research is the first step into better understanding the current state and structure of programs throughout the United States. Future research is needed to better understand the curriculum, number of students and faculty, recent or historical changes, and immediate challenges facing these programs. These types of indicators will help academics, practitioners, and students understand the current state of outdoor academic programs in the United States.

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Correspondence concerning this article should be addressed to Dr. Jeff Turner, Georgia College and State University; E-mail: jeff.turner@gcsu.edu

Navigating the Professoriate in Contemporary Academia:
A Co/Autoethnography of Seven Outdoor Educators/University Faculty

Dan McCole, Michigan State University; Andrew J. Bobilya, Western Carolina University;
Betsy Lindley, Utah Valley University; Tom Holman, Southeast Missouri State University;
Paul Shirilla, University of Wisconsin-River Falls; Jeff Jacobs, Camp Henry;
Leo H. McAvoy, University of Minnesota (Retired)

This co/autoethnographic study examines the impacts of a unique Community of Practice comprised of seven outdoor educators/university faculty over a 20-year period. It aims to better understand the ways and reasons Communities of Practice such as this can address many of the challenges faced by faculty in contemporary academia. Life in academia can be very difficult, especially for early career faculty. Studies have increasingly shown high stress levels among faculty (e.g., Bira et al., 2019), with the causes attributed to the progressive administrative requirements of academic work, unrealistic research and grant expectations, and 24-7 engagement with colleagues and students via email (Bira et al., 2019). Austin and Sorcinelli (2013) note that the very nature of teaching, learning and scholarship has changed, and that the emergence of a more diverse student body, while a positive development, requires more faculty support.

Irrespective of the reasons, faculty stress has been shown to impair productivity and job performance (Eagan & Garvey, 2015), and lead to exhaustion, lack of energy, feelings of low personal accomplishments (Sudatta & Payal, 2016), detachment and isolation (Jackson et al., 1986), and feelings of pessimism, cynicism, and disillusionment (Boug-Carter, 2013). Moreover, faculty stress seems to be worse in early and mid-career with studies showing higher rates of stress among early career faculty (Schindler et al., 2006) and associate professors (Wilson, 2012). Researchers have explored factors that offset the challenges facing faculty including workplace well-being and the importance of social interactions. Although many have a tendency to keep their professional and social circles separate, there is growing evidence that one's work and personal life can be successfully integrated and even enrich each other (McNall et al., 2010). A recent study representing a variety of industries found that professional success depends as much on relationships, both in and outside of work, as on the job itself (Cross, 2019). In addition, mentoring programs have been adopted throughout academia as a way to combat many faculty stressors (Rees & Shaw, 2014). Unfortunately, common mentoring in academia is a hierarchical dyadic one where early career faculty are paired with a more experienced professor. Although these mentoring relationships have benefits, their success is highly variable with many faculty mentees reporting unmet needs for personal and professional development (Sambunjak et al., 2010). Many faculty members have turned to peer mentorship as an alternative, or complement, to dyadic mentoring relationships (Johnson et al., 2011). Peer mentorship offers the advantage of shared generational values, the absence of power differentials, peer groups that provide a nurturing environment, and safe place to share personal concerns (Angelique et al., 2002). One place faculty can look to provide peer mentorship and social interaction is through Communities of Practice (CoPs).

CoPs bring together people who engage in a process of collective learning on specific topics, with the objective of having members advance their understanding or personal development in ways more effective than they could individually. The theoretical recognition of CoPs first originated with the work of Lave and Wenger (1991). CoPs are an application of social learning theory, whereby learning does not rest solely on an individual, but is instead a social process situated in a specific context. Defining characteristics of CoPs include the intentional and ongoing gathering of the community over a long period of time, and members who are practitioners of something that offers opportunities for learning and personal development. Because the goal is to connect members who engage on specific issues, CoPs have been shown to reduce isolation, address the need for longer-term maintenance of professional momentum, and provide opportunities for peer mentorship (Wisker et al., 2007). For these reasons, CoPs are particularly well-suited to address the challenges faced by early and mid-career faculty members. The CoP represented in this study began in 2000 and included six graduate students and one faculty member/academic advisor. We developed our relationships as we co-instructed courses, socialized

outside of the university, collaborated on research projects, and participated in professional conferences – the first of which was the Coalition for Education in the Outdoors (CEO) Symposium held in 2002.

