



# Effectiveness of Wilderness Therapy Programs on Mental and Behavioral Health: A Rapid Evidence Review

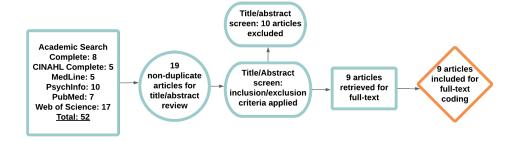
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### What is a Rapid Evidence Review?

Rapid Evidence Reviews (RER) are systematic reviews of the research literature that restrict searches by year or topic in order to produce an overview of the published evidence within a short period of time. On behalf of policymakers in Washington State, CoLab and Evidence-Based Practice Institute (EBPI) researchers conducted an RER to answer the following question: **How effective are wilderness therapy programs on adolescent mental and behavioral health?** 

### **Approach**

CoLab/EBPI searched the Academic Search Complete, CINAHL Complete, MedLine, PsychInfo, PubMed, and Web of Science databases, finding 52 articles that met the initial search criteria. After removing duplicates and applying pre-determined inclusion/exclusion criteria (i.e., quality, type of study design, wilderness therapy, mental health, children and adolescents), nine articles were included for full-text coding.



## **Findings**

Evidence for the effectiveness of wilderness and outdoor therapy programs on adolescent mental and behavioral health is inconclusive. Multiple reviews note the wide variation in program implementation (i.e., heterogeneity), differences in the target population between studies, and small study sample sizes. We review the effectiveness of these programs by treatment goal listed below.

**Mental health:** Five of the eight reviews included studies of mental health outcomes. Interventions across all eight studies included licensed mental health providers, but therapy type varied widely. Bettman (2016) reviewed studies with private pay clients in wilderness groups and found medium improvement on clinical measures. Cahill (2020) compared outdoor camps with other activity-based programs (occupational programs, meditation, animal-assisted, yoga, play, sports) and found low effects for outdoor camps (yoga, sports, and the creative arts achieved moderate to strong effects). Gillis (2016) examined treatment effects using a standard measure across wilderness and non-wilderness treatment groups and found large improvements for both groups. These large effects run counter to other published reviews of outpatient mental health treatment. Kraft (2020) reviewed qualitative studies of youth participating in wilderness camps as part of psychological treatment and found youth experience varied across interventions. Lubans (2012) reviewed studies of physical activity and emotional well-being for youth at-risk of depression, finding inconclusive results.

**Delinquency, recidivism:** Bedard (2004) found small effects of wilderness therapy programs on recidivism for legal-system-involved youth. However, programs focusing on social skills, cognitive behavioral therapy, or family cohesion/reconciliation reported medium effects. This confirms meta-analysis findings from Wilson and Lipsey (2000).

**Prevention of risky behavior:** Guttman (2015) included a review of outdoor adventure programs within a wider metaanalysis of prevention programs designed to improve social-emotional learning. The outdoor adventure programs had small to medium effects, similar to the effects of mentoring. Social-emotional learning programs achieved small to large effects depending on the program.





#### References

- Bedard, R. M. (2004). Wilderness therapy programs for juvenile delinquents: A meta-analysis. In: ProQuest Dissertations Publishing.
- Bettmann, J. E., Gillis, H. L., Speelman, E. A., Parry, K. J., & Case, J. M. (2016). A Meta-analysis of Wilderness Therapy Outcomes for Private Pay Clients. *Journal of child and family studies*, 25(9), 2659-2673. doi:10.1007/s10826-016-0439-0
- Cahill, S. M., Egan, B. E., & Seber, J. (2020). Activity- and Occupation-Based Interventions to Support Mental Health,
  Positive Behavior, and Social Participation for Children and Youth: A Systematic Review. *The American journal of occupational therapy*, 74(2), 7402180020p7402180021-7402180020p7402180028. doi:10.5014/ajot.2020.038687
- Gillis Jr, H. L., Speelman, E., Linville, N., Bailey, E., Kalle, A., Oglesbee, N., . . . Jensen, J. (2016). Meta-analysis of Treatment Outcomes Measured by the Y-OQ and Y-OQ-SR Comparing Wilderness and Non-wilderness Treatment Programs. *Child & youth care forum*, 45(6), 851-863. doi:10.1007/s10566-016-9360-3
- Gutman, L. M., & Schoon, I. (2015). Preventive Interventions for Children and Adolescents: A Review of Meta-Analytic Evidence. *European psychologist*, 20(4), 231-241. doi:10.1027/1016-9040/a000232
- Harper, N. J. (2017). Wilderness therapy, therapeutic camping and adventure education in child and youth care literature: A scoping review. *Children and youth services review*, 83, 68-79. doi:10.1016/j.childyouth.2017.10.030
- Kraft, M., & Cornelius-White, J. (2020). Adolescent Experiences in Wilderness Therapy: A Systematic Review of Qualitative Studies. *Journal of creativity in mental health*, 15(3), 343-352. doi:10.1080/15401383.2019.1696259
- Lubans, D. R., Plotnikoff, R. C., & Lubans, N. J. (2012). Review: A systematic review of the impact of physical activity programmes on social and emotional well-being in at-risk youth. *Child and adolescent mental health*, 17(1), 2-13. doi:10.1111/j.1475-3588.2011.00623.x
- Prince, H. E. (2020). The lasting impacts of outdoor adventure residential experiences on young people. *Journal of adventure education and outdoor learning*, 1-16. doi:10.1080/14729679.2020.1784764