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Abstract

This state of knowledge article provides an overview of Adventure Therapy (AT) as it is practiced with adolescents in North America, presenting (a) current findings in AT research with adolescents, (b) critical issues in AT, (c) the need for training and professional development in AT, and (d) professionalization in AT. Implications of current findings in AT research for practitioners, researchers, and consumers of AT services are also discussed.

Keywords

adventure therapy, outcomes, training, professionalization

Adventure therapy (AT) incorporates the therapeutic application of experiential education using adventure experiences, and can be defined as “the prescriptive use of adventure experiences provided by mental health professionals, often conducted in natural settings that kinesthetically engage clients on cognitive, affective, and behavioral levels” (Gass, Gillis, & Russell, 2012, p. 1). Gass et al. (2012) point out, “the definition of AT has been a well-debated topic, if not a contentious one, due to multiple influences

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and widely varying applications” (p. 1). Although there are distinct commonalities among AT practitioners utilizing outdoor adventure for therapeutic gains, there are also distinct differences. While this article primarily presents a North American view of AT, significant literature outside of the United States and Canada has also documented AT’s efficacy (Bowen & Neill, 2013; Crisp & Hinch, 2004; Somervell & Lambie, 2009), differences in social systems, as well as varied definitions of AT.

This article examines AT’s connection to experiential education and presents (a) current findings in AT research with adolescents, (b) critical issues in AT, (c) professionalization efforts in AT, and (d) the need for training and professional development in AT. A full discussion of additional issues important in AT (e.g., multicultural and international perspectives) is beyond the scope of this article; however, implications of current findings in AT research for practitioners, researchers, and consumers of AT services are discussed.

AT’s Connection to Experiential Education

The philosophical and theoretical roots of AT can be found in experiential education (Gass, 1993). According to the Association for Experiential Education (AEE, 2013), experiential education is “a philosophy of education that informs many methodologies in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, clarify values, and develop people’s capacity to contribute to their communities” (para. 2). These concepts originated in the work of philosopher and educator John Dewey (Warren, Sakofs, & Hunt, 1995) and have great application to AT; they have been reiterated most commonly in Kolb’s (1984) experiential learning cycle, which incorporates action, reflection, and integration as key elements of the learning (or therapeutic) process. The application of experiential education in therapeutic settings provides direct, hands-on adventure experiences that engage clients as active participants in the therapeutic process, elicit motivation from clients, provide exposure to real and meaningful natural consequences, and provide opportunities for reflection and transfer of learning. Within experiential education, all of these qualities are key ingredients that help clients more fully engage in, reflect on, and integrate in the treatment process (Gass, 1993).

Current Findings in AT Research

Wilderness Therapy

Research in the area of wilderness therapy is one of the most prevalent areas of examination within the AT field. One of the reasons for this is the establishment of consistent research outcome measures among some wilderness therapy programs, the establishment of a collective database, and the sharing of critical process and outcome data to establish standards of care and best practices (Outdoor Behavioral Healthcare Industry Council [OBHIC], 2013).

Youth functioning. Research on wilderness programs has shown it to be effective in improving overall functioning of adolescent clients, as well as specifically reducing symptoms of distress related to interpersonal and mental health challenges. In a meta-analysis of adolescent wilderness therapy programs, Bettmann (2012) examined 34 studies, including a total of 2,767 clients. She found medium-sized (effect size, $ES = .43$) overall effects, suggesting the effectiveness of wilderness therapy programs for adolescents. AT programming has consistently found moderate effect sizes that hover in the .42 range (Cason & Gillis, 1994). This finding has recently been reconfirmed by Bowen and Neill (2013), who compared overall results of wilderness therapy with alternative treatment or no treatment, and also found a moderate effect size ($ES = .47$). Effect sizes can be interpreted by explicitly comparing a reported effect size with those reported in prior studies of a similar nature (Schuele & Justice, 2006); therefore, it is the consistency of the moderate-level effect in AT from pre- to post-test or between a treatment and a control group that is important here; programs that score below this moderate score should examine how and why their results differ from what can be considered a benchmarked norm in AT.

