

**The evidence base for  
private therapeutic schools, residential programs, and wilderness therapy programs**

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In the past 25 years adolescent risk factors have dramatically increased. Approximately one-third of public high school students fail to graduate (National Center for Higher Education Management Systems, 2006). Drug use is rampant in middle and high school. More children have been diagnosed with mood, anxiety, attention, substance, and behavior disorders than ever before (Substance Abuse and Mental Health Services Administration, 2006). Alarming large percentages of youth participate in high-risk behaviors, such as carrying weapons and attempting suicide (Centers for Disease Control and Prevention, 2007).

Unfortunately during this period of heightened need, mental health systems have experienced an unprecedented decline in intensive services for high-risk youth. This decrease in the availability of adequate mental health services has been driven by a paradigm shift to crisis stabilization and medication management designed to manage care and contain costs for insurance companies. These real and palpable problems have led to a rapid growth of private therapeutic programs.

*Private therapeutic schools, residential programs, and wilderness therapy programs* are aimed at serving the complex needs of struggling adolescents and their desperate families who have not been helped by palliative remedies offered by outpatient therapy or short-term psychiatric hospitalization. Enrollment in these programs is typically preceded by complex and intensive academic, legal, substance abuse, behavioral, emotional, and familial problems when the adolescents' caregivers (e.g., parents, guardians, teachers, therapists) are unable to provide adequate support. In most cases, youth treated in private therapeutic programs return home after receiving individual and family therapy designed to facilitate their return. The National Association of Therapeutic Schools and Programs (NATSAP) ([www.natsap.org](http://www.natsap.org)) is the primary professional association serving private therapeutic schools, residential programs, and wilderness therapy programs. Its member programs typically consist of "brick and mortar" programs (e.g., therapeutic residential programs) and outdoor-based therapeutic programs. Most NATSAP member programs are independently owned and licensed by appropriate state agencies.

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**The Evidence**

In the past 10 years, a growing body of evidence has accumulated documenting the effectiveness of private therapeutic schools, residential programs, and wilderness therapy programs. This body of research is comprised of studies led by university faculty with the oversight of federally recognized institutional review boards. Collaborative studies have been conducted among NATSAP member programs as well as at individual NATSAP programs.

There are five major research initiatives that, combined together, provide a growing base of research support for private therapeutic programs. These research initiatives are particularly ambitious: many use large samples, longitudinal designs, multiple research sites, multiple reporters, and "gold standard" outcome measures.

**Initiative # 1**

The Outdoor Behavior Healthcare Research Cooperative (OBHRC) ([www.obhrc.org](http://www.obhrc.org)) is a research collaborative comprised of several wilderness therapy programs who are NATSAP member organizations. It is currently located at the University of New Hampshire and is operated by several research scientists. In the last decade, these researchers have generated over 100 published research studies based on outdoor programs addressing the needs of youth.

Two foundational studies within this initiative systematically explored youth outcomes in outdoor programs. The first was conducted at seven OBHRC wilderness therapy programs (<http://obhrc.org/publications.php>). Using the Youth Outcome Questionnaire (YOQ, Burlingame, Wells, & Lambert, 1995), a commonly used measure of outcomes in mental health treatment, Keith Russell, Ph.D. (2002, 2003a) found statistically and clinically significant reductions of behavioral and emotional symptoms of youth immediately following treatment. A one year follow up study with a random sample of these youth found that, on average, the gains made during the program had been maintained.

**Mean scores on Y-OQ at Admission, Discharge, and 12 Months After Discharge for Adolescent Self Reports and Parent Assessments (Russell, 2002a, p. 29)**

Rater	Sample Size	Admission	Discharge	12 Months After Discharge
Adolescent	621	71.80	50.58	37.70
Parent	560	99.04	55.10	42.84

In a second foundational study within this initiative, Russell (2005) followed the same sample of youth two years later and found they had maintained therapeutic progress initiated by treatment. Furthermore, according to youth self-report data, these youth continued to improve after leaving the program. In fact, the majority of parents and youth indicated they were doing well and parents believed that their son or daughter could not have begun their recovery without the initial impact of the wilderness treatment.

