



Ecotherapy

Kimberley Chapman (2108137)

Children & Traumatic experiences

- What are ACE's
- Types of Trauma
- Effects of trauma on development



Trauma can affect...



TRAUMA CAN START
FROM CONCEPTION



ENVIRONMENTAL
FACTORS



EDUCATIONAL IMPACT



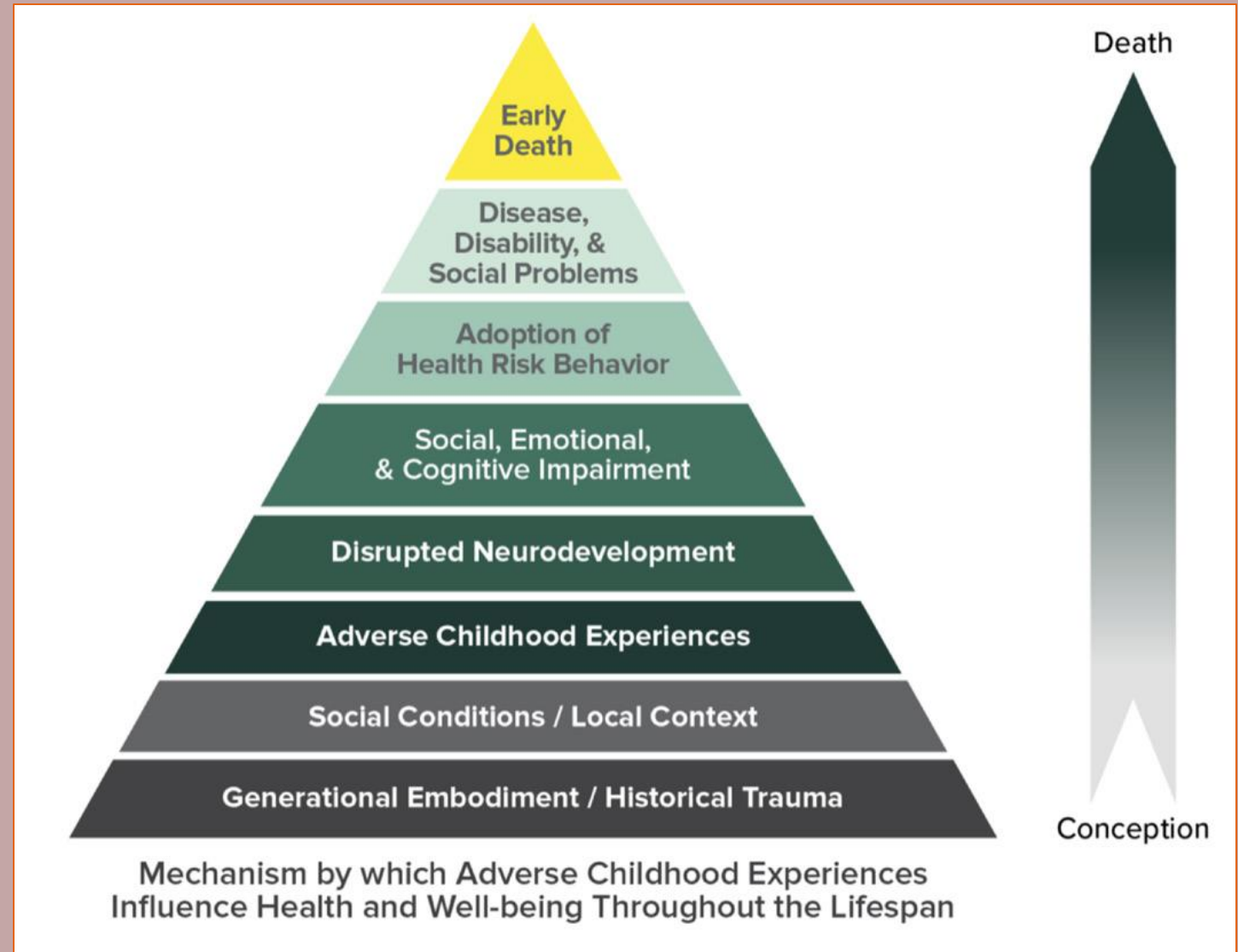
SOCIAL IMPACT



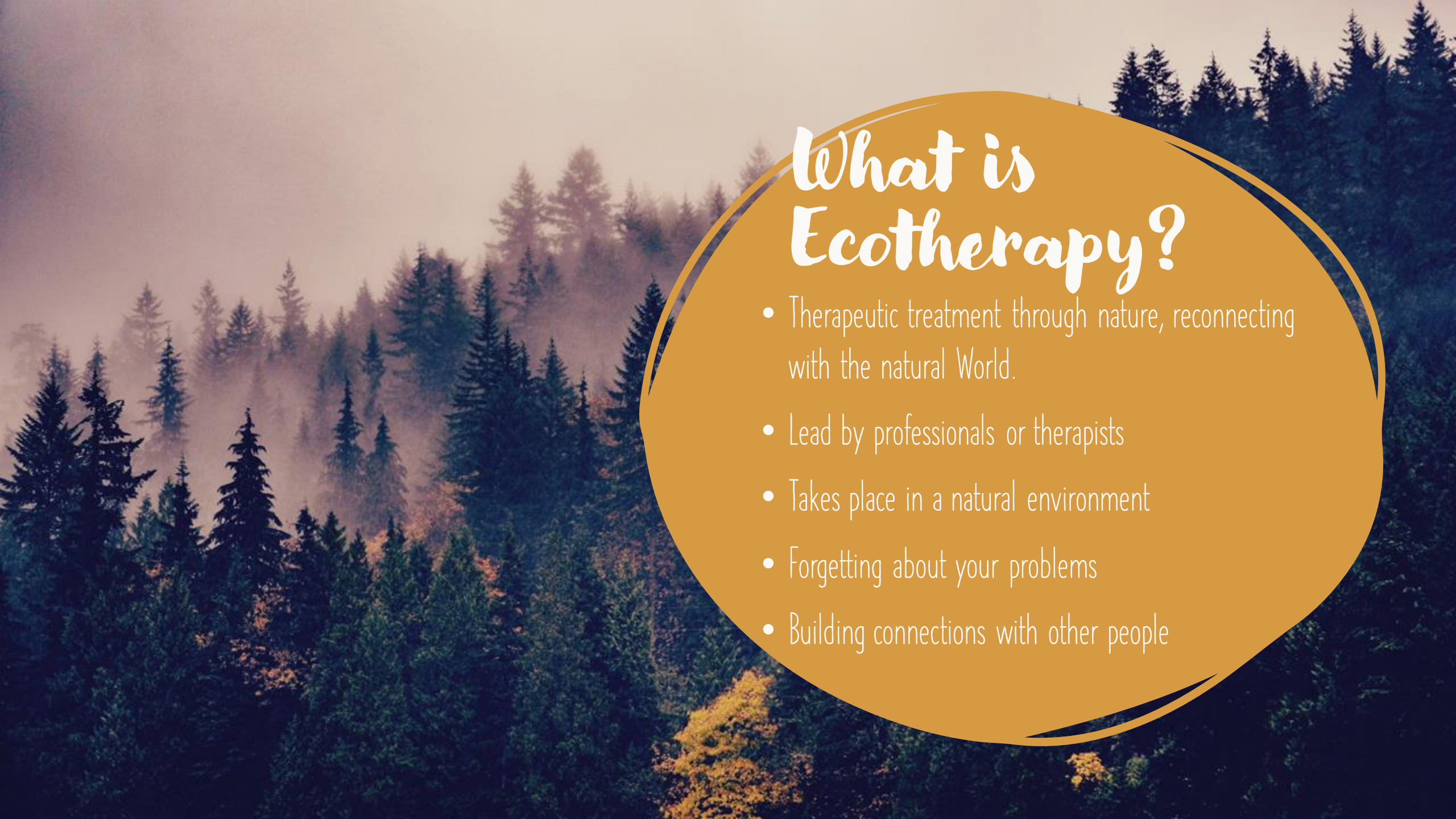
FIGHT, FLIGHT, FREEZE



BEHAVIORAL IMPACT



(De Sa & Nittle, 2020)



What is Ecotherapy?

- Therapeutic treatment through nature, reconnecting with the natural World.
- Lead by professionals or therapists
- Takes place in a natural environment
- Forgetting about your problems
- Building connections with other people

Ecotherapy for Children

- Nature walks and hikes
- Gardening & Planting
- Animal-assisted therapy
- Wilderness play
- Nature journalling & Mindfulness
- Outdoor education programs/ forest school
- Within educational settings





(Fonthill Primary Academy - Forest School, n.d.)