In addition, outcomes collected from OBHIC programs participating in the Practice Research Network (PRN) of the National Association of Therapeutic Schools and Programs (NATSAP) have consistently shown significant improvements for youth. The aim of the PRN is to create a database of outcomes tracking clients from intake to discharge to 12 months post-discharge using triangulation with parent and youth reports. In their study of approximately 900 adolescent clients from OBHIC programs in the PRN, Tucker, Zelov, and Young (2011) found clients had improved in their levels of overall functioning at discharge. These improvements were based on youth and parent reports measured by the Y-OQ 30 (OQ Measures, 2013), with mean decreases large enough to be considered statistically and clinically significant. In addition, these changes in global functioning were shown to remain stable 6 and 12 months post-discharge (Zelov, Tucker, & Javorski, 2013). Similarly, Bettmann, Russell, and Parry's (2013) evaluation of one OBHIC program showed clinical improvements for participants from pre- to post-discharge maintained at 6 months post-discharge. These recent findings are consistent with Russell's (2003, 2006a) foundational research on outdoor behavioral healthcare clients based on parent and youth reports showing clinically significant improvements that were maintained over time.

Youth substance abuse. In his study of participants from five OBHIC programs, Russell (2008) found significant reductions in the frequency of substance use by participants post-treatment, with larger post-treatment reductions shown for clients in residential versus community aftercare settings. More recently, in Lewis' (2012) study of participants from three similar outdoor behavioral healthcare (OBH) programs, youth reported significant decreases in substance use which remained over time regardless of aftercare setting, suggesting that low substance use is not necessarily primarily due to lack of access to substances. Lewis (2012) also found that OBH program participants reported significant decreases in conduct disorder behaviors, with decreases that continued post-discharge, suggesting a lasting effect of the OBH treatment. It is important to note that

while not all research has specifically looked at substance use as an outcome, substance use and abuse are most often reported as one of the main presenting problems for youth entering OBH programs (Russell, Gillis, & Lewis, 2008; Tucker et al., 2011).

Readiness to change. Although AT has anecdotally promoted the idea that it successfully engages resistant clients in the treatment process, recent research in wilderness therapy provides empirical support for this belief. Russell (2008) measured client motivation to change at intake and found the majority of youth were unmotivated to change, but despite this resistance, they demonstrated increased readiness to change at discharge based on changes in pre- to post scores on the University of Rhode Island Change Assessment (URICA). In a similar study utilizing the URICA, Bettmann et al. (2013) found that clients who were unmotivated at intake, when compared with those more active in their motivation to change, reported equally large increases in functioning post-discharge. These findings suggest that resistance to treatment at intake does not reduce the effectiveness of the wilderness therapy program, and that motivation to change may not be a necessary condition for positive therapeutic outcomes in AT.

AT in Residential Programs

AT is also utilized by a variety of residential programs, including residential treatment centers and juvenile justice programs. While it is difficult to control for fidelity and other moderating treatment variables in these programs, recent research has considered the use of adventure within these programs to examine more closely the relationship between the use of AT and therapeutic outcomes.

NATSAP. As previously mentioned, NATSAP has coordinated a research initiative to collect outcome data evaluating the impact of NATSAP programs, including OBHIC programs, residential treatment centers, and therapeutic boarding schools, through the creation of its PRN. Along with OBHIC programs, other residential NATSAP programs also use AT programming within their settings (Russell & Gillis, 2010; Young & Gass, 2010). Research shows the effectiveness of NATSAP programs, with clients showing clinical improvements that are maintained 12 months post-treatment as reported by parents and youth (Tucker et al., 2011; Zelov et al., 2013). Despite these findings, it is not possible to specifically call all NATSAP programs (beside OBHIC programs), AT programs, because the scope and nature of the use of adventure within each program is unclear. However, focusing on the use of adventure within these programs provides a way of building greater empirical support for connecting the use of AT with specific outcomes (Hayes, Tucker, & Gass, 2013).

