

Top 10 adventure therapy research articles you should know about.

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*, DOI 10.1007/s10826-016-0439-0.

Bettmann et al. (2016) ran a meta-analysis on outcomes for private pay clients involving 36 studies, and totaling 2,399 participants overall. Their study found “medium effect sizes for all six constructs assessed: self-esteem ($g = 0.49$), locus of control ($g = 0.55$), behavioral observations ($g = 0.75$), personal effectiveness ($g = 0.46$), clinical measures ($g = 0.50$), and interpersonal measures ($g = 0.54$)” (Bettmann et al., 2016, p. 1). By focusing solely on private-pay clientele and the programs to which those clients attended, the authors also sought to explore the features of private-pay wilderness programs, with the intent of educating the clinical community regarding its effectiveness. By focusing on the specific short- and long-term private pay wilderness industry, Bettmann et al. (2016) were able to provide a more focused snapshot of the effect of OBH, without confounding the data pool with too wide a variety of treatment model. This article is a valuable resource for any stakeholder trying to understand the private-pay wilderness therapy industry.

Bowen, D., & Neill, J. (2013). **A meta-analysis of adventure therapy outcomes and moderators.** *The Open Psychology Journal*, 6, 28-53.

This study reports on a meta-analytic review of 197 studies of adventure therapy participant outcomes (2,908 effect sizes, 206 unique samples). The short-term effect size for adventure therapy was moderate ($g = .47$) and larger than alternative (.14) and no treatment (.08) comparison groups. There was little change during the lead-up (.09) and follow-up periods (.03) for adventure therapy, indicating long-term maintenance of the short-term gains. The short-term adventure therapy outcomes were significant for seven out of the eight outcome categories, with the strongest effects for clinical and self-concept measures, and the smallest effects for spirituality/morality. The only significant moderator of outcomes was a positive relationship with participant age. There was also evidence that adventure therapy studies have reported larger effects over time since the 1960s. Publication bias analyses indicated that the study may slightly underestimate true effects. Overall, the findings provide the most robust meta-analysis of the effects of adventure therapy to date. Thus, an effect size of approximately .5 is suggested as a benchmark for adventure therapy programs, although this should be adjusted according to the age group.

Clem, J.M., Prost, S.G., & Thyer, B.A. (2015). **Does wilderness therapy reduce recidivism in delinquent adolescents?: A narrative review.** *Journal of Adolescent and Family Health*, 7(1), 1-19. Retrieved from <http://scholar.utc.edu/jafh/vol7/iss1/2>

Clem, Prost, and Thyer (2015) explored the use of wilderness therapy (WT) as an intervention for youth involved in the juvenile justice system in the United States, and explored the efficacy of WT as an intervention for reducing recidivism. The authors conducted an analysis of WT literature that fit the following criteria: (a) evaluated a WT intervention, (b) with an adolescent population, (c) including a measure of recidivism for outcome, (d) and published between the years of 1990 and 2010 in English. Ultimately, the authors found seven studies (n = 7) that fit the aforementioned criteria: Burke (2010), Catellano and Soderstrom (1992), Elrod and Minor (1992), Gillis, Gass, and Russell (2008), Jones, Lowe, and Risler (2004), Lambie et al. (2000), and Russell (2006). Among the seven articles, the authors found data to support the efficacy of WT programs as an effective treatment of adolescent recidivism. The authors found a negative correlation between the length of time in WT programs and the recidivism (i.e. longer time in WT programs produced lower rates of recidivism), however the authors concluded with cautioning readers that there is limited data and a need for future research.

DeMille, S.; Tucker, A.; Gass, M.; Javorski, S.; VanKanegan, S.; Talbot, B.; & Karoff, M. (2018). **The effectiveness of outdoor behavioral healthcare with struggling adolescents: A comparison group study. (2018).** *Children and Youth Services Review*. doi.org/10.1016/j.childyouth.2018.03.015.

This study examined the longitudinal impact of Outdoor Behavioral Healthcare on youth participants as reported by their parents. This analysis fills a critical gap in past research by including a Treatment as Usual (TAU) comparison group. Findings showed that youth participants who attended an Outdoor Behavioral Healthcare treatment program were, as reported by their parents, were functioning significantly better than the TAU group one year following the program as measured by the Youth Outcome Questionnaire 2.01. Youth who remained in their communities were still at acute levels of psychosocial dysfunction during the same time span. Despite some differences between the means of the treatment and TAU groups across time between gender and groups, a regression analysis revealed age and gender not to be significant predictors of improvement. The only significant predictor was participation in the treatment group.

Gillis, H. L., Jr., 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 and Youth Care Forum*, (pp. 1-13), Springer US.

Gillis et al. (2016) examine and compare Youth Outcome Questionnaire (completed by parents) and Youth Outcome Questionnaire-Self Report (completed by clients) data in wilderness and non-wilderness treatment settings. To be included in the analysis, studies must have “(a) contained a version of the Y-OQ, (b) implemented mental health treatment, (c) contained sufficient data to obtain an effect size, and (d) had at least two data points” (Gillis et al., 2016, p. 1). Results show that both wilderness and non-wilderness programs yielded a significant effect size per Y-OQ and Y-OQ-SR scores (Hedges g , $g = .98$, 95%; $g = .80$, 95% respectively). Y-OQ scores showed larger effect sizes with wilderness treatment, while Y-OQ-SR scores showed greater effect sizes for non-wilderness programs. More inquiry is needed to understand this discrepancy between parent- and client observation of change. Additionally, utilization of outcome metrics mid-treatment could help develop insight into change trajectory, as this study only examined pre- and post discharge data.

