

Title

Emotional mechanisms underlying the effect of coastal landscapes on stress, coping strategies, and pro-environmental attitudes

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Abstract

Exposure to coastal landscapes appears to have a positive impact on mental well-being and pro-environmental attitudes. However, it remains unclear what mechanisms explain this effect and whether elements of pollution (e.g. plastic) potentially disrupt the benefits of the coastal experience.

We conducted a [pre-registered](#) experimental study evaluating (1) the effect of exposure to coastal landscapes on stress, meaning-focused coping, and pro-environmental attitudes, (2) the emotional experience of awe (feelings of small self), nostalgia, and nature connectedness as potential mediators of these effects, and (3) the role of plastic as a potential moderator.

A total of 248 university students completed an online survey in which participants were randomly assigned to watch a video-clip of either a beach with a sunset, coastal dunes, or an urban street (control condition). Each environment type either contained plastic or not. Before the video-clip, participants were asked to recall a stressful moment and to report their stress level. After the video-clip, they again reported their stress level as well as their emotions, coping strategies, and pro-environmental attitudes.

Structural equation models did not find significant mediation effects of small self, nostalgia, and nature connectedness between coastal exposure and stress reduction, although these emotions were significantly higher in the coastal conditions. No significant moderation effect of plastic was found and coastal exposure did not significantly affect meaning-focused coping nor pro-environmental attitudes.

Our study demonstrates empirical support for specific emotions triggered at the coast, albeit further research is needed to determine to what extent they explain coastal benefits.

Keywords: blue space; restorative environment; emotions; well-being; pro-environmental attitudes