

EXPOSURE TO NATURAL SETTINGS AND HEALTH IN FLORIDA STATE UNIVERSITY STUDENTS



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INTRODUCTION

- Exposure to natural environments is linked to reduced stress, improved mood, and enhanced cognitive function, highlighting the role of green spaces in psychological well-being (Bratman et al., 2019).
- Researcher-developed tools like the Connectedness to Nature Scale (CNS) quantify emotional bonds with nature (Mayer & Frantz, 2004), while Photovoice captures subjective experiences through participant narratives and images (Boamah et al., 2022).
- Few studies integrate both quantitative and qualitative methods to explore nature's mental health benefits. College students, who often face academic stress and limited access to restorative outdoor spaces, remain understudied in this area (Ribeiro et al., 2024).
- This study investigates how brief nature exposure impacts Florida State University students' stress, well-being, and connectedness to nature.

METHODS

- Participants included 33 Florida State University undergraduates, primarily white women from suburban backgrounds with some variation. Reported time in nature ranged from <30 minutes hour to 6+ hours per week.
- Pre- and post-exposure surveys included demographics, a Connectedness to Nature Scale (CNS; Mayer & Frantz, 2004) measure, and a creativity object-association task. Participants also submitted nature photographs with written reflections through a Photovoice component.
- Pre-surveys measured baseline connectedness and creativity, while post-surveys following independent nature exposure reassessed connectedness, creativity, and emotional/cognitive experiences.
- Quantitative data were analyzed using descriptive statistics and paired pre/post comparisons, while qualitative reflections were coded thematically to identify recurring emotional and experiential patterns.

KEY THEMES

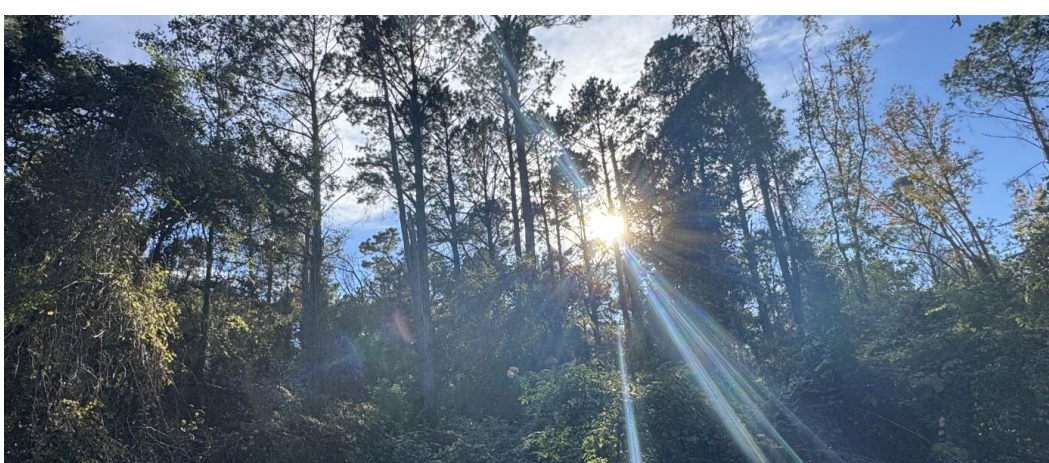
Appreciation and Beauty (53% of Responses)

"I took this photo because I think the view was beautiful. It describes my feelings about nature because it is nothing particularly, but it is still very beautiful. "



Calm, Peace, and Emotional Regulation (52% of Responses)

"This scenery made me feel at peace with the world. I chose to take this photograph because it shows how beautiful nature can be. This photo describes the feeling of serenity and tranquility that nature allows us to feel. "



Reflection, Meaning, & Perspective (35% of Responses)

"The train track between the trail and the trees... reminded me that not everything in life is scripted, and that though things will happen, life will keep going."



Human-Nature Interaction and Tension (28% of Responses)

"I think this photo shows how nature continues to go through its motions, regardless of humanity's actions; nature will do all it can to maintain itself."



