



## Teens to Trails Outdoor Benefits Bibliography

Included below are a host of sources for research on the benefits of outdoor time for teenagers.

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*Well designed outdoor activities have a myriad of benefits, including physical and mental health benefits, non-cognitive benefits in the classroom, and teaching social and emotional learning competencies. These benefits come from both the inherent benefits gained from time in natural settings, the nature of the activities, and the social structure of the activities. Below is research on these benefits and the current issues faced by teenagers, specifically a deficit of nature based experiences.*

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### Why is This Important?

Before getting too far into the benefits of Outdoor time and Outing Clubs, it is important to clarify the issue and deficits that these outdoor experiences address. These issues include:

- Nature Deficit Disorder (the human costs of alienation from nature, including a diminished use of the senses, attention difficulties, conditions of obesity, higher rates of emotional and physical illnesses, weakened ecological literacy and stewardship of the natural world; connected to the epidemic of inactivity)
- Lack of physical activity  
(44.4% of Maine high school students were physically active for >60min 5 of 7 days, up from 42.8% in 2017)
- Lack of connections to a caring adult  
(50% of Maine HS students felt connected to a caring adult, down from 57% in 2017)
- Lack of the feeling that teens matter to their community  
(56.6% of Maine HS students felt they mattered to their community, down from 57.3% in 2017)
- Feelings of sadness and hopelessness  
(32.1% of Maine HS students felt so sad or hopeless for 2+ weeks that they stopped some usual activities, up from 26.9% in 2017)

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MIYHS CORE QUESTIONS: 2017 VERSUS 2019 COMPARISON REPORT MAINE 2019 MIYHS HIGH SCHOOL REPORT (Rep.). (2019, November 25). Retrieved [https://data.mainepublichealth.gov/miyhs/files/2019\\_Reports/Core\\_Reports/HS/MIYHS2019\\_Core\\_Reports\\_HS\\_State/Maine\\_2019\\_MIYHS\\_High\\_School\\_Report.pdf](https://data.mainepublichealth.gov/miyhs/files/2019_Reports/Core_Reports/HS/MIYHS2019_Core_Reports_HS_State/Maine_2019_MIYHS_High_School_Report.pdf)

Stage Of Life Trend Report (Rep.). (n.d.). Retrieved

## Physical Health Benefits

Physical health benefits include:

- Lowering blood pressure and heart rate
- Breathing cleaner air
- Boosting your immune system
- And teaching and developing good lifelong exercise habits to encourage an active lifestyle

Abraham, A., Sommerhalder, K., & Abel, T. (2009). Landscape and well-being: A scoping study on the health-promoting impact of outdoor environments. *International Journal of Public Health, 55*(1), 59-69. doi:10.1007/s00038-009-0069-z

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Largo-Wight, E., Chen, W. W., Dodd, V., & Weiler, R. (2011). Healthy workplaces: the effects of nature contact at work on employee stress and health. *Public health reports (Washington, D.C. : 1974), 126 Suppl 1*(Suppl 1), 124-130. <https://doi.org/10.1177/00333549111260S116>

Li, Q. (2010). Effect of forest bathing trips on human immune function. *Environmental Health and Preventative Medicine, 15*(1): 9-17. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2793341/>.

Lovasi, G.S., J.W. Quinn, K.M. Neckermann, M.S. Perzanowski, and A. Rundle. 2008. "Children Living in Areas with More Street Trees Have Lower Prevalence of Asthma." *Journal of Epidemiology and Community Health 62* (2008): 647-649. JECH online. Web. 16 February 2016.

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## Mental Health Benefits

Mental health benefits include:

- Reducing stress and anxiety
- Fighting depression
- Boosting mood and energy levels
- Evoking positive emotions
- And improving creativity

Abraham, A., Sommerhalder, K., & Abel, T. (2009). Landscape and well-being: A scoping study on the health-promoting impact of outdoor environments. *International Journal of Public Health, 55*(1), 59-69. doi:10.1007/s00038-009-0069-z

Beyer KMM, Kaltenbach A, Szabo A, Bogar S, Nieto FJ, Malecki KM. Exposure to Neighborhood Green Space and Mental Health: Evidence from the Survey of the Health of Wisconsin. *International Journal of Environmental Research and Public Health, 2014; 11*(3):3453-3472.

