

## **A Concurrent Model of the Wilderness Therapy Process**

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### **Abstract**

*Though wilderness therapy programs are growing in number and popularity, the theoretical basis for distinguishing wilderness therapy from traditional therapeutic modalities is lacking. Existing models describing the wilderness therapy process have been stage-based, meaning the process has been conceptualized as sequential and discrete. Lost in this conceptualization of the wilderness therapy process is the dynamic and interrelated nature of therapeutic factors reasoned to be present at all times and to varying degrees. To address the limitations of stage based models and the lack of a strong theoretical basis in wilderness therapy, a concurrent model of the wilderness therapy process is proposed. This proposed model consists of three factors believed to be unique to the wilderness therapy milieu: Wilderness, Physical Self, and Social Self. The constituents of each of these factors are detailed and theoretical rationale for inclusion provided. In addition hypotheses about the intensity of each of these factors are discussed as a function of the temporal progression of the wilderness experience (e.g. entrance into wilderness program, exiting wilderness program). Advantages of the proposed model as well as suggestions for model testing and refinement are included.*

### **A concurrent Model of the Wilderness Therapy Process**

Juxtaposed to civilization, wilderness may create emotions and experiences that can alleviate some of the stress caused by our increasingly urban and technological culture (Greenway, 1995). The naturalness and solitude that wilderness offers restores and renews our spirit and offers evidence that wilderness is in itself, therapeutic. This belief in the inherent therapeutic value of nature is evidenced by the growing number of wilderness experience programs; there are over 700 such programs in the USA according to one recent census attempt (Friese, Hendee, & Kinziger, 1998). Wilderness experience programs are typically designed to promote personal growth, leadership, and education through outdoor activities and outdoor living. These programs are often geared towards adolescents and have been associated with such benefits as increased self-efficacy (Propst & Koesler, 1998), lowered recidivism rates (Wilson & Lipsey, 2000), improved self-concept and leadership qualities (Hattie, Marsh, Neill & Richards, 1997), and a more internal locus of control (Hans, 2000).

Within the wilderness experience genre, a specific type of wilderness program is emerging — wilderness therapy. Wilderness therapy distinguishes itself from the larger group of wilderness experience programs through application of more targeted clinical and therapeutic methods in wilderness environments. Such therapeutic interventions usually involve treating adolescents' emotional, behavioral, psychological, and substance use issues (Davis-Berman & Berman, 1989). In this wilderness therapy approach, adolescents are immersed in wilderness or comparable lands, practice group living with peers, and undergo individual and group therapy sessions as well as

educational and therapeutic curricula including social skills training and backcountry skill development (Bandoroff, 1989). These elements have been shown to work conjointly to reveal and address problem behaviors (Russell, 2003a), foster personal, emotional, and social growth of adolescent clients (Edgmom, 2002; Hagan 2003; Pawlowski, Gwili & Julian, 1993) and enhance family communication (Bandoroff & Scherer, 1994). Though often discussed in the broader context of resistant and troubled adolescents (Bandoroff, 1989), wilderness therapy has been specifically applied to various populations, including adolescent sexual abuse victims (Agosta & Loring, 1988), emotionally disturbed adolescents (Kraus, 1983), adolescent sexual abuse offenders (Lambie, Seymour, Simmonds, Robson, & Houlahan, 2000), emotionally disturbed girls (Levitt, 1994), borderline adolescents (Nurenberg, 1986), borderline or schizophrenic adolescents (Pawlowski et al., 1993), Native American (Navajo) youth (Parzen, 2001), adult women (Arnold, 1994), and women survivors of rape and incest (Asher, 1994). The growing application of wilderness therapy suggests that mental health professionals are becoming more aware of the approach and its inherent therapeutic value to a variety of clients.

Though there are currently over 100 wilderness therapy programs in existence in the United States that service more than 10,000 clients and their families (Russell, 2003b), there are a lack of studies that empirically evaluate the therapeutic factors evident in the wilderness therapy processes. As such, general conceptualizations and testable models about the active ingredients in wilderness therapy remain abstract and ill-defined. Though the existing literature does suggest that wilderness therapy shows promise as a treatment modality (Cason & Gillis, 1994; Hans, 2000; Hattie, Marsh, Neill, & Richards, 1997; Wilson & Lipsey, 2000), how and why wilderness therapy may work has yet to be definitively explicated. No agreed-upon, inclusive model exists to truly identify and describe those factors that may be causal change agents. Thus, to further both theoretical and applied domains in wilderness therapy, forming a working model of wilderness therapy process is critical.