RESULTS

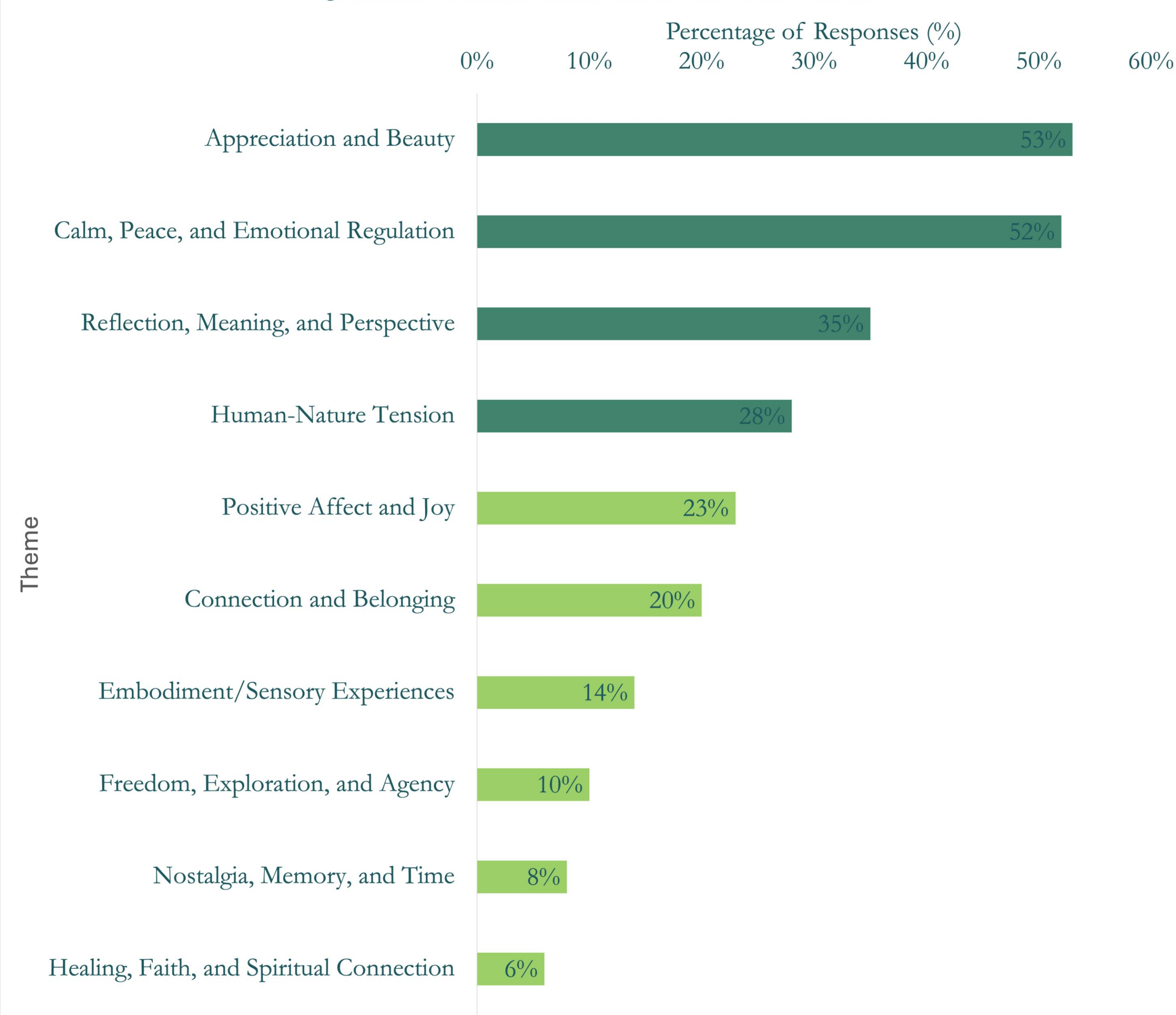
Quantitative Findings:

- Connectedness to nature scores significantly increased after the photovoice activity, (CNS: 3.40–3.80, $p < .00001$, $d = 0.8$), while creativity remained stable. Participants reported high awe (4.14) and relaxation (4.06). Effects were strongest in those with low prior weekly nature exposure.

Qualitative Themes:

- Themes T01 (53%) and T05 (52%) dominated, followed by T04 (35%), T07 (28%), T02 (23%), and T03 (20%). Other themes appeared in 39% of responses.