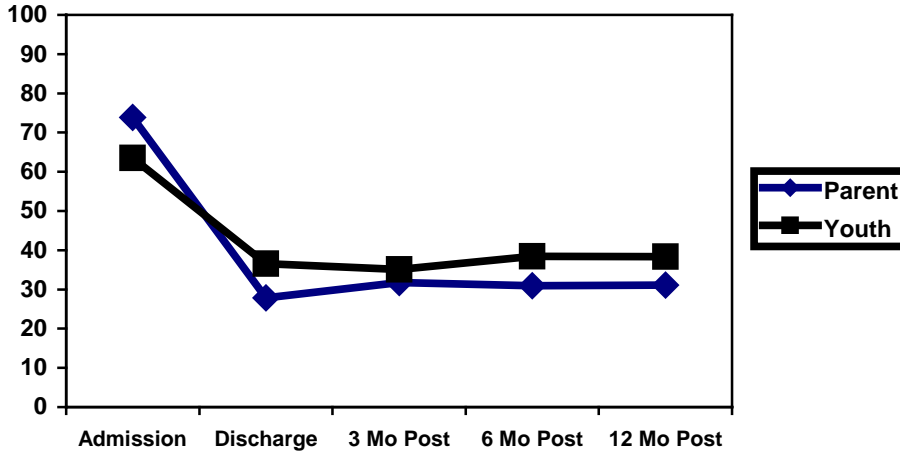
As with many initial quantitative studies designed to determine basic effectiveness of programming, Dr. Russell's work did not include various control groups that would help determine more precisely the reasons and generalizability of the strong positive effects obtained with wilderness intervention. Qualitatively, parents obviously did not need control groups to attest to the degree of positive changes produced by several weeks of wilderness intervention. Dr. Russell's work begins to empirically document these positive effects.

**Initiative # 2**

Ellen Behrens, Ph.D. (2006) conducted another major, IRB-approved research initiative at nine "brick-and-mortar" NATSAP programs owned by Aspen Education Group. Generated by repeated surveys of nearly 1000 youth and their parents, these results were presented at the American Psychological Association Annual Conference in 2006. Employing standardized measures of psychosocial functioning developed by Achenbach (2001), the study found strong positive effects of treatment on internalizing problems (i.e., depression, anxiety, attention), problematic external behaviors (i.e., aggression, rule breaking), and overall functioning. In addition, youth academic functioning and youth family relationships improved significantly during treatment. A study that

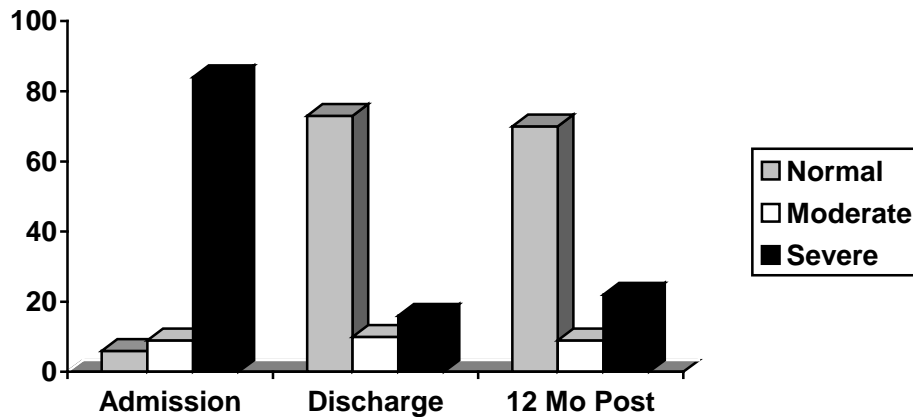
followed the youth for 12 months after treatment found that the positive treatment effects were maintained (Behrens, 2007; Behrens & Satterfield, 2007).

Problem Severity



These data are perhaps most striking when considered in terms of changes in youth level of functioning. By the end of residential treatment and one year after treatment, the majority of the youth demonstrated clinically significant improvement by shifting from the abnormal (or clinical) range to the normal range of behavioral and psychological functioning. These results are especially remarkable when considered in the context of other evidence-based treatments. For example, the maintenance of gains after private residential treatment is more favorable than those reported with two of the most highly acclaimed evidenced-based treatments for youth (i.e., Multi-systemic Therapy and Functional Family Therapy) (see Fonagy, Target, Cottrell, Phillips & Kurtz, 2002; U.S. Department of Health and Human Services, 2001).

