Leave the Stress Outside

A Comparison of Scholarly and Popular Articles

Unicorn Thunderfoot

Author Note

This paper was prepared for English 112

Abstract

In this essay, I will compare and contrast a scholarly, peer reviewed publication with a popular blog article that each explore the effects of outdoor education on stress reduction in children. “Reducing Student Stress Through Nature” by Jessica Ordonez-Lancet, published on the National Wildlife Foundation blog, exemplifies key characteristics of popular articles, while “Stress in School. Some Empirical Hints on the Circadian Cortisol Rhythm of Children in Outdoor and Indoor Classes” by Dettweiler, Becker, Auestad, Simon and Kirsch presents an academic appeal. After summarizing the authors claims and exploring the purpose behind the writing, I will define their respective audiences and evaluate the use of ethos, pathos and logos to determine the effectiveness of their articles.

Leave the Stress Outside

Increasing stress in schools has serious short-term and long-term effects on children’s health. As youth report higher levels of anxiety than previous generations, researchers seek solutions. Outdoor education shows promise for helping reduce stress, leading schools and parents to consider the role of the natural world in their children’s lives. Recent studies and articles examine how reconnecting with nature can support children’s well-being in the face of today’s unprecedented anxiety levels. In two articles, “Stress in School. Some Empirical Hints on the Circadian Cortisol Rhythm of Children in Outdoor and Indoor Classes” by Dettweiler, Becker, Auestad, Simon and Kirsch (2017), and “Reducing Student Stress Through Nature” by Jessica Ordonez-Lancet (2018), the authors explore the effects of the outdoors in mitigating children’s anxiety, specifically in schools. Although these articles appeal to different audiences, both state the importance of integrating the outdoors into education. While Ordonez-Lancet writes in a conversational tone for a blog post published by the National Wildlife Federation, Dettweiler et al. present an academic, scholarly article published in the peer-reviewed *International Journal of Environmental Research and Public Health.* Despite different uses of rhetorical appeals, both sources provide compelling claims for integrating outdoor education into schools to support lowering cortisol levels in children.

As more evidence shows the positive effects of the outdoors, efforts to reduce anxiety in children have led to a critique of the traditional education model that has kids inside a classroom most of the day. In Dettweiler et al.’s “Stress in School. Some Empirical Hints on the Circadian Cortisol Rhythm of Children in Outdoor and Indoor Classes,” researchers participate in the larger conversation around children’s mental health and how more time spent outside could reduce stress in their lives. Dettweiler et al. conducted a yearlong study in Germany, measuring cortisol levels in children from two classrooms: one with an outdoor curriculum and one without. Through a systematic review of previously conducted studies and analysis of the data from their own study, while recognizing the limitations of the research, Dettweiler et al. show how outdoor education alleviates stress. Similarly, “Reducing Student Stress Through Nature,” published on the National Wildlife Federation’s blog, sheds light on the disturbing and continually increasing school-related stress. Through ongoing research, The NWF aims “to provide solutions to the stress epidemic through time spent in the outdoors” (Ordonez-Lancet, 2018, p.2). In her blog post, Ordonez-Lancet claims that as stress increases and the well-being of the nation’s children decreases, time outdoors offers relief. While both articles conclude that outdoor education helps reduce stress in children, Dettweiler et al. recognize the limitations of their claims and state the need for more research.

Although both articles advocate for outdoor education, Dettweiler et al. and Ordonez-Lancet speak to distinct audiences. In Dettweiler et al.’s article, the scientific language, detailed report of the study conducted for this article, and references to previously conducted research indicate that the authors intended this article for professionals in public health, education, and environmental institutions/organizations. While this particular study was conducted in Germany and published in 2017 in Switzerland, the authors write for a global audience as the epidemic of stress in children is widespread. They purposely cite relevant research from other countries to provide cross-cultural context so that their findings hold more credibility with an international audience of professionals. Published under the subjects of public health and safety, environmental studies, and comprehensive science works, this article could be referenced by anyone studying the effects of stress on children and/or outdoor education. Dettweiler et al. (2017) write for an academic audience when they say, “findings give some preliminary support for the often assumed […] hypothesis that outdoor teaching over regular intervals is beneficial to children’s mental and physical health” (p.8).

