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Framing Ageing Symposium:

One-day workshop for early career scholars

BOOK OF ABSTRACTS



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EFFECT OF THE RESTORATIVE NATURAL ENVIRONMENT ON HRV, HR, STRESS, AND COGNITIVE FUNCTION IN SLOVAK SENIORS

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Abstract:

Depression, stress, anxiety, and dementia are the most common mental illnesses in older adults, leading to disability, comorbidities, and impaired cognitive function. Digital phenotyping with commercial wearable devices is increasingly popular but little done in older adults in free-living settings. Quantifying the effect of nature on psychological outcomes will capture the health benefits of the restorative natural environment. The objective of the present study was to determine the individual-frequently exposure to the restorative natural environment on HRV, HR, stress level, and cognitive function in the aging population. Fiftyfour Slovak seniors participated in one month-randomized parallel intervention study with forest exposure as the primary intervention and urban as the active control. HRV(RMSSD), HR, and stress levels were measured before and after the 8-walks. Meanwhile, the cognitive function was measured at the baseline and the endline of the intervention. Between groups comparison, there was no difference between forest and urban in HRV change, HR, and stress level. Rote memory (TMT-A) and executive functioning (TMT-B) differed at the baseline measurement (p<0.05) but not after the intervention. Within group comparison, the HRV(RMSSD) increased significantly after the intervention in both groups (p<0.05). Cognitive performance was increased after the intervention in both groups. However, cognitive flexibility (TMT B-A) was significantly greater in the forest group with a mean difference of 21.15 score (vs. 6.63 in urban group). The findings indicate that urban exposure is not substandard at all, however, engaging with the natural environment (forest) showed more considerable benefits.

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