Carla P. Bezold, Rachel F. Banay, Brent A. Coull, Jaime E. Hart, Peter James, Laura D. Kubzansky, Stacey A. \ Missmer, Francine Laden. The Association Between Natural Environments and Depressive Symptoms in Adolescents Living in the United States, *Journal of Adolescent Health*, Volume 62, Issue 4, 2018, Pages 488-495, ISSN 1054-139X, <https://doi.org/10.1016/j.jadohealth.2017.10.008>. (<http://www.sciencedirect.com/science/article/pii/S1054139X17305050>)

Largo-Wight, E., Chen, W. W., Dodd, V., & Weiler, R. (2011). Healthy workplaces: the effects of nature contact at work on employee stress and health. *Public health reports (Washington, D.C. : 1974)*, 126 Suppl 1(Suppl 1), 124–130. <https://doi.org/10.1177/00333549111260S116>

Thompson, Catherine Ward, Jenny Roe, Peter Aspinall, Richard Mitchell, Angela Clow, and David Miller. 2012. "More Green Space Is Linked to Less Stress in Deprived Communities: Evidence from Salivary Cortisol Patterns." *Landscape and Urban Planning* 105 (2012): 221-29. Elsevier. Web. 14 January 2016. [http://ac.els-cdn.com/S0169204611003665/1-s2.0-S0169204611003665-main.pdf?\\_tid=98606ef0-c6c7-1e5-884b-00000aab0f27&acdnat=1454099806\\_cf23d890c461e3db4a71ef046496cb7b](http://ac.els-cdn.com/S0169204611003665/1-s2.0-S0169204611003665-main.pdf?_tid=98606ef0-c6c7-1e5-884b-00000aab0f27&acdnat=1454099806_cf23d890c461e3db4a71ef046496cb7b)

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## Non-cognitive Benefits

Non-cognitive benefits include:

- Improving learning and performance outcomes
- Developing interpersonal skills
- Creating community with other students and meaningful connections with faculty mentors
- Developing a care for the natural world and non-human community
- Inspiring stewardship of the world around them

Abraham, A., Sommerhalder, K., & Abel, T. (2009). Landscape and well-being: A scoping study on the health-promoting impact of outdoor environments. *International Journal of Public Health*, 55(1), 59-69. doi:10.1007/s00038-009-0069-z

Arky, B. (2019, May 03). Animals, Nature Offer Children a Fresh Start. Retrieved August 06, 2020, from <https://childmind.org/article/animals-nature-offer-children-a-fresh-start/>

Kuo, F. E., Taylor, A. F. (2004) A Potential Natural Treatment for Attention-Deficit /Hyperactivity Disorder: Evidence From a National Study. *American Journal of Public Health*. 94(9): 1580-1586. <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1448497/>.

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Tennessen, Carolyn M. and Bernadine Cimprich. 1995. "Views to Nature: Effects on Attention." *Journal of Environmental Psychology* 15 (1995): 77-85. ScienceDirect. Web. 16 February 2016.

Younan, D., Tuvblad, C., Li, L., Wu, J., Lurmann, F., Franklin, M., Berhane, K., McConnell, R., Wu, A. H., Baker, L. A., & Chen, J. C. (2016). Environmental Determinants of Aggression in Adolescents: Role of Urban Neighborhood Greenspace. *Journal of the American Academy of Child and Adolescent Psychiatry*, 55(7), 591–601. <https://doi.org/10.1016/j.jaac.2016.05.002>

## Teaching Social and Emotional Learning Competencies

The five core Social and Emotional Learning competencies that students need to get along well with peers and adults:

- Self-Management
- Self-Awareness
- Social Awareness
- Relationship Skills
- Responsible Decision Making

Arky, B. (2019, May 03). Animals, Nature Offer Children a Fresh Start. Retrieved August 06, 2020, from <https://childmind.org/article/animals-nature-offer-children-a-fresh-start/>

Jones, S., & Doolittle, E. (2017). Social and Emotional Learning: Introducing the Issue. *The Future of Children*, 27(1), 3-11. Retrieved August 6, 2020, from [www.jstor.org/stable/44219018](http://www.jstor.org/stable/44219018)

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Price, A. (2019). Using outdoor learning to augment social and emotional learning (SEL) skills in young people with social, emotional, and behavioural difficulties (SEBD). *Journal of Adventure Education and Outdoor Learning*, 19(4), 315-328. doi:<http://dx.doi.org/10.1080/14729679.2018.1548362>

Younan, D., Tuvblad, C., Li, L., Wu, J., Lurmann, F., Franklin, M., Berhane, K., McConnell, R., Wu, A. H., Baker, L. A., & Chen, J. C. (2016). Environmental Determinants of Aggression in Adolescents: Role of Urban Neighborhood Greenspace. *Journal of the American Academy of Child and Adolescent Psychiatry*, 55(7), 591-601. <https://doi.org/10.1016/j.jaac.2016.05.002>

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### More Information:

Databases for further research:

<https://www.childrenandnature.org/research-library/>