### ***Developing a Model of the Wilderness Therapy Process***

The few models that have been developed to examine wilderness therapy process have viewed the wilderness therapy process in mechanistic terms; participants pass through specific stages to achieve desired outcomes (Bacon & Kimball, 1989; Davis-Berman & Berman, 1989; Powch 1994; Walsh & Gollins, 1976). Such models, especially the Walsh and Gollins model of the Outward Bound process, are widely cited and used by practitioners, yet are rarely empirically tested and are often perceived as being atheoretical (Sibthorp, 2003). A limitation of these models is that they convey stages as sequential and discrete, and though this may be valuable for providing a general conceptualization of process, the dynamic and interrelated nature of therapeutic factors present throughout the process may be lost. Critiques of stage-based models of change are not new; several critiques have been launched against such models. First implicit within stage models is the idea that students progress through graduated levels in a discrete and hierarchal fashion (Sutton, 2001). To view stages of the psychotherapy process to be isolated from each other provides an inaccurate conceptualization of the psychotherapy Gestalt (Waehler & Lenox, 1994). Similarly, stage models necessarily suggest that those processes occurring in one stage are absent in all others (Littrell & Girvin, 2002). This further adds to a false sense of disconnect between points on the psychotherapy spectrum. Last, presenting a stage-based conceptualization of counseling processes precludes the cyclical nature of the psychotherapy process (Davidson, 1998). In other words, it is quite possible that students may, at any point during the counseling process, revisit or "skip ahead" to points along the counseling continuum.

Recognizing the need to have a better conceptualization of the factors underlying wilderness therapy process and acknowledging the inherent complications of stage models, the current work seeks to formulate a concurrent model of the wilderness therapy process. A concurrent model is one that recognizes the interconnectedness of therapeutic process, acknowledging that the same therapeutic factors are present throughout the process, albeit in different intensities. Concurrent models also allow for the relative influence of each of these factors to be delineated as a function of these points on the continuum (Waehler & Lennox, 1994). These benefits allow much of the stage-based criticism to be circumvented. The process is viewed more as a continuum rather than a step-by-step mechanism and change factors during one part of the process are not "forgotten" as others gain more salience.

Figure 1 presents a brief overview of the three factors believed to be operating within the context of wilderness experience programs in general and wilderness therapy programs in particular. The first factor, *Wilderness*, refers to elements of the natural world that create student change. The second factor, which is termed *Physical Self*, consists of activities or processes within wilderness that facilitate learning and personal growth. The third factor of the milieu is *Social Self*, and refers to variables associated with social interaction. These three therapeutic factors can be viewed as interrelated and mutually influential, present throughout the experience and varying in intensity according to the temporal progression of the trip. Combined these factors constitute what we dub the "wilderness therapy milieu." Though there are a plethora of factors that may add to the success of any group treatment program (e.g., group cohesion, universality), the remainder of the current piece will focus on those factors unique to—or particularly active in—wilderness therapy.

**Figure 1.** Conceptual framework of the wilderness therapy treatment milieu

Category	Time of Peak Intensity	Proposition
<b>Therapeutic Factors of the Wilderness Experience</b>		
● Wilderness	Beginning	The wilderness environment, acting alone, can be seen as a restorative environment for at-risk youth who have high levels of anxiety and are stressed from mental fatigue caused by too much direct attention.
● Physical Self	Middle-late	By combining the effects of feeling and looking better physically through consistent physical activity and wilderness activities that are designed to challenge while allowing opportunities for immediate feedback and success, the wilderness works as a therapeutic medium to foster an enhanced image of the self.
● Social Self	Late	Research has shown that wilderness experience programs, through a variety of day-to-day activities while on the program, helping at-risk youth learn more cooperative behaviors. Breaking down barriers of stereotypes and preconceived notions allows participants get to know each other better, meeting the needs of youth at risk who have limited capacities to form close interpersonal relationships.

