

'Nature from my perspective': Mental modeling of outdoor retreat impacts on Black men's well-being

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A Research Brief

Study Summary: Time spent in nature supports health and well-being, yet research in this area does not often accurately reflect the experiences of diverse communities. As varying identities and cultural backgrounds influence human-nature relationships, it is important to explore and document these dynamics. This study furthers this aim by amplifying the nature-based perspectives of Black men in the U.S. who completed a multi-day outdoor retreat program led by the non-profit organization, **Boyz N The Wood**.

Literature Review

Studies have found that time spent in nature improves health and well-being including:

- Sense of community and connection^{1,2}
- Increased positive emotions, such as awe and inspiration^{3,4}
- Pro-environmental behaviors⁵⁻⁷

Nature influences well-being through multiple co-occurring pathways:

- Previous research focuses narrowly on singular, linear pathways.⁸ (e.g., testing attention and stress pathways separately)
- Less quantifiable benefits—like social connection, awe, and reflection—are understudied.³

There are significant cultural and social biases in nature and well-being research

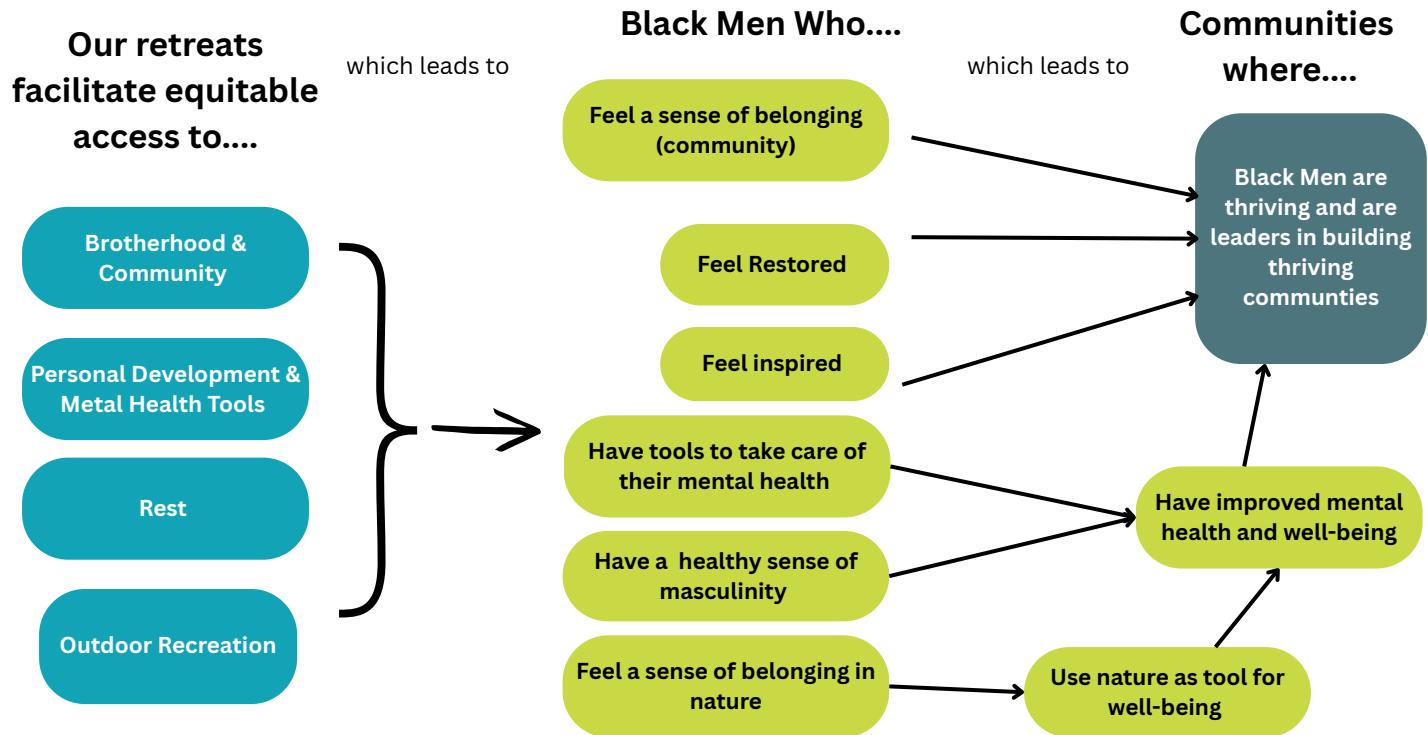
- The experiences of historically marginalized communities are often excluded from scientific literature and studies.^{9,10}
- But social identities (e.g., culture, race, gender, sexuality) shape our relationships with nature.¹¹⁻¹³
- To understand the cultural and interwoven components of human-nature relationships, we need to study more diverse participant populations.^{14,15}

Black Communities & Nature

- In the US, most research examines Black outdoor participation, not the psychological benefits or mechanisms of nature engagement.¹⁶
- Historical oppression in the US—slavery, segregation, discriminatory policies—has disrupted Black communities' access to and relationships with nature.^{17,18}
- Despite this, Black communities maintain enduring cultural and ancestral connections to the natural world.¹⁹⁻²¹
- Advancing nature-well-being research requires recognizing these historical contexts and the role of culture and identity.²²

The Case Study: Boyz N The Wood

- Boyz N The Wood is a U.S. based non profit providing culturally responsive, nature-based retreats for Black men to build brotherhood, strengthen mental well-being, and support personal growth.
- Retreats combine outdoor recreation, mental-health-focused workshops, intentional rest, and community-building rituals, offered at no cost in nature-rich U.S. settings.