Juvenile justice. Recent research has increased the methodological rigor and understanding of the impact of these programs on youth (Gillis & Gass, 2010; Gillis, Gass, & Russell, 2008). Russell's (2006b) evaluation of a wilderness therapy program for young offenders found significant clinical improvement from intake to discharge,

especially in the areas of interpersonal relations and social problems, and recidivism rates of program participants were comparable with those found in other studies of young offenders. Walsh and Russell's (2010) study of a wilderness therapy program for young offenders found significant improvement in participant levels of hope and self-efficacy from intake to discharge. However, despite hope being a predictor of reduced recidivism, the study showed no overall difference in recidivism rates between the wilderness therapy (WT) program and the comparison group. In contrast, the research on Behavior Management through Adventure (BMtA) alternatives to treatment as usual for young offenders found more significant decreases in re-arrest rates with the BMtA program when compared with the comparison groups over a 3-year period (Gillis & Gass, 2010; Gillis et al., 2008). Of note is that BMtA is an AT program incorporated within a residential, not wilderness, setting for juveniles. In terms of residential and juvenile justice settings, the current research clearly highlights the need for future research to understand how different settings and different applications of AT impact outcomes on youth.

Community-Based Applications of AT

One of the criticisms of traditional residential treatment is the limitation of removing children from the home, the cost of out-of-home care, and the limited accessibility of treatment to the individuals who may need it the most (Becker, 2010; Scott & Duerson, 2010). Although wilderness therapy is not the same as residential treatment, the bulk of the intervention also involves out of home, non-community-based interventions that is privately funded. Hence, AT for youth within community settings has been embraced by a variety of clinical professionals. For example, recent findings highlight how social workers in the United States are utilizing these techniques in school, outpatient, and healthcare settings (Tucker & Norton, 2013).

Research has begun to document the effectiveness of AT in community settings. Gillis and Speelman (2008) examined 44 studies that focused on challenge courses and found that studies with therapeutic ($ES = 0.53$) or developmental foci ($ES = 0.47$) had higher effect sizes than those with educational foci ($ES = 0.17$), thus demonstrating that using challenge courses for therapeutic purposes is a promising community-based intervention. Jelalian, Mehlenbeck, Lloyd-Richardson, Birmaher, and Wing (2006) and Jelalian, Sato, and Hart (2011) evaluated the impact of adding an AT component to a traditional cognitive behavior therapy (CBT) group and compared it with a CBT group with added physical exercise on weight loss and social relationships for adolescent outpatient clients. Both studies reported similar significant decreases in weight loss, as well as increased peer relationships. Tucker, Javorski, Tracy, and Beale (2013) found that youth in AT groups in a community mental health setting showed significantly higher decreases in problem severity, especially in African American and female youth, when compared with those without AT. A focus on AT with youth in community settings is growing; however, it is an area that lags behind wilderness therapy research and is in need of continued attention.

Research Examining the Change Process in AT

While much of the research and literature on AT has been outcome focused, there has been a rising concern about documenting what specific factors in AT are involved in that change process. This area of understanding is integral for building effective models of AT that delineate the essential components needed for change which, in turn, can enhance treatment fidelity (Tucker & Rheingold, 2010). For example, the role of nature has been gaining attention as an important healing component of therapy (Bowler, Buyung-Ali, Knight, & Pullin; 2010; Russell, 2012). Taylor, Segal, and Harper (2010) argue that nature can be an essential “co-facilitator” of change.

Due to the importance of understanding the process, some researchers have specifically explored process variables. Russell and Phillips-Miller (2002) qualitatively explored the process of wilderness therapy with youth participants and found four key factors related to change, including the “relationship established with counselors and leaders, peer dynamic, facilitated reflection on life through use of solo, and challenge and structure of (the) process” (p. 422). Norton’s (2010) research supported these findings and found time in nature, contemplation, challenge, positive communication with parents, and the group environment as key factors impacting adolescent depression and functioning. Looking more closely at the aspects of adventure programming, Caulkins, White, and Russell’s (2006) qualitative case study explored the role of backpacking in female youth’s wilderness experience, and found cognitive, emotional, and physical outcomes from backpacking, which suggests it as a key factor to the experience. Magle-Haberek, Tucker, and Gass (2012) looked at how the format and frequency of adventure activities within NATSAP programs related to outcomes and found that AT facilitated in small groups versus individually or as a family was a significant predictor of improvements in participants in residential treatment. Despite these preliminary efforts, AT still needs to continue exploring its process and outcomes.

