Understanding the Impact of Wilderness Therapy on Adolescent Depression and Psychosocial Development

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Abstract

Rates of adolescent depression in the United States have become alarmingly high, reemphasizing the need for holistic interventions for afflicted youth. This study examined the impact of wilderness therapy on youth with depression using a mixed methods research design. Data were collected via pre- and post-tests using the Reynolds Adolescent Depression Scale-2 and the Measures of Psychosocial Development. Qualitative data were also collected via three month, post-course phone interviews. Rates and prevalence of depression decreased after the wilderness therapy intervention, and wilderness therapy also increased the prevalence of psychosocial health among participants, including gains in school improvement, decreased substance abuse and improved family relationships. Findings held up even three months post-course. This study's consumer evaluation research component assessed the importance of various elements of the wilderness therapy intervention. Data analysis revealed the importance of a positive group experience on psychosocial health, and positive communication with family members decreased depression. Participants reported that being in nature, challenge and adventure, and contemplation were all important aspects of the change process.

Introduction: Adolescent Depression and the Need for a Holistic Approach

> "Depression is the inability to construct a future."
> —Rollo May

Adolescent depression has become epidemic in the United States; more than than 20% of adolescents in the general population have emotional problems and one-third of adolescents attending psychiatric clinics suffer from depression (Koplewicz, 2002). One in eight may suffer from depression (Koplewicz, 2002). Only 30% of children and teens with emotional and behavioral problems receive any sort of intervention or treatment (Battle, 2005).

The consequences of untreated depression can include increased incidence of depression in adulthood, involvement in the criminal justice system, and, in some cases, suicide. The rates of suicidal thinking and behavior are alarmingly high among adolescents with depression. Most adolescents who have been diagnosed with depression think about suicide, and between 15% and 30% of those adolescents who think about suicide go on to make an actual suicide attempt (Brent, 1999). Approximately 3 million youths, aged 12 to 17, either thought seriously about suicide or attempted suicide in 2000, and the actual suicide rate for all adolescents has increased more than 200% since 2000 (Borowsky, Wagman, Ireland, & Resnick, 2001). Many teens who commit suicide suffer from undiagnosed or untreated clinical depression, and have experienced serious difficulties in school, work, and personal relationships (Hodgma & McAnarny, 1992).

Adding to the magnitude of the teenage suicide issue is the underreporting of actual suicides. Research shows that underreporting is higher among female adolescents and in cases of drowning or poisoning, which may be construed as accidents (Speechley & Stavraky, 1991). Thus, teen suicide is an even bigger problem than it may appear from the available statistics.

Because of these alarming figures, adolescent depression has finally been recognized as a mood disorder that affects the functioning of millions of adolescents (Koplewicz, 2002). Most researchers agree that the majority of adolescent depression *can* be treated; yet there is debate about the type of psychotherapeutic interventions that can target adolescent depression most effectively. In trying to decide how best to treat adolescent depression, it is important to acknowledge the complexity and richness of human development and pathology. Adolescence, in particular, is an important time in one's developmental history, in which the formation of one's identity takes center stage (Erikson, 1968). For this reason, this study sought to understand adolescent depression by grounding it in the context of psychosocial development.

Integration of theory is needed in contemporary social work treatment of adolescent depression. As Allen-Meares said: "Social workers need to expand their knowledge about risk factors and unique characteristics associated with depression in this population to refine the different schools of thought and to design prevention and treatment interventions" (1987, p. 515). By viewing adolescent depression in the context of psychosocial development, this study sought to arrive at a theory base and treatment modality that addressed the developmental, neurobiological, cognitive, and relational factors that give rise to adolescent depression. Wilderness therapy is considered to be this type of intervention, as it is a structured, holistic model of treatment that addresses multiple factors of human development and pathology (Amesberger, 1998).

Although people have long been aware of the increase in general well-being that being outdoors can engender in a person (Miles, 1987), the field of wilderness therapy seeks to harness the power of the outdoors in combination with structured clinical interventions in a way that promotes healing and personal growth. This holistic approach seeks to create a context of hope that may positively affect a client's emotional state, and is based on the paradigm that "a primary cause of emotional and behavioral disturbances in youth is the lack of significant relationships with the social and natural worlds" (Gass, 1993, p. 24). Wilderness therapy may also treat adolescent depression through a"frontal assault on learned helplessness, dependency and feelings of low self-worth" (Kimball & Bacon, 1993, p. 20). Although wilderness therapy has been recognized as a powerful intervention that promotes cognitive, affective, and behavioral change (Gillis, 1992), leaders in the field of wilderness therapy admit that more research is needed to understand the impact of wilderness therapy on specific emotional and psychological issues (Berman & Davis-Berman, 1994; Russell, 1999).