Javorski, S., & Gass, M. A. (2013). **10-Year incident monitoring trends in outdoor behavioral healthcare: Lessons learned and future directions.** *Journal of Therapeutic Schools & Programs*, 6, 112-128.

Javorski and Gass (2013) examine data collected by the Outdoor Behavioral Healthcare Research Cooperative (now called the Outdoor Behavioral Healthcare Center), from Outdoor Behavioral Healthcare Council member programs. These authors examine the risk of OBH treatment, as explained by incident monitoring. Important in the introduction to this research is a discussion of the use of actual and perceived risk in the wilderness- and adventure therapy model. Risk is used to create an “adaptive dissonance” that promotes growth. Risk, Javorski and Gass (2013) argue, must be managed in such a way that exposes clients enough to foster positive change while limiting exposure to unnecessary danger. Javorski and Gass (2013) examined data on injuries, illnesses, and restraints. Such an examination provides context for comparing risk of OBH treatment against other forms of adventure programming, other types of treatment, and the risk inherent in adolescence while not in a controlled treatment environment. This research is important in addressing concerns about the relative safety of OBH treatment and AT in general. Results show that metrics measuring risk, like illness, injury, use of therapeutic restraint, etc., all remained stable over the ten-year period from 2001-2011. This comprehensive report provides a longitudinal perspective on risk in OBH treatment.

Koperski, H., Tucker, A., Lung, D.M., & Gass, M. (2015). **The impact of community based adventure therapy programming on stress and coping skills in**

adults. *The Practitioner Scholar: Journal of Counseling and Professional Psychology*, 4(1), 1-16.

In an exploratory study involving 31 participants at a community agency, Koperski et al. (2015) examined the use of Adventure Therapy (AT) to help lower stress and develop coping skills. The treatment method combined leisure and challenge activities to accomplish stated goals (e.g., situational appraisal, identification of factors contributing to stress, emotional expression and regulation, increase in coping strategies), implemented over the course of 12-36 sessions (mean=25). Using the Perceived Stress Inventory, Coping Skills Utilizations Scale, and Working Alliance Inventory (WAI), authors found AT to lower stress appraisal (perceptions of situations as stressful), increase coping skills, and help build therapeutic rapport between client and clinician. PSI scores dropped from 24.5 at intake to 11 at discharge, a change seen as significant. Implications are that AT can be utilized to treat stress in adult clients, an extension of AT beyond the more typical adolescent client population.

Norton, C. L., Tucker, A., Russell, K. C., Bettmann, J. E., Gass, M. A., Gillis, H. L., & Behrens, E. (2014). **Adventure therapy with youth.** *Journal of Experiential Education*, 37(1), 46-59.

Norton et al. (2014) present a “state of knowledge” regarding AT in North America. Included are current findings, critical issues, a call for training, and a discussion of professionalization in the field of AT. These authors address AT in its many settings, looking at wilderness therapy, AT in residential treatment, and as AT can be applied to community mental healthcare. Norton et al. (2014) connect the importance of research and training in addressing the critical issues in AT, like funding and reputation in the healthcare field.

Tucker, A. R., Smith, A., & Gass, M. A. (2014). **How presenting problems and individual characteristics impact successful treatment outcomes in residential and wilderness treatment programs.** *Residential Treatment for Children and Youth*, 31(2), 135–153.

Tucker et al. (2014) examine the effect of individual characteristics on treatment outcomes. In a sample of 1,058 participants from both OBH and private residential treatment programs, Tucker et al. (2014) found female OBH clients to report statistically significant improvements at a (statistically) significantly higher rate than males. Clients from residential treatment reporting a history of sexual abuse were also more likely to achieve clinically significant improvements than those clients without a history of sexual abuse. This data was collected through the efforts of the National Association of Therapeutic Schools and Programs (NATSAP) Practice Research Network (PRN). Over two thirds of participants demonstrated clinically significant change, per the outcome measure used (Youth Outcome Questionnaire, Y-OQ 30). Interestingly, clients with a trauma history were four times less likely than average to achieve clinically significant

improvements, while those reporting a history of sexual abuse were seven times more likely than average to see clinically significant improvement. Implications include measurements regarding diagnoses, in this case trauma, as well as appropriate treatment placement and planning for specific client profiles. Finally, “programs should be proactive in training staff about the types of problems, risk factors, and warning signs that are most likely to be present in their clients” (as cited in Tucker et al., 2014).

Tucker, A., Javorski, S., Tracy, J., & Beale, B. (2013). **The use of adventure therapy in community-based mental health: Decreases in problem severity among youth clients.** *Child & Youth Care Forum, 42*(2), 155–179.

The purpose of this article was to establish Adventure Therapy (AT) as a viable treatment option for community-based mental health treatment. Tucker et al. (2013) sought to examine the effectiveness of AT as compared to traditional counseling; to compare treatment outcomes across gender, age, primary diagnosis, and race between AT and traditional counseling; and to establish predictors of change in problem severity for AT clients. Tucker et al. (2013) examined the primary clinician reports for a sample of 1,135 youth, and found treatment with an AT component to be more effective than counseling without an AT component: 50-55.8% of AT clients were considered “recovered”, compared to 42.5-43.4% of non-AT clients. Additionally, AT was found to effectively reduce problem severity, alongside the psychological counseling, with better rates of reduction in female and African American clients. Length of AT was not a predictor of decreased problem severity, whereas length of psychological counseling was. Notably, the clients engaged in AT were more acute, yet demonstrated better outcomes. This could be attributed to the kinesthetic component of AT, which involves an exercise aspect shown beneficial for myriad diagnoses (e.g., PTSD, depression, and anxiety). Community mental health is a field in need of effective interventions for children and adolescents. AT is one possible answer.