### **Wilderness**

Wilderness refers to the external qualities of outdoor areas that seem to be inherently therapeutic. Though the term wilderness is inherently ethnocentric, Oeschlaeger (1991) in his development of a postmodern wilderness philosophy, suggests that wilderness is "a convergence of scientific research and reflective thought on the premise that the human and cultural—including the ethical, theological, and philosophical—are linked with the material and organic" (p.320). Wilderness then is thought of in relation to something else, and that something else is an "overpopulated, industrialized, anxiety-ridden, polluted and often violent world" (Ibid., p.5). Therefore, within the Wilderness factor of the wilderness therapy treatment milieu, wilderness acts independently to produce psychological benefits; put another way, the wilderness is the sole healer. Though wilderness has long been supposed to induce positive psychological effects (Greenway, 1995), only recently have researchers started to look at the empirical basis behind that observation. Kaplan and Kaplan (1989) have been at the forefront of this, performing seminal work examining the psychological benefits of experiencing nature and enumerating wilderness qualities believed to impact psychological state of mind. These qualities, they hypothesize, work to counteract mental fatigue, the sense of cumulative exhaustion that comes from being engaged in psychologically draining activities over time (Kaplan, 1995; Tennessen & Cimprich, 1995). Long hours of study, social stressors, and interpersonal struggles—all of these are examples of issues that induce mental fatigue and may be issues wilderness therapy participants bring to the experience.

Kaplan and Kaplan (1989) specify several qualities of wilderness that counteract mental fatigue. Of most importance to the Wilderness construct of the wilderness therapy treatment milieu are being away and soft fascination. Being away suggests that attaining physical distance from daily stress allows the psyche to recover from cognitive overload; leaving our normal environments relieves much of this overload. Kaplan and Kaplan claim that natural settings provide one of the best opportunities for being away as they are quite different than our fatigue-producing daily environments. That the sense of being away works to restore fatigue and alleviate stress complements the work of wilderness-based researchers who found that natural areas are used for escape (Driver & Tocher, 1970) from a variety of stressors including noise (Lucas, 1963), crowding (Lime & Cushwa, 1969), the city (Hendee, Catton, Marlow & Brockman, 1968), predictability (Catton, 1969), role overload (Knopf, 1972), and social restriction (Etzkorn, 1965).

Another quality of wilderness pertinent to the wilderness therapy treatment milieu is Kaplan and Kaplan's (1989) notion of soft fascination. Soft fascination occurs when involuntary attention—the opposite of stressful, directed attention—is engaged. Clouds, sunsets, and moving river water capture attention but do not require directed attention, allowing room for cognitive reflection. Because demands upon directed attention are diminished, psychological restoration becomes possible. Kaplan and Kaplan argue that these types of natural phenomenon—clouds sunsets, etc.—are prime types of stimuli to induce cognitive rest. Attention is captured by an interesting and aesthetically pleasing environment that does not necessitate a high degree of cognitive processing. Thus, soft fascination allows for release from stressors that cause mental fatigue, easing away from cognitive strain and relaxing.

Empirical research examining Kaplan and Kaplan's suppositions (1989) has found that these constructs are highly associated with natural environments and, in turn, with restorative benefits (Hartig, Mang & Evans, 1987; Herzog, Black, Fountaine, & Knotts, 1997; Korpela & Hartig, 1996). In such studies, participants have rated natural environments, as opposed to urban

environments or even television watching, as being preferable to achieving a sense of restoration and relaxation. Reports from qualitative work also suggest that participants find the natural environment to contain these elements of being away and fascination. Consider the following excerpt from an at-risk student in a Federal work and educational program as he was acclimatizing to a week-long wilderness experience:

I realized that time is really not a necessity in the wilderness. I can't believe how relaxed it is I fell here, I am so free (Russell, Hendee, & Cooke, 1998 p.33). (Quoted in original grammar and text from student journal)

Wilderness, then, with its sense of being away and soft fascination, forms the first factor in the wilderness therapy treatment milieu.