Purpose of the Study

The purpose of this study was to explore the impact of wilderness therapy on adolescent depression and psychosocial development, in particular. This study explored the relationship that exists between adolescent depression and psychosocial development and sought to understand the connection between the two in greater depth. This study looked at both the outcomes of participating in wilderness therapy, and at the various components of the intervention and their effect on adolescent depression and psychosocial development.

By utilizing the Reynolds Adolescent Depression Scale-2 (RADS-2) and the Measures of Psychosocial Development (MPD), this study measured whether wilderness therapy could decrease adolescent depression and increase positive psychosocial development. By utilizing additional surveys and interviews, this study also sought to understand *how* the clinical process of wilderness therapy worked to affect these issues.

Definition of Terms

Adolescent depression

This study defined *adolescence* as the section of the lifespan including ages 13–18. This age group has a wide range of developmental and intellectual variance, and this will be accounted for when the data are analyzed. For the purpose of this study, this author addressed unipolar adolescent depressive disorders, including: (1) Major Depressive Disorder, (2) Dysthymic Disorder, and (3) Depressive Disorder, Not Otherwise Specified, as these disorders are defined by the *DSM IV*. The main variance between these diagnostic categories lies in the episodic vs. chronic nature of the depression, which can be very useful in comparing the effectiveness of wilderness therapy intervention. Bipolar disorders and mood disorders due to a general medical condition are not discussed in this study.

Along with the diagnostic criteria of clinical depression, as listed in the *DSM IV*'s categories of depressive disorders, this study also utilized depressive symptomology as identified by the participants and their parents on both the precourse paperwork and their scores on the RAD-2.

Although many depressive symptoms are found in the *DSM-IV* diagnostic criteria of unipolar mood disorders, they are also found in a subclinical population, and still cause many problems in functioning for that population. Johnson, Weissman, and Klerman (1992) found that subclinical depression, as identified via self-reports of depressive symptoms, was highly prevalent and had significant consequences associated with it, such as suicide, time lost at work, and emergency room visits. The statistics in Johnson's research apply to adult depression, but it is reasonable to assume that subclinical depression in adolescents has similar consequences. On this basis, this study considered both depressive disorders and depressive symptoms as essential aspects of a comprehensive definition of *depression*.

Psychosocial development

Psychosocial development is an idea first articulated by Erik Erikson (1959). By combining Freud's stages of development with his own research across cultures, Erikson (1959) identified eight stages of psychosocial development: trust vs. mistrust, autonomy vs. shame, initiative vs. guilt, industry vs. inferiority, identity vs. role confusion, intimacy vs. isolation, generativity vs. stagnation, and ego integrity vs. despair.

Specific to adolescence, positive psychosocial development focuses on the consolidation of the self through ego identity, secondary autonomy, sexual identity constancy, healthy object relations, and the resolution of former developmental crises (Blos, 1979). Identity consolidation is thought to bring about an enhanced capacity for intimacy and relationships, whereas the opposite, role confusion, is thought to cause isolation and aspects of depression (Marcia, 1980).

For the purpose of this study, *adolescent psychosocial development* is defined as "optimal ego development as a result of the mastering of stage specific developmental tasks and crises" (Goldstein, 1998, p. 27). This definition is based largely on Erikson's and Marcia's theories and ideas, which, though largely known and accepted, have also been criticized for explaining human development in a uniform manner and thus not accounting for differences of gender, sexual orientation, race, and non-European ethnicity. Although Erikson's framework of psychosocial development was used for this study, this researcher considered these differences when analyzing and interpreting the data. Likewise, indicators of psychosocial health that reflected the positive youth development model were also considered (LeBlanc et al., 2005).

Wilderness therapy

For the purposes of this study, the author proposed a continuum model to define the many types of wilderness

therapy experiences (Figure 1). On one side of the continuum there are programs like Outward Bound, which provide adolescents with therapeutic adventure experiences for personal growth and development. These programs are known as *wilderness experience programs* and are defined as "outdoor programs in wilderness or comparable lands for purposes of personal growth, therapy, rehabilitation, education or leadership/organizational development" (Friese, Hendee, & Kinziger, 1998, p. 40).