Activities



Welly walks



Sensory nature play



Scavenger hunts



Gardening



Den building



Nature art



Cloud watching



Animal watching & bug hunts



(Miller, 2020)



6 / 10

Putting out the fire!



4 / 7



1 / 8

A great treat for the children getting to watch a carpenter in action. He showed how he used some of his tools and the importance of measuring things carefully. Some children even got to have a go!





A photograph of two young children, a girl and a boy, crouching on the grassy bank of a small stream. The girl, on the left, is wearing a red and white striped shirt and is holding a wooden stick. The boy, on the right, is wearing a yellow shirt and is holding a large, orange mesh net. They are both looking down at the net, which is partially submerged in the water. The background is a lush green forest with sunlight filtering through the trees.

Nature-Based Education 0-8 years old

Social development

Cognitive development

Emotional development

Physical development

Community connection

Health improvement

(Marshall-Seslar, 2024)

Vella-Brodrick and Gilowska (2022).

- Systematic Review of 15 studies
- Found significant improvement in children's results from attention tests.
- Found significant improvement in Long-term memory tests.
- More beneficial to children suffering from anxiety symptoms and anxiety around exams.
- Wellbeing & Emotional regulation were reported to have increased after Nature-based education.
- Supports children learning with or within nature, in Educational settings.

Roslund et al., (2020).

- Tested children's immune systems through blood tests before & after 28 days of nature-based education.
- Found a significant improvement in test results, suggesting improvement in immunity to minor illnesses.
- Supports Educational settings including more nature within lessons.

(GettyTim, 2021)

Lin and Green (2023).

- Systematic review of 40 studies on children before and after Nature-based education.
- Found significant results in psychological outcomes
- Parents reported children's overall behaviour had improved with children reporting an increase in emotional well-being and physical ability.
- Results found improvement in cognitive functioning and well-being from simply viewing nature through a window daily.

Garden (2021).

- Two-year study on children who accessed Forest School activities.
- Found significant improvements in cognitive, emotional, behavioural and physical development in children
- Children with ADHD experienced attention regulation whilst in nature.
- Confidence building and space to explore and 'be wild'.

Pixnio, (2017)

Limitations of Ecotherapy

- Needs training to lead the sessions
- Minimal long-term studies
- Minimal studies exploring the effects of Ecotherapy on ACEs
- Individual differences
- Weather and season dependant
- Accessibility to green spaces for schools
- Safety concerns
- Integrating Nature-based education within current educational settings
- Access to resources



A silhouette of a person's head and hand against a bright sunset. The person is holding their hand out, and a stream of small, glowing stars or stardust is falling from it. The background is a warm, golden-orange glow from the setting sun.

Conclusion

- Ecotherapy as an intervention for children who have experienced ACEs
- Easily attainable
- Diverse and representative.
- Cost effective.
- Extensive evidence to support cognitive, social, emotional and behavioural development in children.
- It is a beneficial and sustainable intervention that improves the adverse effects of trauma.
- Although there is little evidence that focuses on children with ACEs, there is evidence to show psychological improvement.
- Further research to explore specifically the impact of Forest School on children with ACEs.

References.