Qualitative Themes from Photovoice Reflections



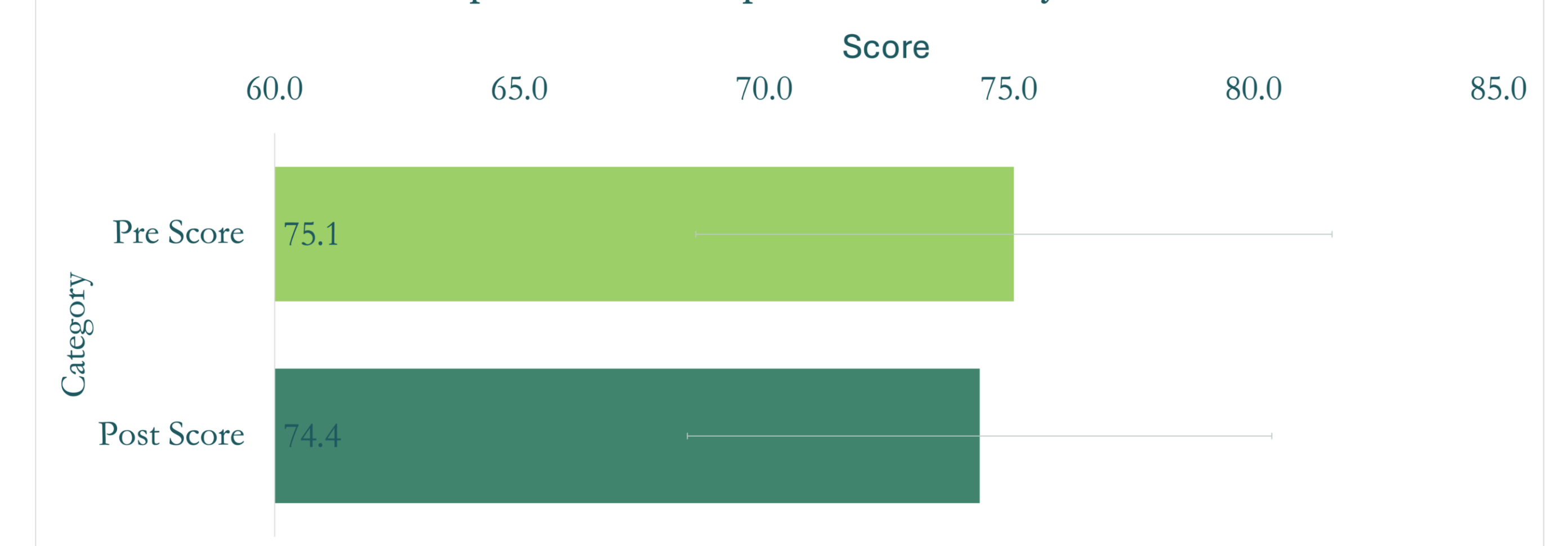
DISCUSSION

- Top themes of appreciation, calm, reflection, and human-nature interaction pair with stress reduction and connectedness theories.
- Participants described nature as a "sanctuary", a space for stress relief and contemplation.
- After completing the photovoice activity, participants exhibited significant boost in connectedness to nature, indicating restorative benefits.
- Unchanged creativity scores call for further exploration.
- Anecdotes of human-nature tension reveal potential challenges in urban green space integration.
- 22% of participants mentioned multisensory and/or nostalgic experiences during the photovoice activity, providing insight into mental and sensory experiences.

Impact of Nature Exposure on CNS



Impact of Nature Exposure on Creativity Score



CONCLUSION

- Brief nature exposure through a photovoice activity increased emotional regulation, grounding, and connectedness to nature in students, with a large increase in CNS ($d = 0.8$). Meanwhile, creativity remained stable.
- Themes of appreciation (53%), calm (52%), reflection (35%), and human-nature tension (28%) highlight nature as a sanctuary for stress relief and contemplation.
- Photovoice insights revealed multisensory, nostalgic experiences, complementing and deepening survey data.
- The combination of comfort and ecological concern reveals the need for sustainable, accessible green spaces.
- Universities could integrate nature-based wellness programs and accessible campus green spaces.
- Further research should explore longer exposure among diverse populations to further reveal nature's psychological benefit.

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