On the other side of the continuum are programs that are collectively known as outdoor behavioral healthcare, a modality of mental health treatment in which only clinical staff provide therapy in a wilderness context (Russell, 2002). In the middle are various types of wilderness therapy programs for at-risk youth, some of which use clinical staff and others of which use nonclinical staff. Many of these programs utilize nonclinical field staff, who are supervised by clinical staff.

This continuum is similar to Gass's (1993, p. 74) "Depth of Intervention Continuum," the difference being that *all* of the types of wilderness programs included in the Wilderness Therapy Continuum involve *therapeutic* interventions that use adventure activities in a wilderness setting. A broad definition of wilderness therapy may be controversial for some, but Carson and Gillis's (1994) study supports the therapeutic benefit of both clinical and nonclinical wilderness programs for delinquent adolescents, further supporting a continuum model of wilderness therapy.

For the purpose of defining wilderness therapy for this particular study, Kimball and Bacon's (1993) foundational definition was used. Their definition encompasses the commonalities found across the continuum shown in Figure 1. For Kimball and Bacon, wilderness therapy contains: (1) a group process; (2) a series of challenges (*in the outdoors);* (3) employs therapeutic techniques such as reflection and journal writing, individual counseling, and self-disclosure; and (5) varies in length. Although the definition of wilderness therapy has evolved since this definition to specify more clinical approaches, this definition still served as a good umbrella.

Significance of the Study

As mentioned earlier in the introduction, the statistics regarding adolescent depression are staggering. Fleming, Offord, and Boyle (1989), using diagnostic criteria from major depressive disorders, reported prevalence rates of adolescent depression to be as high as 6.4%. A clinical level of depression in the general population is estimated to be between 4% and 12% in the United States (Reynolds, 1992), and some studies of youth that utilized the Beck Depression Inventory (BDI) in Canada (Beck, 1976) found prevalence rates as high as 16.7% (Marcotte, Alain, & Gosselin, 1999). Koplewicz's (2002) more recent research has estimated that adolescent depression in the United States affects as many as 1 in 8 adolescents.

Adolescent depression, if left untreated, can lead to adult depression and is often accompanied by other psychological disorders, or worse, can end in death (Birmaher et al., 1996). Suicide is the third leading cause of death among 10- to 24-year-olds (Brent, 1999). Adolescent depression also plays a comorbid role in other complex clinical disorders such as anxiety disorders, learning disabilities, attention deficit disorder, and adolescent substance abuse (Angold & Costello, 1993; Spencer, Biederman, & Wilens, 1999). Depression in adolescence can be seen as particularly serious because adolescents often lack the coping skills and self-esteem needed to tackle their problems (Feldman & Elliott, 1990).

For these reasons, more clinical research should be conducted on effective treatments for adolescent depression. Though clinical experience and research have led many to believe that wilderness therapy reflects social work values and is grounded in

integrated, holistic clinical theory, its efficacy with depressed adolescents is debated by some mental health professionals (Nortrom, 2004, Russell, 2002). Some have even gone so far as to say there is no scientific evidence supporting use of these programs (Carpenter, 1996), and question whether they may actually harm teens, particularly sensitive teens with depression (Hait, 2002). In contrast, others believe these programs to be very effective for at-risk youth, many of whom are depressed (Nortrom, 2004; Berman & Davis-Berman, 1994).

Despite the controversy, wilderness therapy programs continue to expand throughout the country, and depressed adolescents are often referred to these programs. For this reason, we felt it was important to study the impact of this type of intervention on this population in particular. The purpose of this study was to explore whether wilderness therapy is an effective modality for treating adolescent depression and furthering psychosocial development.

This research study also helped deconstruct the various aspects of wilderness therapy so that social workers can have an accurate theoretical grounding for either accepting or rejecting this type of intervention for depressed adolescents. This research tried to provide a compelling theoretical explanation of wilderness therapy, and make an effective case for the positive impact that wilderness therapy can have on depressed adolescents and their psychosocial development.

This and other studies have found that wilderness therapy may address the huge treatment gap, because of which adolescent mental health needs are not being met. As Berman and Davis-Berman (1994) point out, wilderness therapy is "more intense than most outpatient settings and less restrictive than inpatient settings" (p. 10). As Russell (2001) argues, wilderness therapy may provide a middle ground between traditional outpatient and inpatient treatment settings that may meet the needs of many adolescents.

Research Methodology

Research Question

The overarching research question for this study was: What is the impact of wilderness therapy on adolescent depression and psychosocial development? Based on the literature and this author's clinical experience, the theoretical proposition of this study was that wilderness therapy decreases adolescent depression and increases positive psychosocial development.