In contrast to the peer-reviewed source, Ordonez-Lancet’s article published in 2018 as part of the NWF’s Back to School- Back Outside Initiative, is aimed at educational institutions, teachers, and families who want to integrate the outdoors into their children’s education. The author engages her audience through citing common issues teachers and parents encounter in overly stressed children and provides concrete outdoor activities that improve overall health. The use of everyday jargon and pictures of children playing outside indicate that while well-written with links to relevant studies and additional articles, the publication is not an accredited, academic article.

Both the popular and peer reviewed sources utilize logos to gain credibility with their respective audiences. In “Reducing Student Stress Through Nature,” Ordonez-Lancet (2018) begins with strategic references of current issues in children’s behavior due to anxiety including “sleeplessness, headaches, and stomach problems” as well as “depression and aggression” (p.1). These specific examples help build a logical argument for the need for stress reduction, particularly in schools. From there, Ordonez-Lancet provides evidence for how the outdoors supports stress-reduction by listing the physiological effects nature has on the brain and body. In listing out well known positive benefits of spending time outside like increases in vitamin D and more physical activity, she draws sound connections to the role nature can play in children’s health and well-being (Ordonez-Lancet, 2018, p.1). By arranging her article in short paragraphs centered around a benefit of the outdoors on children, she builds a well-reasoned argument that supports her conclusion that time in nature has a significant positive impact on today’s youth.

Dettweiler et al.’s article provides credible evidence through thoroughly explaining and detailing their research and experimentation process. Including tables, graphs, and an appendix showing the statistical significance of their findings bolsters their qualitative discussion with quantitative data. Furthermore, the use of well-integrated references to previously conducted studies and research gives a larger context to their argument, building a stronger body of evidence. The use of clear sections, subheadings and labeled tables and graphs makes the study easy to read. These graphics and section headings guide the reader clearly through the research process to better understand the conclusions of study. Unlike the popular article, Dettweiler et al. don’t shy away from calling attention to the lack of a robust enough body of research in the emerging realm of outdoor education and mental health in children. Dettweiler et al.(2017) acknowledge that “this is some of the first research into biological stress factors in the outdoor education context” (p.8). Not only do Dettweiler et al. go beyond merely gaining credibility, they provide a convincing call to action for more research in this field.

Appealing to the emotional needs of readers is as important as a sound logical appeal in effectively communicating to the audience. Ordonez-Lancet relies on pathos from the opening sentence of her blog that draws attention to the alarming levels of stress in schools today. She details the very serious physical and emotional effects stress has on children. “Some younger students have even been shown to regress developmentally,” Ordonez-Lancet (2018) asserts, eliciting the deep-seated fear many parents and teachers share (p.1). The strategic use of images throughout the blog showing peaceful, calm children in nature provide powerful images that support the author’s claim that nature is an antidote to behavioral issues and stress in children.

Like Ordonez-Lancet, Dettweiler et al. employ pathos in the introduction to effectively draw the reader into their research by stating disturbing statistics that speak to the increasing mental health issues. For example, Dettweiler et al. (2017) report that “16.2% of all employee sickness-related absences are attributatble to mental health diorders, with many of them associated to stress” making the reader aware of how stress in children can lead to consequences in adult life (p.1). This statistic helps the researchers humanize the data, giving the reader the opportunity to think about if the sick days they or coworkers took were mental health related, recognizing the seriousness of stress. Furthermore, they point out that from a “developmental neurobiology perspective, childhood and adolescence can be described as very vulnerable phases in which biological systems develop” (Dettweiler et al., 2017, p.2) In pointing out how childhood stress can lead to long-term mental health illnesses, the authors make an emotional appeal to anyone concerned with the youth of today and future generations. Throughout the rest of the article, the researchers rely more on logos and ethos to support their argument due to its academic nature.

