Schools Biodiversity Project: Nurturing Nature Connection & Wellbeing

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Introduction

- The UK is one of the most nature depleted countries in the world with 90% of the population living in built up urban environments.
- A connection to nature is largely forged during childhood but can be stunted from urban expansion threatening biodiversity.

Aim & Hypotheses

Aim
To explore how children's mood, wellbeing and connection to nature changes as children participate in biodiversity-boosting activities in their school grounds.

Hypothesis 1
Mood will improve over the short term.

Hypothesis 2
Wellbeing will improve as connection to nature improves.

Hypothesis 3
Connection to nature will improve over the long term.

Methods

School Participation

14 schools (ages 8-18) participated from autumn 2017 to summer 2018.

Mood

Mood surveys based on Positive and Negative Affect Schedule (PANAS) were completed before and after biodiversity activities.

Wellbeing & Connection to Nature

Kidscreen-27[1] and RSPB Connection to Nature Index[2] (CNI) were completed at the start of the academic year and at the end of each term.

Biodiversity Activities

Biodiversity activities (on plants, fungi, invertebrates and vertebrates) were undertaken for one hour per week in school grounds.

Results

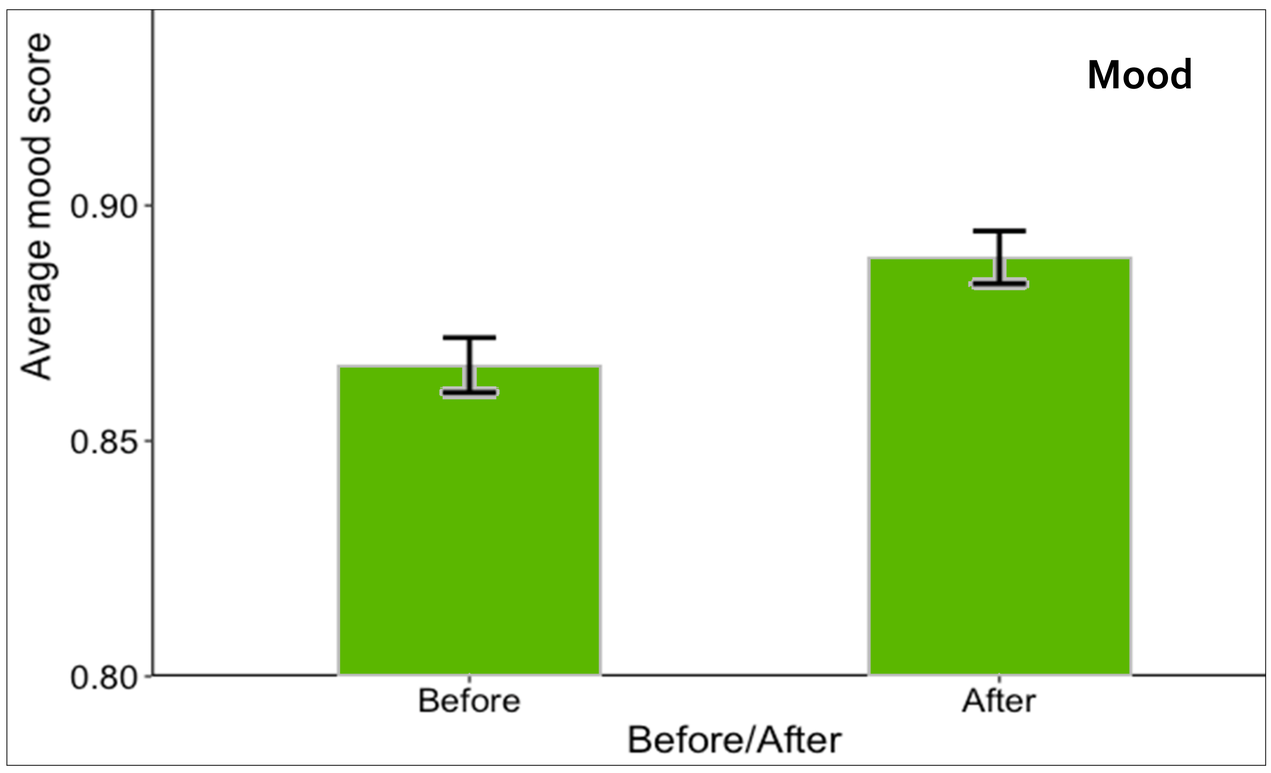

Fig. 1: Overall mood of children before and after interactive biodiversity-boosting activities.