Guiding Research Questions

1. What well-being impacts do Black men experience from a nature-based retreat?
2. What nature-based activities and characteristics do they associate with those impacts?

Methods

- 19 Black men were interviewed 6-9 months after the retreat with ages ranging from 23-63 years old, each with varied social and economic backgrounds with differing outdoor recreation experience. They identified and described retreat activities that impacted their well-being.
- Mental modeling was used to capture participants' conceptual understanding of how various components of the retreat led to program impacts.
- Data was analyzed using thematic analysis to identify patterns and categorize them into themes, to then identify linkages between activities, retreat characteristics, and well-being impacts.

Example of a Participant's Mental Model

After the retreat I shared about my experience on Instagram and told people they can do it too

Didn't pay out of pocket

The outdoors are free

Communication, free to do the activity or rest

Learned about layering clothing; gifted that same apparel if you needed it; it was freezing cold so it was a learn and apply quickly situation

A lot of us were doing winter sports for the first time; which took a lot of teamwork; created curiosity and openmindedness

When I arrived I was picked up by a snowmobile

Outdoor apparel/survival knowledge

Camaraderie; teamwork; brotherhood

Spontaneity; I didn't know much about the retreat before I came and it turned out great

Fresh perspective on everything, things in common with other guys there in how we grew up

= Impacts

= Activities

= Enabling/Constraining Characteristics



Results

Participants identified 6 ways the retreat impacted their well-being:

Perspective changes: shifted view on the relationship between Black men and nature

Connection to others: developed sense of brotherhood between participants

Emotional responses: mental and affective experiences that improved

Identity and personal development: self-reflection intended to better understand and develop personal qualities and goals

Skill acquisition: opportunity to practice and receive resources to support development of new skills

Community leadership: increased sense of responsibility for their communities

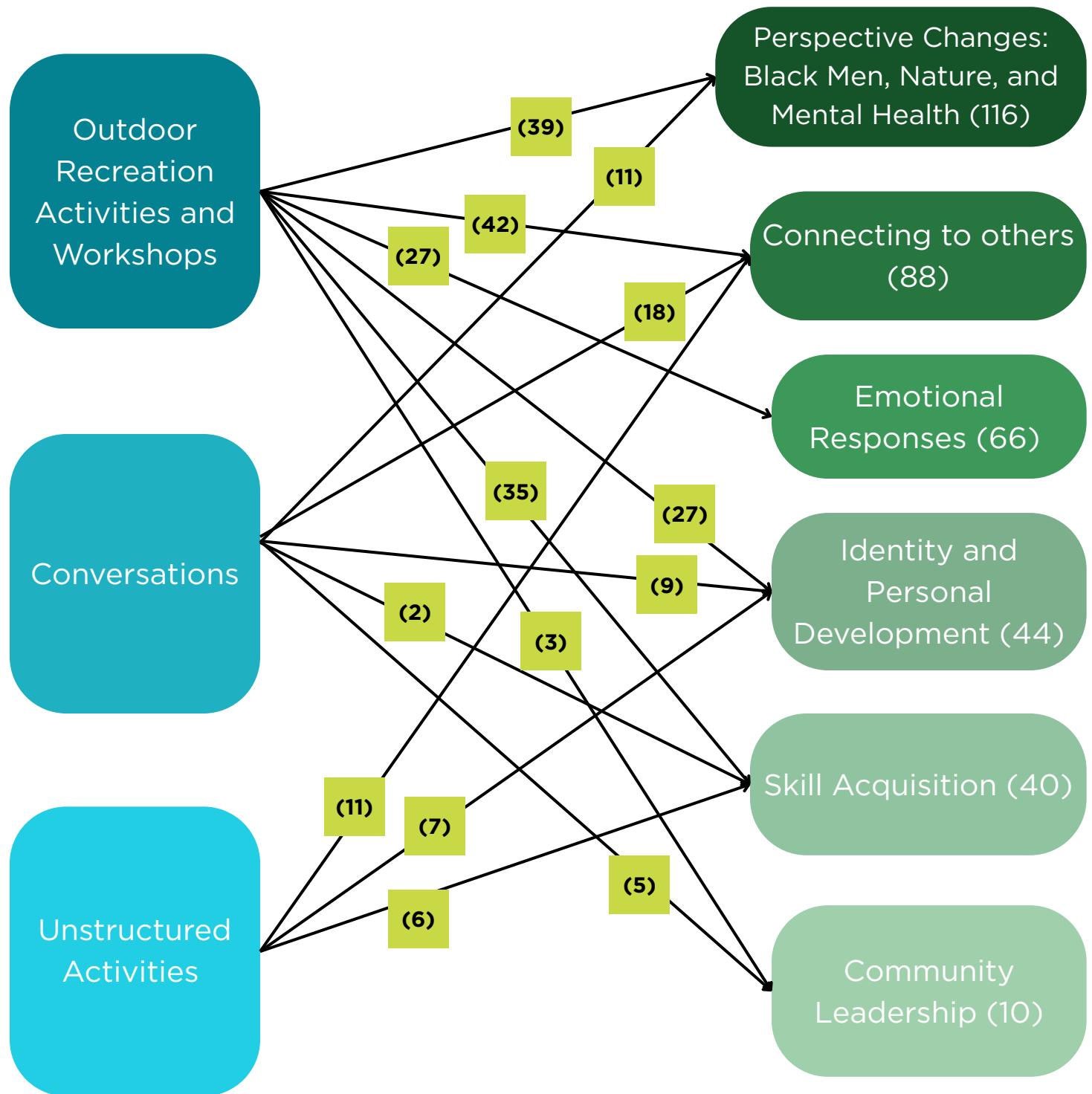
Participants connected the above well-being impacts with 3 activity components of the retreat:

Outdoor Recreation Activities and Workshops: Time spent engaging in nature-based activities and formal workshops, building skills to participate in these activities in the future

Conversations with other participants: Verbal interactions between participants, both formal and spontaneous, in or about nature settings. Interactions were both about retreat topics and daily life

Unstructured Activities: Unplanned moments during the retreat where participants engaged in both solo and communal activities outdoors

Synthesis of Connections Between Impacts and Activity Themes



Synthesis of the connections between impact (green boxes) and activity themes (blue boxes). Color shades represent how salient themes were for participants from high (dark) to low (light). Light green boxes with numbers placed on the arrows represent the number of times the activity was connected.

Discussion & Implications

- Participatory mental modeling showed that three nature-based activities and several enabling/constraining factors shaped retreat experiences, **with outdoor recreation driving all major impact themes**—especially perspective shifts and connection to others.
- Participants' reported **outcomes align with established nature-health frameworks** (social, mental, cognitive, and pro-environmental benefits), even when expressed indirectly through restoration, relaxation, or increased outdoor confidence.
- **Personal development and identity exploration** emerged as central impacts— impacts often overlooked in previous nature-health syntheses—highlighting an important gap in the literature.

"I'm still a work in progress. Sometimes you feel like you have it all mapped out and that you know who you are but then all it takes is one right person to ask a question that blows up your world. They asked a lot of questions that I didn't have an answer to. Before the retreat, I could always guess an answer to that kind of question but the retreat showed me that I'm still young and have a ways to go."
~ Participant

Perspective Changes: Culturally Grounded Nature-Connectedness?

- Perspective shifts were tied to engaging with other Black men and seeing Black leaders in nature, which countered narratives of disconnection, strengthened belonging, and deepened generational identity-based ties to the outdoors.
- Participants reframed Black communities as inherently connected to nature, reflecting the construct of nature-connectedness and echoing research on reclaiming environmental narratives through shared outdoor time, cultural storytelling, and discussion of historical barriers.

Implications for Policy and Practice

- Participants emphasized that effective, equitable programming for underrepresented communities must ensure accessible nature contact, flexible activities, and financial inclusivity—challenging historically exclusionary outdoor program models.
- Findings suggest policymakers and funders should support culturally grounded approaches that foster nature-connectedness, while recognizing study limitations and the unique value of participatory mental modeling for illuminating Black men's nature-based well-being experiences.



Conclusion

This study reveals how a multi-day outdoor retreat program impacted the well-being of Black men in six relevant ways. For Boyz N The Wood, these themes will help guide their programming to enhance the wellness benefits of being immersed in nature for underrepresented communities. Participants emphasized the importance of accommodations enhancing nature contact, flexibility in programming, and financial support to attend the retreat. Results ground nature-connectedness in cultural identity and encourage the investigation of psychological benefits particularly in ways that reflect the perspectives of diverse communities and support culturally informed, evidence-based programming. Through collaboration across research and practice, we can deepen our understanding of human-nature relationships and how they differ based on cultural contexts.



List of references

Boyz N The Wood

Boyz N The Wood is a U.S.-based non-profit organization using nature-based experiences as a culturally responsive approach to support Black men in building brotherhood, strengthening mental well-being, and engaging in personal development. Their retreats are free and take place in nature-rich locations across the U.S. at facilities such as YMCA sites, national parks, and nature retreat centers. Attendees can connect to virtual peer networks before and after the retreat.



The **Collective for Nature Immersion Science and Practice (cNISP)** primarily exists to increase the capacity of nature-based programming to support happier, healthier and more sustainable communities. We do this by facilitating collaboration and co-learning between practitioners and researchers working at the intersection of nature immersion and human health and well-being.

The **Nature and Well-Being Research Group** is directed by Dr. Sarah Walker at Colorado State University. Our research aims to better understand the relationship between human well-being and nature. We believe that well-being is a powerful tool for supporting equitable and effective environmental solutions



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