As evidenced by the literature review, there is a strong relationship between adolescent depression and psychosocial development; however, this study examined this relationship further in the context of effective treatment for adolescent depression. Supplemental to these research questions, this study also considered the possible impact that the moderating variables of age, gender, race, prior diagnosis of depression, prior treatment with antidepressant medications, and prior participation in counseling may have had on the outcomes in this study. Likewise, family conflict, substance abuse, and school problems emerged as secondary dependent variables that may also have been influenced by the wilderness therapy intervention.

Research Paradigm

For social workers, it is important to ground one's meta-theory of research in the historical context of early social work practice. In this way, one can be true to the social justice roots of the profession, by seeking to utilize "an approach to scientific research that is not methodologically restrictive" (Tyson, 1995, p. 23). It is important to remember that social work research should promote social justice, self-determination, and flexibility of methodology. The heuristic paradigm

incorporates all of those things, and is clearly connected to early social work history.

In this study, which examined wilderness therapy, the effects of reflection were studied as the reconstruction of experience or new meaning that clients gained about themselves through multidimensional experiences (Gass, 1993). Wilderness therapy helped to break down old structures and build new ones, and helped to build structures where they did not exist. This is clearly a constructivist approach to treatment, which was best served via a postpositivist meta-theory of research.

Research design

For this reason, this author utilized a mixed-method study to assess the impact of wilderness therapy on adolescent depression and psychosocial development. The specific research design for this study was a sequential explanatory mixed-method design that operated within the quantitative-qualitative interactive continuum (Creswell, Plano Clark, Gutmann, & Hanson, 2003). In accordance with the parameters of this research design, research was conducted first via quantitative means, followed by qualitative means. Although the sequence began with quantitative, the priority was equal. Integration of the two occurred in the interpretation phase, and, as already mentioned, a strong theoretical perspective was present throughout.

The main quantitative aspect of this study was a nonrandomized within-subject experimental design via pre- and postcourse tests. Because of the open-enrollment nature of the therapeutic wilderness program under study, this research design did not include a traditional control group. The author believes this was justified based on the previous discussion of the heuristic research paradigm, the difficulty of having a control group that could receive some intervention other than wilderness therapy, and the need to avoid any ethical concerns related to having a placebo-control group of teenage subjects that were clearly in need of some intervention.

The purpose of the quantitative aspect of this study was to measure pre- to postcourse changes, as well as to establish a relationship between adolescent depression and psychosocial development. The within-subject experimental design had each subject serve as his or her own control while adjusting for any threat to the validity of attributing any observed changes to the intervention versus known or suspected confounding variables (i.e., age, sex, race, preexisting diagnosis of depression, prior treatment with antidepressant medications, and prior counseling.)

This study also incorporated survey research as a way of understanding the impact of specific wilderness program components. In this study, the survey questioned participants about the quality and level of participation regarding key components of the wilderness therapy intervention, so as to understand which components of the wilderness therapy intervention had the greatest impact.

The qualitative aspects of this study included narrative data via precourse paperwork and three-month postprogram phone interviews. This aspect of the research design was both explanatory and exploratory. It was explanatory in that it helped explain the change process; it was exploratory in that it opened up new theoretical perspectives regarding the impact of wilderness therapy on adolescent depression and psychosocial development.

Also, by using a mixed-method design, this author triangulated the multiple sources of quantitative data with the multiple sources of qualitative data gathered in this study. *Triangulation,* an essential component of mixed methodology, can be defined as the combination and comparison of multiple sources of data, data collection, and analysis (Tashakkori & Teddlie, 2003). If multiple findings corroborate

one another and there is agreement among inferences, this is also known as triangulation (Erzberger & Kelle, 2003).

Sample

The research population for this study consisted of adolescent participants in a therapeutic wilderness program called Intercept, affiliated with Outward Bound Wilderness. This group was made up of males and females ages 13–17, of mixed racial and ethnic backgrounds; however, the subject pool was somewhat limited in this area, with almost 81% of the sample population being Caucasian. Although students in Outward Bound courses also reflect a varying level of socioeconomic diversity, this author did not have access to the financial backgrounds of each participant in the study.