Percentage of Youth in normal, moderate, and severe ranges of functioning at admission, discharge, and one year after discharge



### **Initiative # 3**

In collaboration with the University of Arkansas, Sarah Lewis, Ph.D. coordinated a program evaluation initiative at Aspen Education Group's wilderness therapy programs (Dixon, Leen-Feldner, Ham, Feldner, Lewis, in press; Lewis, Rogers, Dixon, Barreto, Leen-Feldner, & Daniels, 2007; Rogers, Dixon, Barreto, Farrell, Daniels & Lewis, 2007; Rogers, et. al., 2007). This longitudinal outcome study used the Treatment Outcome Package (TOP) questionnaire (Krause, Seligman, & Jordan, 2005) to measure changes in participating youth. The study confirmed the findings generated by the evaluation initiatives of Russell (2003a, 2005): wilderness therapy was associated with statistically significant positive changes in overall functioning. Youth in the study experienced significant decreases in suicidal ideation, anxiety, depression, substance abuse, social conflict, sleep disruption, violence, as well as an overall reduction in externalizing behaviors such as impulsivity, defiance, and hostility. Furthermore, these youth demonstrated improvements in work and academic functioning during the follow-up portion of the study.

### **Initiative #4**

Michael Gass, Ph.D. and colleagues (2009) provided a summary of preliminary analyses of the NATSAP Outcomes Research Project. The Project involves systematic data collection from more than 33 NATSAP programs examining the status of participants at the beginning of treatment in residential or wilderness settings, at the conclusion of treatment, and one-year post discharge. This large-scale study has currently collected more than 1200 participant surveys using either the Youth Outcome (Burlingame et al., 1995) or Achenbach (Achenbach, 2001) assessments of psychiatric and behavioral symptoms. Preliminary analysis indicates strong positive effects of program intervention with large statistically significant reductions in both psychiatric and behavioral symptoms from admission to discharge. The data collection process is ongoing and later analyses will allow for a more detailed and prescriptive assessment of the effect of different types of program intervention on a range of specific presenting problems. This large-scale database is located at the University of New Hampshire and will be available to investigators who have various research questions.

### **Initiative #5**

A number of other published, well-designed studies have been conducted at single NATSAP member programs. For example, one study conducted at *The Menninger Residential Treatment Program* with a sample of 123 youth found that parents and youth reported a significant decline in problems from admission to 3 months after completing the program, and these gains from treatment lasted up to 12 months after completing the program (Leichtman, Leichtman, Barber, & Neese, 2001).

Another published study, conducted at *Alpine Academy*, employed a strong control group design and found families reported significant improvement in child behavior, parental effectiveness, and parent-child relationships when compared with similar difficulties in families who were referred for the service but not served (Lewis, 2005). These changes were maintained on assessments three months after discharge.

*Wediko Children's Services*, another NATSAP member program, has participated in numerous research projects with Jack Wright, Ph.D. of Brown University and Audry Zakriski, Ph.D. of Connecticut College. These studies examined adaptive and contextually based behavior for youth

in residential treatment (Wright & Zakriski, 2003; Zakriski, Wright, & Parad, 2006; Zakriski, Wright, & Underwood, 2005).

Nick Hong, Ph.D. and his colleagues (Hong & Santa, 2007; Hong & McKinnon, 2009; Hong, 2010) at Montana Academy conducted a series of studies demonstrating marked increases in parent ratings of their child's maturity over the course of treatment, and these gains persisted one year after discharge. They also demonstrated that over the course of treatment school performance improved markedly, psychiatric and behavioral symptoms dissipated, and parents increased positive warmth and decreased negative emotional control of their children.

Joanna Bettmann, Ph.D. has produced a series of valuable studies on the positive influences of wilderness therapy on attachment issues for both adolescents and adults (Bettmann, 2007; Bettmann & Jaspersen, 2008; Bettmann, Demong, & Jaspersen, 2008). Her work demonstrates how wilderness therapy programs can aid in the treatment of insecure attachment cycles.

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### Conclusions

*Private therapeutic schools, residential programs, and wilderness therapy programs* possess a solid and growing research base. This collective body of research demonstrates that participating youth improve significantly during treatment and these improvements continue after youth return home. These findings are based on several different research programs of study: studies that were large scale, multi-center, and longitudinal, conducted by nationally recognized university researchers, and reviewed by federally recognized institutional review boards. Further research of course is needed, and encouraged, that will include a variety of control conditions aimed at refining the explanations of the powerful treatment effects that have been revealed.

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