Methods

This study employed an co/autoethnographic approach (Taylor & Coia, 2009) whereby we interrogated our experiences as members of this unique CoP cultivated over 20 years and the important role of this group in helping us as outdoor educators and faculty members. Co/autoethnography uses the autobiographical elements of self-narrative and expands its effectiveness by engaging participants in written exchanges and dialog about their individual stories. We are both insiders and outsiders composing our autoethnographies together to enhance our understandings of ourselves and others (Taylor & Coia, 2009). We are the authors and members of the CoP and are part of what we are studying, and thereby we become reflexive narrators of self (Butz & Besio, 2009). We have been discussing our experiences in this CoP over the past twenty years and in 2021 we decided to engage in this co/autoethnography to more intentionally reflect on our experiences. The members of this CoP were asked to respond to the following question by writing a 1,500-word reflective essay, "Why and/or how has our L.E.O. group impacted you personally and professionally over the past 20 years?" L.E.O., Leisure and Education in the Outdoors, is the name that our CoP took on. After each member submitted their reflection, all essays were distributed to the group. Members read each other's essays and considered themes that emerged across essays as well as individual stories. We then gathered for a two-hour video call to discuss our stories, emergent themes, and recommendations for others interested in developing a similar CoP. Following this call, the recording was sent to all members, and three members of the CoP met to synthesize the discussion and document characteristics of themes. A list of themes that emerged from the essays and the video call were sent to the CoP. Members were asked to review the video and their own essay and provide excerpts from their stories in support of each theme. The themes and some excerpts are included here. It is important to note that the goal of this co/autoethnographic project was not to reduce the individual stories into thematic categories, thereby risking losing the voice and perspective of the individual. We attempt to represent both the individual and collective voice of this CoP and recognize that in doing so, both may be compromised.

Results and Discussion

The following themes emerged as we considered why and/or how our group has impacted us personally and professionally over the past 20 years. This CoP has a) enhanced our professional development; b) provided opportunities for shared play; c) been maintained and enhanced because of ongoing commitment, and d) been a group unlike any other; all of which has resulted in a community of care. ***Professional Development*** was described as a shared goal that has led to collaboration on research, conference presentations, and publications. These in turn have led to members feeling that our CoP has enhanced their careers through annual evaluations, promotions and tenure decisions. A spirit of cooperation, rather than competition, has also been important to our professional productivity. Leo shared, *"Being a young professor starting out as a teacher, scholar, and advisor can be stressful. There are a number of demands made on professors to produce more and more with less support and resources. This group has always been available to support each other in times of personal and professional stress."* Dan shared, *"Beginning in grad school, our group somehow slipped into a culture of candid feedback that improved our work."* ***Shared Play*** has enhanced acceptance, understanding, trust, willingness to be vulnerable, and cooperation for our group. Play involves actual play (cards, adventure trips, etc.), as well as a playfulness that is present in all of our interactions. Tom shared, *"I have a lot of fun with my friends from L.E.O.!...I plan for a fun adventurous time together and look forward to each one of them."* Paul reflected, *"We always make time for outdoor play and fellowship. One of the most rewarding experiences has been shared trips with our children…We've shared several outdoor trips together that are the most formative experiences of my children's lives. They, and their families, have become an integral part of my personal life."* Dan shared, *"I used to think that the recreational aspects of our gatherings were important to get everyone to show up. That is important, but over time, I've learned that high quality professional relationships require trust, respect, willingness to be vulnerable, enjoyment of each other,*

