

Review of:

The Restorative Outcomes of Forest School and Conventional School in Young People with Good and Poor Behaviour

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Background

There are a number of studies which suggest that amongst adults, nature deprivation can lead to heightened anxiety and, in turn, aggression. Conversely, a number of studies point to the opposite effect where exposure to nature appears to reduce levels of stress anxiety and hence aggression.

There is evidence from the Netherlands that exposure to tasks within a woodland setting lead to raised feelings of competence and, hence, self esteem. However, it is difficult to determine whether these effects derive directly from the immersion in nature or as an outcome of the forest school based programmes that provide that introduction.

It notes that there are two studies which seem to show a correlation between exposure to nature and reduced levels of anxiety and stress. One (Kuo 2001) links the amount of green space to task performance and coping in residential areas. The second, similar study in Chicago with a group of 7-12 year olds, suggested improved rates of self-discipline positively correlated with the amount of visible green space from high-rise accommodation.

This paper reviews the evidence for the restorative aspect of exposure to nature. It notes that no such study has involved teenagers and sets out to correct this, especially with regard to children in the UK because, according to UNICEF, in 2007, UK children had the lowest levels of well-being in the developed world.

(Foresight 2008), suggested that the number of children in the UK with behavioural problems had increased to around 9%. These behavioural problems manifested themselves in two forms; internalised problems (emotional disturbance or withdrawal) or externalised (disruptive or anti-social behaviour, attention deficit, hyperactivity or excessive aggression).

Research methodology

This piece of research tracked a group of 18 children from an urban area in central Scotland, 6 of whom had been identified as showing “good behaviour” and 12 of whom were rated as showing “poor behaviour”. The “poor behaviour” group came, equally, from a main stream school setting, where they were at risk of exclusion and a residential school.

The proxies used for measuring mood, were:

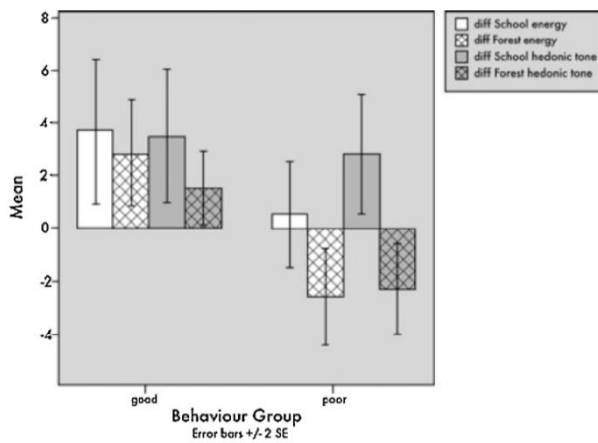
- Energy
- Hedonic tone (happiness)
- Stress
- Anger

Each child was required to complete a questionnaire in which they ranked themselves against these 4 emotional traits for a variety of adjectives on a range from “definitely” to “definitely not”. The questionnaires were completed pre and post time in school and pre and post time in a forest setting.

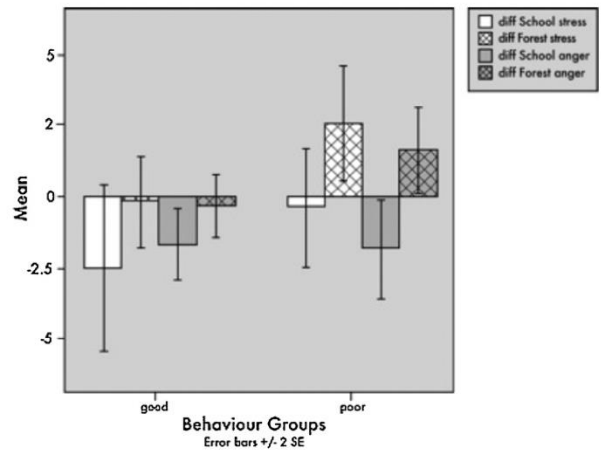
The controls were the group of “good” behaviour students and the scoring of time in normal lessons as well as the forest sessions.

Research findings

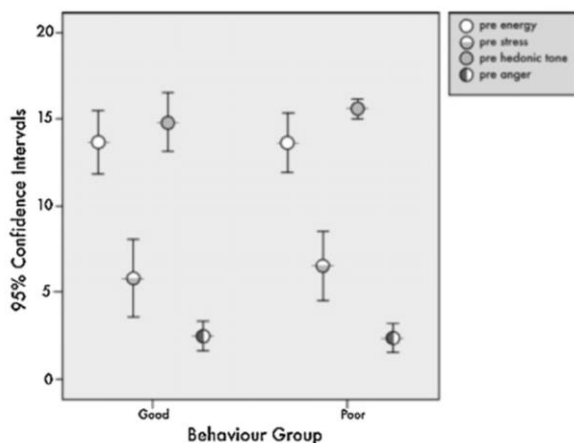
The research outcomes showed that all students had a lower level of stress and anger after forest school than they did after a normal day of school. The reduction was most marked in the “poor” behaviour group where the levels of stress and anger were actually lower at the end of the day than they were at the beginning of the day.



Note: the y axis indicates the change in mood scale pre-post intervention. A lower value on the y axis indicates an increase in energy and hedonic tone (HT).



Note: the y axis indicates the change in mood scale pre-post intervention. A higher value on the y axis indicates a reduction in stress and anger.



Note: the range of possible scores on a mood variable is 0 to 16 for energy, stress and hedonic tone and 0 to 8 for anger.

Discussion of results

A research study such as this will inevitably not provide the whole picture because quantitative rigour displaces qualitative understanding of the impact on the individuals.

The main short-coming, from a quantitative perspective, is the size of the group which is really too small to be of any statistical significance. The existence of a control group raises as many questions as it answers. The two groups scored themselves surprisingly similarly on the four parameters at the beginning of the sessions. The implication is that their self-perception was remarkably similar. This raises concerns for me that the study relies heavily on the capacity of the subjects to understand and rate their emotional states. Whilst not, in itself, a reliable indicator, I would have liked to have seen scoring by people who generally worked with the students as a control mechanism for the children's own perception.

I was also not convinced that a self-reflection exercise alone could be used as a proxy for emotional change. The study leaves me wanting to know whether the effects of the Forest programme led to a significant reduction in behaviour incidents once back in the school setting.

I would have liked to have seen control for other out of school activities. Conventional school places stressors on children which are not present in any out of school task. Forest School does not attempt to replicate the learning that goes on in a school setting and this study could therefore be accused of simply confirming that we are less stressed when we are at leisure than we are when we are work! Leaving school is intrinsically exciting because the requirement to learn according to an externally set agenda has been removed. Would similar levels of stress/anger reduction and mood improvement have been seen if, for example, the children had been taken to an amusement park or to see a film?

Finally, I think one needs to be cautious about the possible Hawthorn effect; that children record improved ratings because being part of the experiment itself leads to improved well-being. This would certainly explain why the "poor" behaviour group, accustomed as they would be to constant disapproval in a school setting, might show the greatest benefit from being released from this opprobrium.

Conclusion

Whilst this is an interesting study with a commendable aim, I think the results need to be treated with caution. The assumption that forest schools is a universal panacea for all mood or behaviour imbalances is dangerous and risks trivialising the causes of those imbalances. To be effective, a forest school programme has to bring about a long term change in the learners' self-perception and capacity to cope with life's challenges. A study such as this, cannot hope to demonstrate these outcomes.