

The psychological benefits of visiting natural environments: Differential effects of coast, countryside & urban open space on positive affect

Katherine Ashbullby^{1,2}, Mathew White², Sabine Pahl¹ & Michael Depledge²

¹School of Psychology, University of Plymouth

²European Centre for Environment & Human Health, Peninsula College of Medicine & Dentistry, Universities of Exeter & Plymouth



Introduction

A growing body of evidence suggests that exposure to natural environments can improve mood and increase positive affect (Hartig et al., 1991; Kaplan, 1995; Pretty et al., 2005; Thompson Coon et al., 2010). These effects are important for health in light of accumulating evidence that positive affect may protect against ill health and risk of disease (Steptoe, Wardle & Marmot, 2005).

Yet systematic investigation of the potential benefits of different types of natural environment is lacking.

Using data collected as part of a national survey by Natural England we investigated affective responses to visits made from home to three different types of natural environment: (i) open spaces in towns and cities, (ii) countryside, and (iii) coastal and seaside regions.



Method

The data for this study were provided by Natural England* and drawn from the "visits" data set for years 1 and 2 of the MENE ('Monitor of Engagement with Natural Environment') survey.



MENE is jointly commissioned by (i) Natural England, (ii) DEFRA and (iii) Forestry Commission.

Our sample included a subset of respondents who were asked about their affective reactions to a recent visit which was made from home (n = 2584) to different environment types: (i) open spaces in towns and cities (n=1081), (ii) countryside (n=1156) & coast (n=347).

Participants were asked to what extent they agreed or disagreed with the following statements relating to how they felt about their visit: "It made me feel calm and relaxed"; "I enjoyed it"; "It made me feel refreshed and revitalized"; "I took time to appreciate my surroundings." These 4 items were all positively correlated and averaged to create a measure of affective responses ($\alpha = 0.75$).

A series of regression analyses were conducted to investigate the role of environment type on affective responses whilst controlling for: Distance travelled, Mode of transport, Age, Gender, Socio-economic status, Group structure (visits made alone or with children/adults).

*Thank you to Stephen Herbert from Natural England for his help accessing the data and insightful suggestions.

Results

Visits to all types of outdoor locations were associated with high levels of positive affect (e.g. enjoy, calm, refreshed).

Visiting open spaces in towns and cities (compared to the countryside) was associated with significantly lower levels of positive affect ($\beta = -.08, p < .001$).

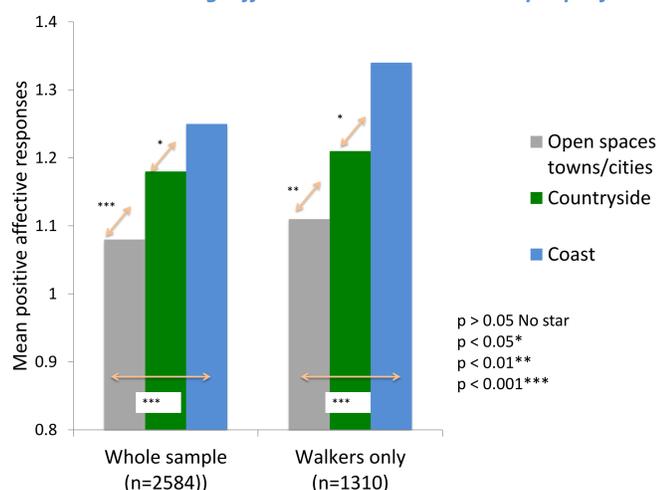
Visiting the coast (compared to the countryside), was associated with significantly higher levels of positive affect ($\beta = 0.04, p < .05$).



The findings also held when restricting the analysis to individuals who were only engaged in walking (the most frequent activity undertaken in outdoor locations).

Walking in coastal environments was associated with significantly higher levels of positive affect than walking in the countryside ($\beta = 0.06, p < .05$).

How did visiting different environments make people feel?

