

The health benefits of experiencing “wilderness” in the National Park

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Introduction

One of the main tasks of national parks is protecting the natural processes through which diversity is indirectly preserved and promoted. But the contribution of national parks also goes beyond nature conservation and has a potential impact on human health and wellbeing.

In the summer of 2016 the Black Forest National Park conducted a field study exploring the restorative effects of nature for human health and wellbeing by measuring the effect of a walk through different types of landscapes on 111 participants. The route comprised the characteristic of the National Park (c.f. photo): a cultivated forest of spruce (1), a small trail with blueberry vegetation (2), a structurally diverse forest with dense ground vegetation, deadwood components and uprooted trees (3) and an open heathland (4).

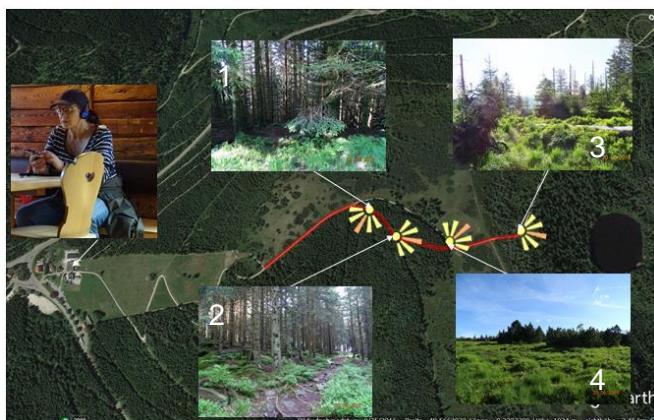


Photo: Route and different types of landscapes
(Source: Black Forest National Park)

An additional component of the study explored the effects of an intervention that aimed to direct participants' attention to the present (Kabat Zinn, 1990). Therefore, the participants were randomly assigned to one of two experimental conditions: mindfulness training before or after the walk.

Methods

A sensor wristband measured skin conductance and skin temperature in order to assess each person's psychophysiological reaction (Papastefanou, 2013). A GPS device tracked the participants' geographical position during the entire walk; therefore an “emotional map” could be generated. People further underwent different psychological pre- and posttests via a smartphone app and answered questions about their perception of the different landscapes.

Experience of the Black Forest National Park

The results of the study highlight the benefits of a walk through different types of landscapes. The walk as a whole promotes self-perceived restorative experiences: both participants of the intervention and the control group reported substantial improvements in their wellbeing after the walk ($M = 3.41$, $SD = 0.56$; min = 1 (no improvement), max = 4 (substantial improvement)). Most striking was that the different landscapes were all rated equally positive in terms of restorative characteristics; only landscape 1 (cultivated forest) was rated slightly less restorative compared to all other landscape types ($F(2.504) = 23.364$, $p = .00$).

Participants who received mindfulness based training before the walk reported to be able to stronger let go their thoughts and troubles during the walk ($t = 1.994$, $p = .05$; 95% bootstrap corrected CI [0.03;0,06]). Further, their average physiological arousal levels were more even and mostly uncorrelated with the different types of landscape, whereas participants who received the training after the walk showed stronger associations between positive and negative arousal in relation to different landscape types.

Conclusion

On different levels the study underlines the restorative effect of a walk in the Black Forest National Park. The results support the importance of nature conservation, not only for the sake of nature itself, but for its crucial contribution to public health (Ensinger, 2016).

Furthermore, the results highlight different aspects of mindfulness: mindfulness practice improves the restorative effect of nature. On the other hand it might also reduce the effect of different landscape types on physiological arousal by improving resistance towards external stimuli. Therefore mindfulness could be considered as a resource for health in the face of climate change. It supports people to deal with constraints for restoration in a changing world.

References

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