



CORRESPONDENCE

Expanding the definition of pediatric environmental health

Pediatric Research (2020) 87:976; <https://doi.org/10.1038/s41390-019-0426-4>

We read with interest the recent call for research articles on environmental health.¹ This call for papers provides a concise summary of the past accomplishments of pediatric-focused environmental research, as well as developing threats to current and future research and the potential impact on child health. Although environmental health has traditionally focused on identifying and protecting the public from exposure to harmful substances in air, water, soil, and food,² we propose a broader definition that encompasses a more holistic vision of health and the environment. Just as the World Health Organization famously defined health as being “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”,³ we hope that the new environmental health section in *Pediatric Research* will focus not only on the health risks of environmental toxins, but also the health benefits of positive environmental exposures. More precisely, we would like to see additional published research regarding the growing list of positive health benefits from exposure to the natural environment.

There is currently accumulating research demonstrating that access to quality green spaces and natural environments decreases stress and enhances a number of health-related outcomes. For example, a simple walk through nature improves affect as well as working memory performance as compared to a walk through an urban environment,⁴ and having contact with nature for at least 10 minutes, three times weekly resulted in decreases in salivary cortisol and alpha-amylase in adults living in an urban environment.⁵ Indeed, the more time adults spend outdoors, the lower their depression scores are.⁶ Such benefits may play an even more prominent role in promoting mental health in children and adolescents. Simply spending time outdoors can help decrease internalized mental health symptoms in girls,⁷ enhance self-discipline in girls growing up in poverty,⁸ and children with high levels of nature exposure are less likely to develop mental illnesses in adulthood.⁹

The benefits of engagement with and exposure to nature are not limited to mental health. In fact, the loss of trees due to the spread of the emerald ash bore resulted in increases in myocardial infarction in women¹⁰ and in overall cardiovascular mortality.¹¹ Consistent with these findings, counties with more shrub and forest land have lower Medicare expenses. Interestingly, land covered in grass (that is, lawns) does not convey this benefit.¹²

The growing body of research examining connections between nature access, outdoor play, and healthy child development is of legitimate, and even urgent, interest to pediatric health care practitioners. Although the field of pediatrics has strongly emphasized the importance of play in child development,¹³ the importance of outdoor play and exposure to nature should be just as prominent.¹⁴ Much of the nature-related research is published in professional journals outside of typical medical establishment journals, such as in the fields of psychology,

environmental studies, urban design, and public health. By including and welcoming this research, we hope to encourage a broader definition of pediatric environmental health, and to promote healthier children, families, schools, and communities.

ADDITIONAL INFORMATION

Competing interests: The authors declare no competing interests.

Publisher's note: Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Terrill Bravender¹ and Lee Smith Bravender²

¹Department of Pediatrics, University of Michigan, Ann Arbor, MI, USA and ²Matthaei Botanical Gardens and Nichols Arboretum, University of Michigan, Ann Arbor, MI, USA
Correspondence: Terrill Bravender (tbrave@umich.edu)

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Received: 23 April 2019 Accepted: 1 May 2019

Published online: 11 May 2019