Limitations in AT Research

Limitations in the existing research include a lack of clearly delineated or described models of practice, a focus on program evaluation rather than rigorous intervention research, a lack of comparison groups and longitudinal data, and a focus more on the statistical rather than clinical significance of outcomes. It is also important to note that most outcomes of AT are measured based on the mean improvements reported for youth, and within these means there can be large variations (see, for example, Bettmann et al., 2013; Tucker & Norton, 2013). This can be a limitation, and merits future research to critically analyze for what populations AT can be an effective intervention.

Unfortunately, we are still not able to answer the question of why AT works or does not work; the answer remains in the black box. While some may argue it may not matter what creates change in AT (Parchem, 1976; Priest & Gass, 2005), this perspective creates significant challenges. Although there have been improvements in AT research, most studies fail to delineate program models (Gass et al., 2012). Without clearly describing models and therapeutic processes used, researchers cannot be sure that the

changes measured are indeed due to interventions or to other variables. This is because researchers cannot fully measure fidelity of the various models. In addition, well-documented programs are easier to replicate. Replication is how we can determine best practices and build an evidence-based model of AT (Tucker & Rheingold, 2010).

There is a need for further intervention research in AT to move beyond evaluation of a single program toward generalization of effectiveness to a larger populations (Gass et al., 2012). In particular, it is important for research to compare youth with different demographic and presenting issues to see if AT is more or less effective with certain populations. In addition, attrition has been a considerable challenge to most of the research on AT, especially when trying to gather data months to a year post-discharge from a program (Bettmann et al., 2013; Zelov et al., 2013). Attrition limits the internal validity of AT research, as well as a deeper understanding of the durability of client changes.

Finally, there is a growing need to focus on the clinical application of findings versus the statistical outcomes of research. Gillis (2012) stresses how AT research needs to move beyond our focus on statistical significance and look at the real world, practically significant, applications of our findings on client outcomes. As previously mentioned, calculating effect sizes within a given domain—like AT—allows the field to set benchmarks for what are considered small, medium, and large effects within it, while allowing the field to also compare findings with other mental health practices.

In addition to effect sizes, researchers can consider client change in terms of clinical significance. Many measures (including the widely used Y-OQ) standardize their instruments with community and clinical samples to determine a cut-off score at which to distinguish normative versus clinical levels of functioning (Burlingame et al., 2005; Ogles, Melendez, Davis, & Lunnen, 1999). In addition, researchers can mathematically determine how much change can be considered reliable clinical change (Jacobson & Truax, 1991). Hence, quantitative AT research should consider looking at outcomes, calculate effects sizes, determine if clients are functioning within normative ranges post-treatment, and see if those changes are large enough to be considered clinically significant.

Critical Issues in AT

Despite the current research, AT programs and the modality itself has come under intense scrutiny in recent years, culminating in the fall of 2007 when the U.S. Government Accounting Office (GAO) issued a report and heard testimony before Congress entitled *Concerns Regarding Abuse and Death in Certain Programs for Troubled Youth* (Kutz & O'Connell, 2007). The GAO defined the programs under scrutiny in this report as “wilderness therapy programs, boot camps, and academies, among other names” that “provide a range of services, including drug and alcohol treatment, confidence building, military-style discipline, and psychological counseling for troubled boys and girls with a variety of addiction, behavioral, and emotional problems” (p. 1). A key conclusion put forth by the GAO was that little was known about these programs, as there did not appear to be an organizing single entity that

provided oversight. The question for this article is, what if anything has changed since this report was issued over 7 years ago? Organizations like the OBHIC, the AEE's Accreditation Program (AEE, 2013b), state licensing entities (Utah Division of Administrative Rules, 2013), and the Joint Commission's accreditation program (Joint Commission, 2013) indicate that some oversight has been developed to address this pressing issue. For example, the OBHIC group has developed certain standards that must be met for membership, and slightly more than half of all programs are nationally accredited (see Russell et al., 2008).

Regarding risk management issues concluded in the GAO Report (Kutz & O'Connell, 2007), three important implications for AT were referenced in the conclusions. They were (a) program operation in unfamiliar and dangerous territory and not carrying necessary emergency medical supplies or radios/satellite phones, (b) detoxification and transition time from home into a wilderness environment at admission to the program, and (c) programs operating without state licenses or who chose to disregard state health and safety standards. Recent risk management research on OBH found that when appropriate practices and procedures are used, participating clients are at less risk on adventure programs than they would be in their home environments (Javorski & Gass, 2013).