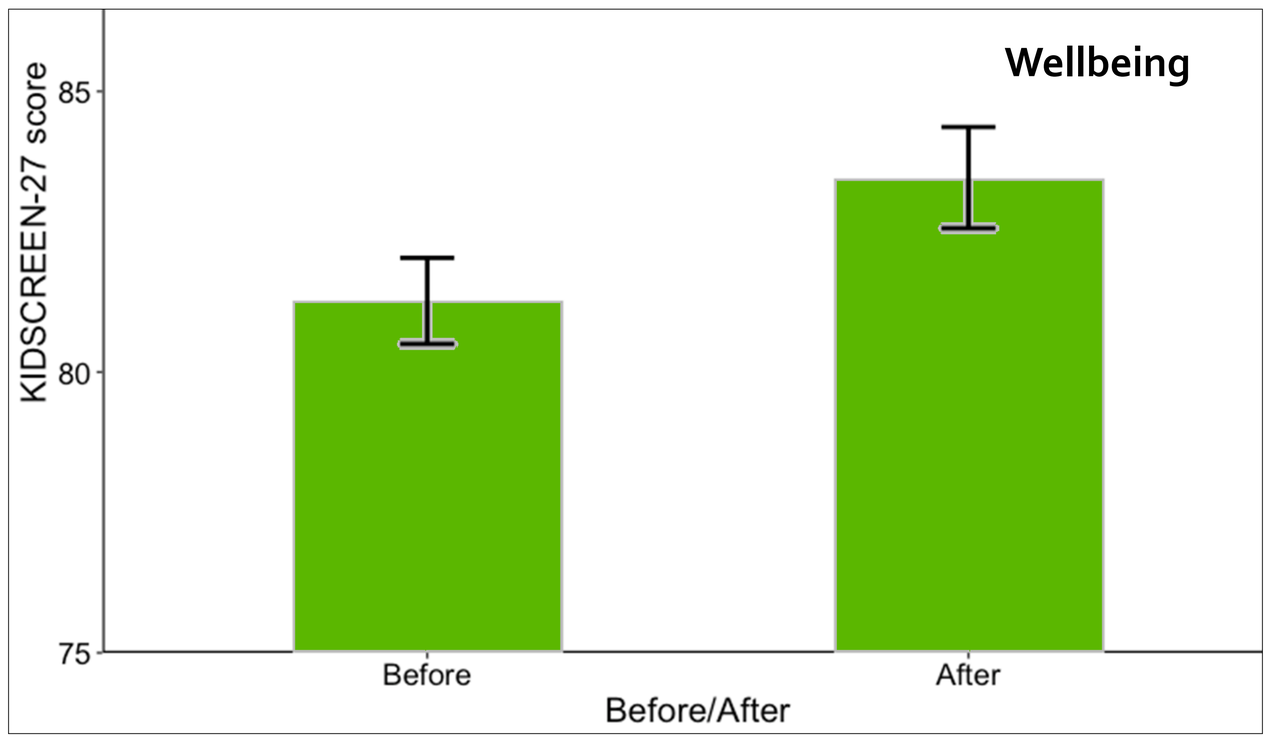

Fig. 2: Change in Kidscreen -27 score recorded immediately before and after biodiversity programme. Bars represent standard error.