etc. It's much easier to develop those things while playing together." ***Commitment*** is a vital attribute of our COP's success and is demonstrated in several ways including: commitment to overcome obstacles to gather together, commitment to each other and to support each other in times of stress, commitment to not let each other down, and in the outdoors, commitment to each other's safety. Andrew shared, ***"****No matter where members of this community gather and for what purpose, I will go out of my way to be there…The benefits I have received from this community are only present, I believe, because everyone contributed. We are all in!* Betsy shared, *"I believe we all recognize the importance of this group…I have always believed that people find the time for what is important to them. We have consistently found the time."* ***A Group Unlike Any Other*** means that this group is unique compared to other groups of which we are a part. Other groups share some of the qualities of our group, but none share ALL of the following: we endured hardship together (graduate degree); we blur the lines between professional and social; we don't interact daily, but have been engaging and producing outputs together consistently for 20 years; we are not geographically proximate or part of the same organization, but we understand each other's professional challenges; we take trips together with loved ones; and we share an appreciation for the power (and legitimacy) of outdoor education. Paul commented, *"I learned how to speak about what I do from my L.E.O. community. It is incredibly important to have people in my life who truly understand what I do. They are the ones I reach out to when I have uncertainties in my classes that no one on my campus would understand…They validate the work I do to impact the lives of others through outdoor experiences. That will always be enough for me."* Finally, these and other characteristics have contributed to what we call a ***Community of Care*** which has all of the elements of a Community of Practice, but with deeper friendships and a stronger personal investment in each other. Andrew commented, *"These are the kind of people I want to be around. Because they build me up. They listen to me. They treat me with respect. I can be real."* And Paul shared, *"Without my L.E.O. community I would feel incredibly isolated and misunderstood in my professional life. It is incredibly comforting to know that I have a group of people who care deeply about me personally and professionally. I know that I am never alone.*" Jeff shared, *"I don't think I knew or fully understood what a unique and special group of colleagues I had while going through the graduate school process. Yet, looking back it is apparent that the seeds that were planted in the classrooms at the University of Minnesota, and along the shores of the Boundary Waters, hit fertile soil and our roots have become intertwined and made each of us stronger as we gird up and support one another."* Finally, Leo reflected, *"The members of this group respect and care about each other a great deal, and treat each other with kindness and understanding. We are always excited about seeing each other and being together. We laugh when we are together. We laugh a lot! After I retired I was wondering if I would find a group of like-minded folks who liked to work and play together. This group provided that for me. It is a wonderful blend of personal and professional stimulation for me. A group of kind, respectful, fun, caring, capable people who care for me, for each other, and for our field."*

It's difficult to know how our CoP helped us to navigate the stressors facing faculty in contemporary academia, but each of us seems to agree that it did help. Our CoP helped us professionally, through collaborations which generated at least 23 journal articles, three book chapters and 40 conference presentations. The peer mentoring also helped each of us navigate professional challenges along the way. Most importantly, though, has been the deep friendship that we have developed over many years that has improved the quality of our lives. Our experiences support the importance of developing meaningful relationships that cross personal and professional boundaries as represented in a CoP (Cross, 2019; McNall et al., 2010; Wisker et al., 2007). As Tom shared, *"I probably could have navigated academia without this group, but I wouldn't have enjoyed it nearly as much."* These reflections lead us to offer suggestions for others interested in cultivating similar CoPs: a) be intentional, b) gather in person; c) foster play; d) have a committed mentor(s); f) candidly share challenges and needs; and g) identify projects that help members in ways they need help. This co/autoethnography may be an encouragement to faculty to cultivate similar CoPs as well as assist others to intentionally support such efforts.

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Correspondence concerning this article should be addressed to Dan McCole at: mccoleda@msu.edu

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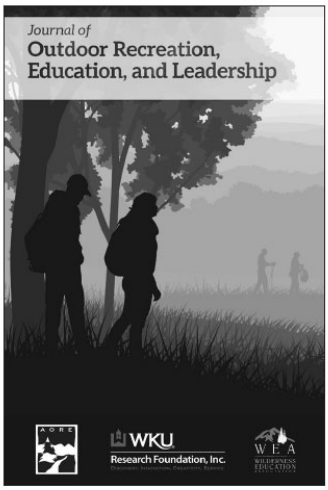
Special Issue–Call for Papers



Special Issue: Coalition for Education in the Outdoors (CEO) 15th Biennial Research Symposium

Deadline: March 15, 2022

Guest Editors
Andrew J. Bobilya, PhD
Lisa Meerts-Brandsma, PhD
Jayson Seaman, PhD

A forthcoming (fourth quarter 2022) special issue of the *Journal of Outdoor Recreation, Education, and Leadership* will feature full-length papers based on abstracts presented at the Coalition for Education in the Outdoors (CEO) 15th Biennial Research Symposium held at the YMCA Blue Ridge Assembly conference center in Black Mountain, North Carolina, USA. Authors who presented their work at the symposium are invited to submit regular papers; essays, practices, and commentaries; and research notes for consideration for inclusion in this special issue. We encourage submissions representing all three categories.

All manuscripts submitted will undergo the normal peer-review process and should adhere to the "Author Guidelines" as outlined by the *Journal of Outdoor Recreation, Education, and Leadership*. All manuscripts should be submitted through the Sagamore Publishing journal management system. Instructions for both are provided here: http://js.sagamorepub.com/jorel/about/submissions#authorGuidelines

Interested authors should direct questions to the guest editors:

Andrew J. Bobilya
Western Carolina University
ajbobilya@wcu.edu

Lisa Meerts-Brandsma
Weber State University
lmeerts@weber.edu

Jayson Seaman
University of New Hampshire
Jayson.Seaman@unh.edu

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