Training and Development in AT

One of the most important ways to ensure ethical and effective practice within AT is through training and development for all program staff—from clinicians to direct care staff. In a random sample of 646 clinical social workers in the National Association of Social Workers who were surveyed, more than one third of this sample (35.1%) reported the use of adventure-based activities for therapeutic purposes in their social work practice (Tucker & Norton, 2013). However, only 40 individuals (17.6%) out of the 227 respondents who utilized these AT techniques had formal training. Of those, only 20 specifically reported to have received AT training or specific training on the therapeutic application of adventure activities. Although this study did not look at the formal impact, this lack of training had on clients, professionals agree that when AT interventions occur without education and/or training, there is a potential for negative psychological effects, as well as harmful physical effects on clients (Berman & Davis-Berman, 2013; Tucker & Norton, 2013). The importance of training is even further highlighted due to the intensity of the AT experience and risk of burnout for professionals (Marchand & Russell, 2013).

There is a need for more attention in educational and clinical settings to proper instruction around this growing intervention; however, training in AT is complex, as it requires individuals to be “cross-trained” on the technical skills needed to facilitate the adventure experience and the clinical skills needed to promote therapeutic change in clients (Gass, 1995). Gass et al. (2012) detail a comprehensive set of AT competencies in their book; however, rarely do training opportunities in AT address all of these categories. Although some formal training programs exist for field staff in AT settings (McClintock, 2008; Newes & Bendoroff, 2006), “credentialing and cross-training of

all adventure professionals and therapists are issues that continue to cause contention in the United States and internationally” (Berman & Davis-Berman, 2013, p. 60). Research has demonstrated that training can lead to positive self-perception, group cohesion, and mutual aid, and increased AT knowledge and skills among emerging professionals (Norton & Tucker, 2010).

Professionalization of AT

Combined with a long history within experiential education, the AT field has made significant strides in the areas of research, recognition within allied clinical fields, and acknowledgment from government agencies as a promising clinical intervention. Likewise, to establish more appropriate risk management practices and accountability, many AT programs are aligning their program practice through joint accreditation with OBHIC and AEE. This type of accreditation will promote appropriate risk management and standards of practice in the utilization of experiential education in therapeutic settings. Furthermore, best practices in AT have been developed by Therapeutic Adventure Professional Group (TAPG) and OBHIC to promote ethical and efficacious practice (OBHIC, 2013; Sacksteder, 2012).

Although some believe that the field of AT is outside of the mainstream of the evidence-based realm of healthcare, social programming, and psychotherapy (Berman & Davis-Berman, 2013), AEE’s Research and Evaluation of Adventure Programming (REAP) group has helped advance the field and connect with recognized government agencies that oversee mental health policy and practice. In just one example, REAP helped connect research on Project Adventure’s BMtA (Behavior Management through Adventure) program with the Substance Abuse Mental Health Services Administration (SAMHSA). By submitting research demonstrating the effectiveness of the BMtA intervention (Gillis & Gass, 2010; Gillis et al., 2008), the program was included on SAMHSA’s National Registry of Evidenced-Based Programs and Practices (NREPP). Even though this is a promising development, this is only the second AT model to receive this recognition.

Future Directions

Future research in AT must move toward evidence-based practices, including better documenting our program models, gaining a deeper understanding of the processes of change, using more methodologically sophisticated methods, and focusing on the clinical significance of our outcomes. In addition, the AT field needs to focus on increasing client access to treatment through third-party payments, as well as looking at cost–benefit analyses of AT programs in comparison with other forms of intervention as a way of building the argument for the acceptance of our interventions for coverage. These analyses take into account a financial cost–benefit analysis, but there is also a need to calculate a risk–benefit analysis as well—some of which has already been done (Javorski & Gass, 2013). Finally, the AT field must focus on training and sustaining its professionals. The authors of this article believe that practitioners and

researchers must continue to work together to address these critical issues and enhance practice-informed research and research-informed practice in the field of AT.

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