- Beck, N., & Wong, J. (2022). A Meta-Analysis of the Effects of Wilderness therapy on delinquent Behaviors among Youth. *Criminal Justice and Behavior*, 49(5), 700–729. <https://doi.org/10.1177/00938548221078002>
- De Sa, K. and Nittle, N. (2020). Painful questions: What happens when doctors uncover adverse childhood experiences? *California Health Report*. <https://www.calhealthreport.org/2020/08/19/painful-questions-what-happens-when-doctors-uncover-adverse-childhood-experiences/>
- Estyn. (2020). Knowing your children – supporting pupils with adverse childhood experiences. In *Estyn*. https://www.estyn.gov.wales/system/files/2022-01/Knowing%2520your%2520children%2520%2520supporting%2520pupils%2520with%2520adverse%2520childhood%2520experiences_0.pdf
- Fonthill Primary Academy - Forest School. (n.d.). <https://www.fonthillbristol.sch.uk/curriculum/forest-school>
- Garden, A. (2021). Forest school as a space for risk for children with social, emotional and mental health needs. In *Routledge eBooks* (pp. 141–153). <https://doi.org/10.4324/9781003155034-12>
- GettyTim. (2021). *A great view up into the trees direction sky*. iStock. <https://www.istockphoto.com/photo/a-view-up-into-the-trees-direction-sky-gm1317771514-405104606>
- Jamieson, K. (2020). *ACEs and intergenerational trauma*. Centre for Child Counselling. <https://www.centerforchildcounseling.org/aces-and-intergenerational-trauma/>
- Liu, J., & Green, R. J. (2023). The effect of exposure to nature on children’s psychological well-being: A systematic review of the literature. *Urban Forestry & Urban Greening*, 81, 127846. <https://doi.org/10.1016/j.ufug.2023.127846>
- Mamun, A. A., Biswas, T., Scott, J. G., Sly, P. D., McIntyre, H. D., Thorpe, K., Boyle, F. M., Nitert, M. D., Doi, S. A., Mitchell, M. D., McNeil, K., Kothari, A., Hardiman, L., & Callaway, L. (2023). Adverse childhood experiences, the risk of pregnancy complications and adverse pregnancy outcomes: a systematic review and meta-analysis. *BMJ Open*, 13(8), e063826. <https://doi.org/10.1136/bmjopen-2022-063826>
- Marshall-Seslar, A. (2024). *My Ultimate Guide to Nature-Based Early Childhood Education*. Well-Being with Alysia. <https://wellbeingswithalysia.com/nature-based-early-childhood-education/>
- Miller, K. (2020). Leaf matching. *The Den Kit Co*. <https://thedenkitco.com/blogs/news/autumn-activities-leaf-matching>
- Mulholland, M., & O’Toole, C. (2021). When it matters most: a trauma-informed, outdoor learning programme to support children’s wellbeing during COVID-19 and beyond. *Irish Educational Studies*, 40(2), 329–340. <https://doi.org/10.1080/03323315.2021.1915843>

- PIXNIO (2017). *Free picture: wood, tree, landscape, nature, leaf, dawn, environment, grass, nature, green.* - <https://pixnio.com/nature-landscapes/forest/wood-tree-landscape-nature-leaf-dawn-environment-grass-nature-green>
- Roberts, A., Hinds, J., & Camic, P. M. (2019). Nature activities and wellbeing in children and young people: a systematic literature review. *Journal of Adventure Education and Outdoor Learning*, 20(4), 298–318. <https://doi.org/10.1080/14729679.2019.1660195>
- Roslund, M. I., Puhakka, R., Grönroos, M., Nurminen, N., Oikarinen, S., Gazali, A. M., Cinek, O., Kramná, L., Siter, N., Vari, H. K., Soininen, L., Hui, N., Rajaniemi, J., Kinnunen, T., Laitinen, O. H., Hyöty, H., & Sinkkonen, A. (2020). Biodiversity intervention enhances immune regulation and health-associated commensal microbiota among daycare children. *Science Advances*, 6(42). <https://doi.org/10.1126/sciadv.aba2578>
- Stevenson, M. P., McEwan, J., Bentsen, P., Schilhab, T., Glue, P., Trani, P., Wheeler, B. J., & Healey, D. (2021). Nature walks versus medication: A pre-registered randomized-controlled trial in children with Attention Deficit/Hyperactivity Disorder. *Journal of Environmental Psychology*, 77, 101679. <https://doi.org/10.1016/j.jenvp.2021.101679>
- Vella-Brodrick, D., & Gilowska, K. (2022). Effects of Nature (Greenspace) on Cognitive Functioning in School Children and Adolescents: a Systematic Review. *Educational Psychology Review*, 34(3), 1217–1254. <https://doi.org/10.1007/s10648-022-09658-5>
- Wood, S., Janssen, H., Hughes, K., World Health Organization. [WHO] (2023). *A practical handbook on Adverse Childhood Experiences (ACEs)*. Collaborating Centre on Investment for Health and Well-being, Public Health Wales, Passmore, J., WHO Regional Office for Europe - Violence and Injury Prevention, & Bellis, M. A. https://phwwhocc.co.uk/wp-content/uploads/2023/10/PHW-WHO-ACEs-Handbook-Eng-18_09_23.pdf