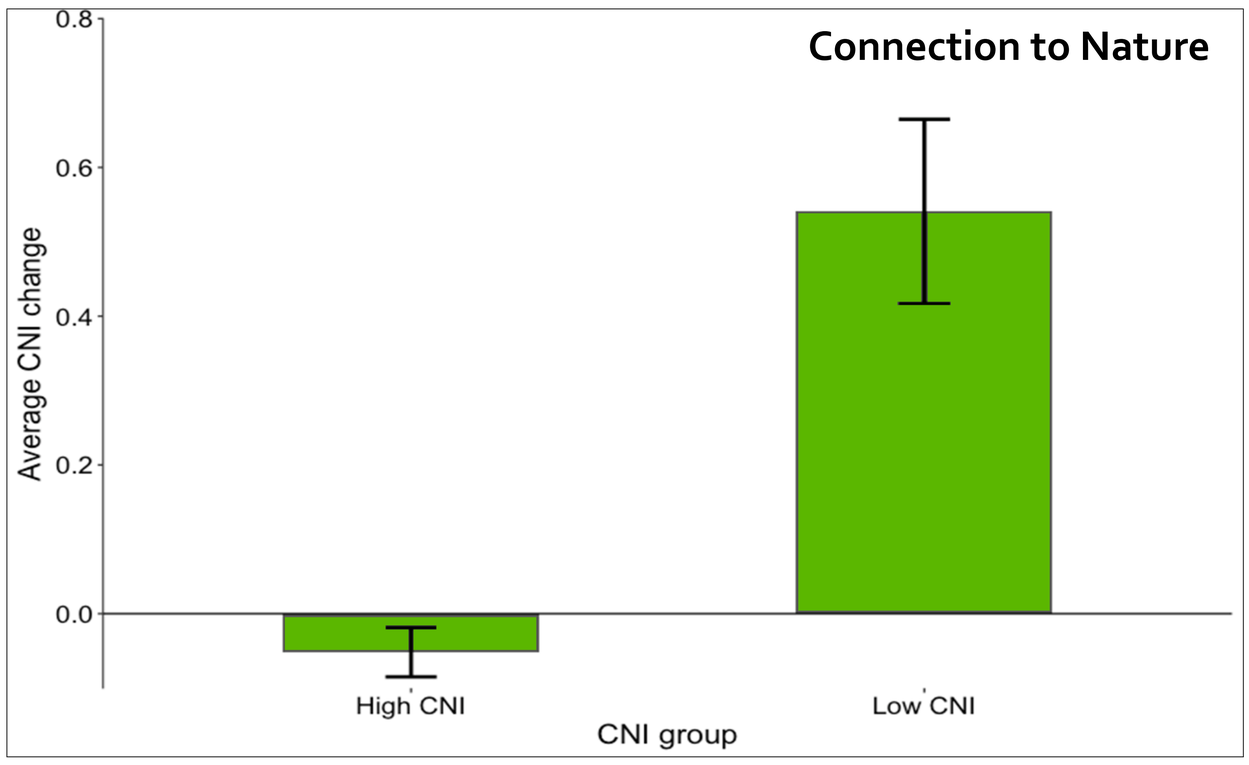

Fig. 3: Change in overall CNI score in children with a high and low connection to nature

Conclusion

- Mood significantly improved over the short term throughout the academic year, while control groups did not.
- Wellbeing significantly increased throughout the academic year in the children that participated in the biodiversity-boosting activities.
- Connection to nature significantly improved in children that had an initially low connection to nature score compared those with an initially high connection to nature.

Key references:
(1) Ravens-Sieberer, U.; Herdman, M.; Devine, J.; Otto, C.; Bullinger, M.; Rose, M.; Klasen, F. (2014). The European KIDSCREEN approach to measure quality of life and well-being in children: development, current application, and future advances. *Quality of Life Research*, *23*(3), p791–803.
(2) Bragg, R.; Wood, C.; Barton, J.; Pretty, J. (2013). Measuring connection to nature in children ages 8-12: A robust methodology for the RSPB. *Essex Sustainability Institute and School of Biological Sciences, University of Essex.* Available at: http://ww2.rspb.org.uk/Images/methodology-report_tcm9-354606.pdf

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