Both the academic and popular sources establish ethos in distinct ways to gain trust and credibility with their audiences; however, the peer reviewed article does so more convincingly. In the blog, the author only presents one solution, time outdoors, to the complex and nuanced issue of stress in schools today. While the National Wildlife Federation is a credible organization and gives the article a certain level of authority, a blog is inherently less credible than other sources. Written by one woman, the blog only provides one perspective. Furthermore, the article reflects the values of the NWF rather than an unbiased viewpoint on the topic. For example, Ordonez-Lancet (2018) emphasizes that the National Wildlife Federation’s continued research shows that “nature and outdoor time can help alleviate stress and foster improved sleep and healing in children who may be experiencing heightened levels of stress” (p. 1). The information provided in the article is credible and backed up with links to other publications by reliable sources. Nevertheless, the article’s clear bias and failure to acknowledge the levels of complexity in supporting children suffering from stress limit the article’s efficacy from an academic perspective.

On the other hand, Dettweiler et al.’s use of ethos through academic rhetoric and peer reviewed accreditation give this article more credibility than the popular blog. The researchers come from highly regarded educational institutions in complimentary fields that help provide a more wholistic view of the education system and the effects of stress on children. With a robust list of references, these researchers show they have not only explored previously conducted studies, but they have also taken the time to compare them, drawing conclusions from the body of data that exists. Writing in an academic tone including important statistics, comparisons in stress levels in children to earlier times in history, and examination of both quantitate and qualitative case studies, the authors build trust with their readers. Despite their logical conclusion that the outdoors has a positive effect in reducing cortisol levels in children, the authors also recognize biases and limitations of their method and conclusions. They recognize the “ethical reasons” for not testing the children in the study for “behavioral or mental health disorders,” which further builds credence of the character and caliber of this study (Dettweiler et al., 2017, p.8).

Both articles cite sources appropriately and accurately to support their claims in different ways. In the popular article, Ordonez-Lancet includes hyperlinks to other resources published by the National Wildlife Foundation and articles on the web for readers to discover more about how the outdoors can mitigate the effects of stress on children. At the end of the article, she includes a list of tools specifically for schools with links to make their grounds and classrooms more integrated with the natural world around them. In addition, Ordonez-Lancet provides a link to a larger report done by the National Wildlife Foundation on the importance of outdoor education in our schools to bolster the information in the blog post. In contrast, Dettweiler et al. use APA citations to reference and cite a combination of peer reviewed publications, google scholar articles, and academic books relevant to their research. They mindfully include research done in different countries across many fields including public health, psychology environmental education, and childhood development. With 48 works cited to support their research and claims, the authors show a comprehensive understanding of their topic and field that goes far beyond that of the popular article.

While the evidence in these sources supports increasing outdoor education opportunities to help reduce stress in children, more research is needed. The intersection and importance of research into outdoor education programs and children’s mental health will only continue to grow in relevancy as stress levels rise and children’s connection to the outdoors diminishes. The articles by Dettweiler et al. and Ordonez-Lancet demonstrate that this topic is relevant to diverse audiences. Though the authors employee rhetorical elements in distinct ways, both effectively communicate the role of outdoor education in stress reduction in children.

References

Dettweiler, U., Becker, C., Auestad, B. H., Simon, P., & Kirsch, P. (2017). Stress in school.

Some empirical hints on the circadian cortisol rhythm of children in outdoor and indoor classes.*International Journal of Environmental Research and Public Health, 14*(5), 475. doi:http://dx.doi.org/10.3390/ijerph14050475

Ordonez-Lancet, J. (2018, August 28). Reducing Student Stress Through Nature. Retrieved from

<https://blog.nwf.org/2018/08/reducing-student-stress-through-nature/>