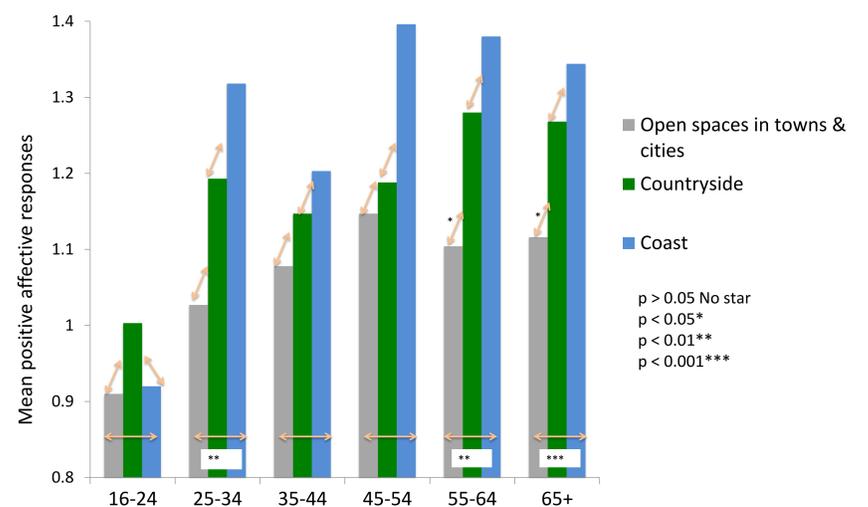


Positive affective responses to visiting different environments

Estimated marginal means taking account of distance travelled, mode of transport, age, gender, ses, and presence of others

Results

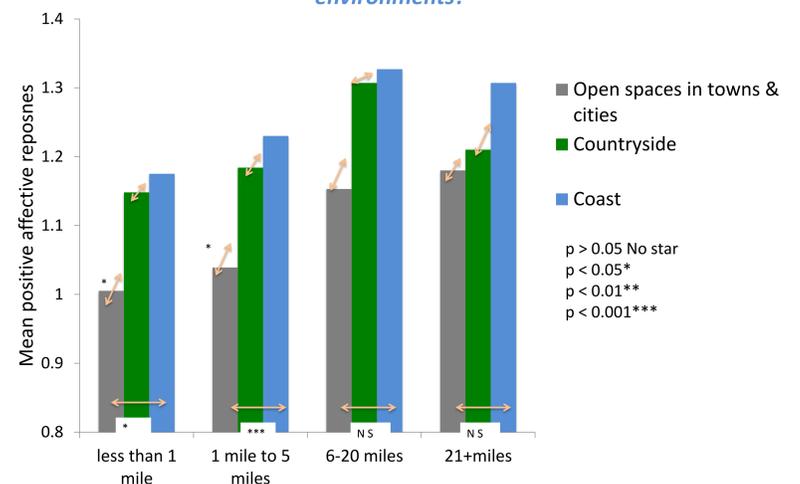
How did different age groups feel about visiting different environments?



Positive affective responses to visiting different environments by age group categories

Estimated marginal means taking account of distance travelled, mode of transport, gender, ses and presence of others

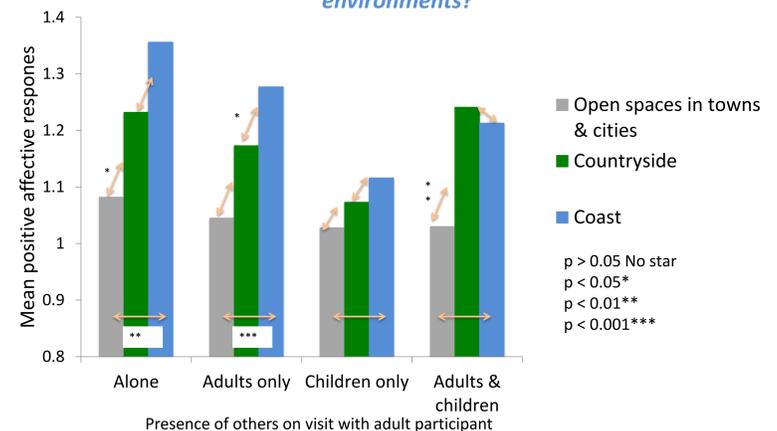
How did distance travelled affect how people felt about visiting different environments?



Positive affective responses to visiting different environments by distance travelled

Estimated marginal means taking account of mode of transport, gender, age, ses and presence of others

How did the presence of others affect how people felt about visiting different environments?



Positive affective responses to visiting different environments by presence of others on the visit

Estimated marginal means taking account of distance travelled, mode of transport, gender, ses & age

Conclusions

Our findings suggest that spending time in natural environments is associated with positive affect.

This is consistent with earlier findings but importantly, extends them by moving beyond a simple urban vs. natural dichotomy to consider different types of natural environment. In particular we find that positive feelings are highest for visits to the coast and lowest for visits to open spaces in towns and cities.

Although several questions remain, policy makers and health care practitioners interested in promoting the use of natural environments for public health initiatives may want to consider environment type when drawing up future guidelines.