Outward Bound Wilderness gave this author access to the addresses of all enrolled Intercept students and families for the summer 2006 season. Via direct mail, this author attempted to recruit approximately 115 youth in the Intercept program for possible participation in this study. Of those 115 who received a letter and informed consent forms, 21 agreed to be in the study from beginning to end. This made for a response rate of 18%. Though the sample was small, the author decided to conduct the study with a nonrandom, purposeful sample of 21 total participants in Outward Bound Wilderness's Intercept program, in the hope of triangulating the findings via the mixed-methods design of the study. This type of purposeful sample, though certainly not representative of all adolescents, helped to focus and simplify this author's analysis, reduced variation, and furthered what Patton (1990) refers to as logical generalization.

Quantitative data collection and recording procedures

Raw scores on the RADS-2 and MPD pre- and posttests were scored by the researcher and converted into percentiles and *t*-scores based on the standards and protocol of each individual test. These scores were then plotted on graphs provided by the testing companies. These graphs allowed the researcher to analyze the clinical significance of the pre- and posttest *t*-scores. The conversion of raw scores into *t*-scores allowed the data to be statistically analyzed with methods to be described later.

Qualitative data collection and recording procedures

The first qualitative data that was collected was the precourse paperwork. The adolescent participant form gathered information about demographics (age, gender, etc.) and also assessed levels of motivation, goals, and attitudes. The parent/guardian form provided information regarding the adolescents' mental health issues, preexisting diagnosis, counseling history, family conflict, school problems, and substance abuse. Section One on each participant's medical form was also used to provide additional data regarding age, ethnicity, race, medication, counseling, and lifestyle choices. Data from these forms was coded nominally into categories, depending on the nature of the variable, and transformed into quantitative data for statistical analysis. The categories included previous depressive diagnosis, previous history of counseling, substance abuse, school problems, and family conflict. Although the issues of school problems, substance abuse, and family conflict were not the main dependent variables in this study, this author found so much data based on youth and family reporting in these areas that she decided to analyze if the intervention also produced change in these areas.

Three months after completion of the wilderness therapy program, this author conducted follow-up phone interviews with

each of the participants. These interviews consisted of open-ended questions designed to evoke rich qualitative data about the process of change during and after the wilderness therapy program; mechanisms of change; and demographics about the participants and what kind of support they had during the three months that followed the intervention.

Data gathered from the phone interviews was typed directly into the computer as the participant was speaking. The researcher wore a headset so she was free to type in participants' responses as accurately and quickly as possible. The researcher wrote down what the participants were saying word for word in order to keep track of emergent themes and coded each variable as to whether or not a problem existed.

Findings

When this researcher examined the effect of the wilderness therapy intervention on depression and psychosocial development, she was interested in two related outcomes. First, was there a change from precourse to postcourse on the prevalence and degree of depression, based on any changes in the RADS-2 scores from pretest to posttest? Second, was there any corresponding change from precourse to postcourse on the psychosocial development, based on any changes in the MPD scores from pretest to posttest?

This researcher found that participants in this study experienced many positive outcomes as a result of the wilderness therapy intervention. There was a 33.5% decrease in the prevalence of depression among youth in the study, which was a statistically significant change ($p = .001$). For the overwhelming majority of youth in this study, the rates of depression also decreased at a statistically significant level ($p = .02$). Specifically related to depression, participants experienced a decrease in learned helplessness, an increase in self-worth, and an increased sense of future. During the course, youth reported no symptoms of depression. Upon completing the course, participants reported an actual elevation in mood, and three months postcourse most youth still reported experiencing more stability in their moods.

This study showed a 52% increase in the prevalence of psychosocial health, statistically significant at the .0001 level. Wilderness therapy increased the levels of psychosocial health among participants at a statistically significant level ($p = .0009$); it also furthered positive psychosocial development in the areas of coping skills, confidence (through the creation of earned self-esteem and self-efficacy), competence, connection, and caring. Together, the combination of all of these assets led to increased identity achievement. In the context of the wilderness therapy intervention, youth explored various aspects of their identities, and made important commitments to who they were.

This study demonstrates the negative correlational relationship between adolescent depression and psychosocial development; in other words, as psychosocial health improves, depression decreases, and vice versa. This relationship was validated by using Pearson's correlation coefficient with T-difference RADS-2 and MPD scores, which generated a statistically significant p-value of .0023. This research reaffirmed Highland's (1979) study, which provided a psychosocial perspective on depression in adolescence, and paved the way to consider psychosocial interventions, such as wilderness therapy, in the treatment of adolescent depression.

Along with improvements in depression and psychosocial development, this study showed relevant gains in school performance improvement, decreased substance abuse, and improved family relationships, even three months postcourse. While these improvements indicate important behavioral changes, they also reflect the aforementioned improvements to

depression and psychosocial development, and indicate some of the deep changes made in these areas, rather than cognitive restructuring alone.

