

The Effects of Sitting and Walking in Green Space on State Mindfulness and Connectedness to Nature

DUSTIN W. DAVIS¹, ELIAS M. MALEK¹, ROBERT W. SALATTO², JEFF MONTES³, CHARLI D. AGUILAR¹, NATHANIEL BODELL⁴, JACOB W. MANNING⁵, MARK DEBELISO⁵, FACSM, MARCUS M. LAWRENCE⁵, & JAMES W. NAVALTA¹, FACSM

¹Department of Kinesiology and Nutrition Sciences; University of Nevada, Las Vegas; Las Vegas, NV. ²Department of Kinesiology; Vanguard University; Costa Mesa, CA. ³Department of Kinesiology; Monmouth College; Monmouth, IL. ⁴Department of Kinesiology; California State University, San Bernardino; San Bernardino, CA. ⁵Department of Kinesiology and Outdoor Recreation; Southern Utah University; Cedar City, UT.

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Advisor / Mentor: Navalta, James (james.navalta@unlv.edu)

ABSTRACT

People report feeling connected to nature while spending time in green space. The modulators of this relationship are unclear. One modulator may be state mindfulness, which is how mindful someone is in a specific moment. The first step of studying state mindfulness as a potential modulator is describing how state mindfulness and connectedness to nature respond to acute exposure to green space. **PURPOSE:** This study aimed to determine whether sitting and walking in green space change state mindfulness and connectedness to nature in tandem. **METHODS:** Participants arrived at one of two green spaces: the Thunderbird Gardens Trailhead in Cedar City, UT, or the Clark County Wetlands Park in Las Vegas, NV. After giving verbal and written consent, the participants completed the State Mindfulness Scale (SMS) and Love and Care of Nature Scale (LCN). The participants then sat alone and undisturbed for 10 minutes near the trailhead and completed the SMS and LCN again. Next, the participants walked alone for 10 minutes on the trail and completed the SMS and LCN once more. The SMS and LCN scores were compared among pre-sit, post-sit, and post-walk via two separate one-way repeated-measures ANOVAs. Population effect sizes were estimated as partial omega squared (ω_p^2 ; large effect > 0.14). After each ANOVA, the post hoc pairwise comparisons were dependent-samples *t*-tests with Bonferroni adjustments. The α -level was 0.05 for all the statistical analyses. **RESULTS:** Forty-two participants completed the study (22 females, 20 males, 0 intersex; 4 African American/Black, 4 Asian, 19 Caucasian/White, 9 Hispanic/Latino, 1 Mediterranean, 1 Middle Eastern, 3 Multi-Racial, 1 Polynesian; 26 ± 9 years, 170 ± 9 cm, 69 ± 16 kg, 24 ± 4 kg/m²). The SMS scores significantly increased from pre-sit to post-sit (+29 arbitrary units [AU], 95% CI: 20, 38; $p < 0.001$) but not from post-sit to post-walk ($p = 0.23$). The LCN scores significantly increased from pre-sit to post-sit (+5 AU, 95% CI: 2, 8; $p = 0.003$) and from post-sit to post-walk (+4 AU, 95% CI: 1, 6; $p = 0.002$). **CONCLUSION:** Sitting for 10 minutes in green space increases state mindfulness and connectedness to nature. Walking for 10 minutes further increases connectedness to nature but not state mindfulness. The next step is determining whether state mindfulness predicts connectedness to nature while in green space.