This is a repository copy of *Does a natural environment enhance the effectiveness of Mindfulness-Based Stress Reduction (MBSR)? Examining the mental health and wellbeing, and nature connectedness benefits*.

White Rose Research Online URL for this paper:
https://eprints.whiterose.ac.uk/162858/

Version: Supplemental Material

eprints@whiterose.ac.uk
https://eprints.whiterose.ac.uk/

Results of path analysis using the Process macro for SPSS (Hayes, 2012).

Rumination

The path analysis indicated that the effect of environment manipulation on rumination remained significant after including nature connectedness in the model, $b = 0.51$ (SE=0.14), $t = 3.63$, $p < 0.001$. The indirect path of environment manipulation affects rumination (Environment→ Nature connectedness→ Rumination), which was showed in Figure 1, exhibited statistically no significant effect. The obtained result on the bootstrap lower limit confidence interval (BootLLCI= -0.11) and bootstrap upper limit confidence interval (BootULCI= 0.09) straddle between zero with indirect effects of 0.001; thus, there was no significant indirect effect of environment manipulation on rumination through nature connectedness.

Indirect effect of environment on rumination: b= 0.001 (SE= 0.05), 95% CI [-0.11; 0.09]

Figure 1. Model of environment manipulation as a predictor of rumination, mediated by nature connectedness.

Reflection

The path analysis indicated that the effect of environment manipulation on reflection was no longer significant after including nature connectedness in the model, $b = -0.16$ (SE=0.15), $t = -1.01$, $p = 0.31$. The indirect path of environment manipulation affects reflection (Environment→ Nature connectedness→ reflection), which was showed in Figure 2, showed statistically a significant effect. The obtained result on the bootstrap lower limit confidence interval (BootLLCI= -0.44) and bootstrap upper limit confidence interval (BootULCI= -0.05) did not straddle between zero with indirect effects of -0.21; thus, there was a significant indirect effect of environment manipulation on reflection through nature connectedness.
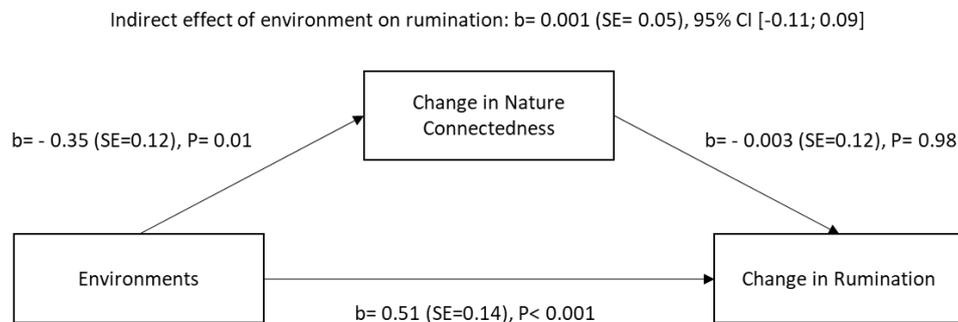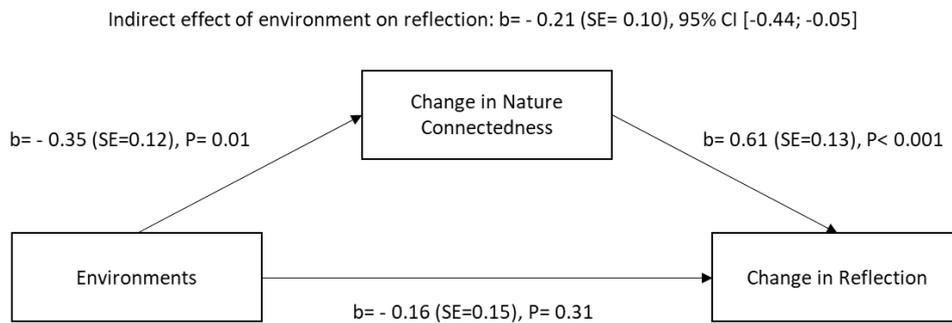
Indirect effect of environment on reflection: b= - 0.21 (SE= 0.10), 95% CI [-0.44; -0.05]

```
                    ┌─────────────────────┐
                    │  Change in Nature   │
                    │   Connectedness     │
                    └─────────────────────┘
  b= - 0.35 (SE=0.12), P= 0.01        b= 0.61 (SE=0.13), P< 0.001

┌─────────────────────┐              ┌─────────────────────┐
│                     │              │                     │
│    Environments     │─────────────▶│ Change in Reflection│
│                     │              │                     │
└─────────────────────┘              └─────────────────────┘
           b= - 0.16 (SE=0.15), P= 0.31
```

Figure 2. Model of environment manipulation as a predictor of reflection, mediated by nature connectedness.

Stress

The path analysis indicated that the effect of environment manipulation on stress remained a significant after including nature connectedness in the model, b= 4.25 (SE= 1.59), t= 2.68, p= 0.01. The indirect path of environment manipulation affects stress (Environment→ Nature connectedness→ Stress), which was showed in Figure 3, exhibited statistically no significant effect. The obtained result on the bootstrap lower limit confidence interval (BootLLCI= -0.52) and bootstrap upper limit confidence interval (BootULCI= 1.45) straddled between zero with indirect effects of 0.35; thus, there was no significant indirect effect of environment manipulation on stress through nature connectedness.
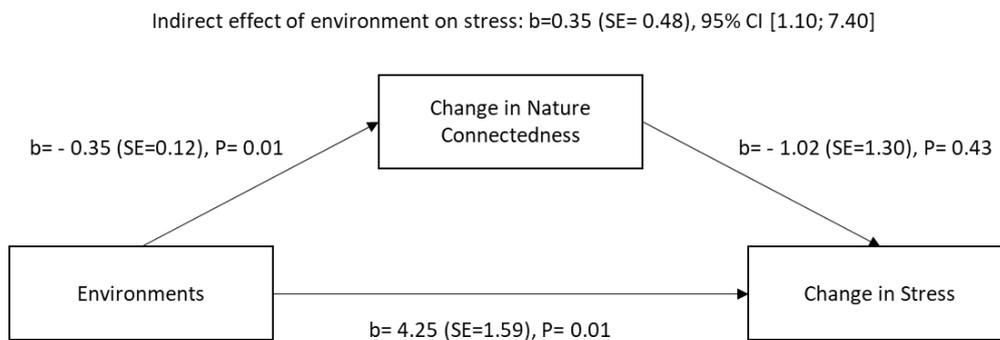
Indirect effect of environment on stress: b=0.35 (SE= 0.48), 95% CI [1.10; 7.40]

```
                    ┌─────────────────────┐
                    │  Change in Nature   │
                    │   Connectedness     │
                    └─────────────────────┘
  b= - 0.35 (SE=0.12), P= 0.01        b= - 1.02 (SE=1.30), P= 0.43

┌─────────────────────┐              ┌─────────────────────┐
│                     │              │                     │
│    Environments     │─────────────▶│  Change in Stress   │
│                     │              │                     │
└─────────────────────┘              └─────────────────────┘
           b= 4.25 (SE=1.59), P= 0.01
```

Figure 5.18 Model of environment manipulation as a predictor of stress, mediated by nature connectedness.

Reference

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling. http://www.afhayes.com/ public/process2012.pdf.