Instead of simply attributing these gains to wilderness therapy in general, this study broke down the various components of the intervention to assess which had the greatest impact. The effect of having positive communication with parents and guardians after the wilderness program was shown by a 3.97 point decrease in the RADS-2 scores, which is almost statistically significant at the .08 level. The effect of having a positive group experience was reflected in a 5.99 point increase on the MPD, which is statistically significant at the .01 level. Likewise, participants reported that being in nature, challenge and adventure, and contemplation were all important aspects of the change process.

This study also differentiated between immediate and lasting change; however, it should be noted that in order to truly assess for lasting change, an ongoing longitudinal study would be necessary. The outcomes evidenced by immediate change (i.e., immediately after the course) were a sense of hope, confidence, and family cohesion. Although temporary, these may have set the stage for more lasting change. Nonetheless, regardless of the immediate changes, all of the youth faced barriers upon returning home, such as distractions, boredom, negative peer pressure, family instability, and lack of follow-up. Despite these barriers, youth who seemed able to sustain the gains made during the wilderness therapy program for three months after the course had a renewed (or completely new) sense of purpose, had embraced the wilderness therapy experience as a metaphorical anchor to cling to when "times got tough," and had ongoing family support.

These meaningful findings constitute the results of this study—yet this is just the beginning. Scientific inquiry provides only a glimpse into the world of humanity, in this case, struggling teens; therefore, this researcher would like to offer gratitude and humility—gratitude for the brave and resilient youth who faced almost a month in the wilderness, gratitude for the wilderness that embraced them without judgment, and humility for the opportunity to examine if this interaction between person and environment is one in which youth with depression can begin to heal.

Implications for Child Welfare Practice

The results of this study have implications for both child welfare practice and the emerging field of wilderness therapy. First and foremost, this study began to answer the question that Berman and Davis-Berman (1994) posed regarding who and what wilderness therapy can best target. This study lays to rest the idea that wilderness therapy is not an appropriate intervention for youth with depression, and even goes so far as to say that the opposite is true. In fact, this study showed that wilderness therapy greatly reduces adolescent depression by furthering youths' levels of psychosocial development. Not only does this study impel social work practitioners to utilize psychosocial interventions to treat adolescent depression, but it also provides social workers with the clinical evidence to feel comfortable referring youth with depression to wilderness therapy programs.

Because of the mixed-methods approach, this study was able to look at the overall decrease in rates and prevalence of adolescent depression; it also identified, through an analysis of the qualitative data, which specific aspects of depression are targeted. The same was true in the realm of psychosocial development. In this way, social work practitioners can more accurately assess the "fit" between clients and a wilderness therapy intervention.

So often, working with adolescents with depression involves cognitive restructuring,

but now, with the proven utility of wilderness therapy, youth can also participate in active corrective emotional and behavioral experiences that engage their entire selves, including sensation, affect, cognition, and body. In this way, wilderness therapy may work to enhance neural integration as well as changes in sense of self and behavior (Cozolino, 2002).

Furthermore, evidence of the importance of a systemic intervention was clear in this study. The power of the group in furthering psychosocial development was a strong indicator of the need for adolescent treatment to be partially embedded in a peer group, so that participants can practice new ways of relating that promote both connection and self-definition. Kimball and Bacon long ago stated that "there is no such thing as individual wilderness therapy" (1989, p. 14). It does seem that the group process is an essential component for furthering psychosocial development. The development of a cooperative interpersonal framework as a part of group dynamics is a critical piece of the healing process, thus reflecting Schiller's (1997) ideas about the group being an important therapeutic medium.

Likewise, this study showed that an effective wilderness therapy intervention for youth with depression must include an intervention with the family. This reaffirms Sanford's (1996) earlier study, in which positive relationships with parents were a key factor for youth who had been treated for depression to remain in remission. Though this idea is certainly catching on in wilderness therapy programs, often the problem is still seen as internal to the youth. This study showed that creating opportunities for positive communication and cohesion in the family system are essential as well.

The results of this study seem to indicate the need to treat youth as a part of a larger system, both during the wilderness therapy program and afterward. This idea mirrors the relational stance that Kimball and Bacon (1993) expressed regarding the healing process of wilderness therapy. The problems these youth brought to the course were embedded in a variety of relationships—family, peers, school—but clearly their healing took place in relational contexts as well. This mirrored the relational paradigm of social work practice and was also a fundamental contribution of this study (Borden, 2000).

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