### ***Physical Self***

The Physical Self (PS) factor of the wilderness therapy treatment milieu consists of therapeutic variables arising solely from personal interaction with the natural environment. In other words, the PS exemplifies those variables that contribute to the change process and arise from acting in and on the environment. The two main constituents reasoned to comprise the PS factor are: (a) physical fitness and physical well-being, and (b) tasks associated with wilderness living. The first construct, physical fitness and well-being, borrows heavily from health psychology and related fields, disciplines that have long observed that physical health is related to mental health. Studies have consistently shown that routine physical exercise is associated with healthier self-images both in adults and adolescents (Boyd & Hrycaiko, 1997; Dilorenzo, Bargman, Stucky-Ropp, Brassington, Fressch, & Lafontaine, 1999; Kirkcaldy, 2002; McAuley, 2002; Van de Vliet, 1999). Such observations have also been made in wilderness-based literature, suggesting that wilderness and adventure-type activities may indeed provide measurable physiological benefits (Bunting, Tolson, Kuhn, Suarez, & Williams, 2000; Knopf, 1983). During the wilderness experience, students are eating nutritious foods on a scheduled basis and exercising regularly. In many programs, participants are hiking between 10 miles per day and allotted up to 5,000 calories a day. Participants entering wilderness therapy programs are typically in poor physical condition from poor nutritional habits and/or substance use (McCord, 1995). Thus, the correlation between increased physical health and mental health is presumed to be especially marked for wilderness therapy students.

Other studies examining the connection between physical and mental health note the relationship between exercise and negative emotion states. Such studies propose the physical activity may be a constructive outlet for the release of anxiety and aggression (Norris, Carroll & Cochrane, 1992; Nouri & Beer 1989). Many of the participants entering wilderness therapy treatment present symptoms of anxiety and aggression (Russell, 2003a). By the nature of these wilderness programs, the opportunity for physical activity is abundant. Hiking, gathering food and firewood, and setting up shelter are all examples of the physical activities that must be performed within the wilderness and that could aid in alleviating the anxiety and aggression experienced by many students. In addition, as participants continue these activities and greater control is gained over physical functioning, another psychological benefit emerges: Research shows that as control over one's own body increases, there is a corresponding gain in perceptions of control in other domains of life (Stich, 1983). Overall, then, there is compelling evidence to imply that the effects of healthy lifestyle routines may be physically and therefore psychologically beneficial. Wilderness travel, by virtue of what it entails, seems an excellent method of capitalizing on these physical-mental health relationships.

In addition to benefits gained through physical activity, PS also works to promote self-concept through specific tasks inherent in outdoor living such as finding shelter and making food. In wilderness therapy programs, skill acquisition begins by learning the "basics" such as how to pack a backpack and read a compass. Students are soon able to complete long and arduous hikes, start their own fires, and cook meals for the group from materials gathered from the land.

Exhaustive literature reviews show that completing these challenging tasks is associated with benefits for various aspects of self-concept such as self-esteem, self-efficacy, and locus of control (Burton, 1981; Cason & Gillis, 1994; Easley, Passineau, & Driver, 1990; Ewert, 1983, 1987; Friese, Pittman, & Hendee, 1995; Gibson, 1979; Gillis, 1992; Gillis & Thomsen, 1996, 1997; Hattie et al., 1997; Levitt, 1982; Moote & Wadarski, 1997; Russell, 1999; Vogl, 1990; Winterdyk & Griffiths, 1984). Wilderness therapy, then, draws upon this natural opportunity to promote self-concept by ensuring that tasks are incremental (i.e., easy to harder) and progressive as to maximize chances of student success.

As with the Environment concept, evidence of the Environment–Active–Self is also reinforced through qualitative research. The following observation was made by Golins (1978) in one of the first studies attempting to ascertain how wilderness programs might affect self-concept:

The outdoors always presents itself in a very physical, straightforward way. There are mountains to climb, rivers to run, bogs to wade through. As an adolescent delinquent whose principal mode of expression is an action-oriented one and whose thinking process is mostly concrete, the possible activities in the outdoors are limitless to fulfill his developmental capability. He just stands a better chance of excelling here.(p.27).

Indeed, such sentiment seems to hold true for the wilderness therapy participants. The following statement captures this Environment–Active–Self factor in one participant's response to the physical aspect of the process taken from Russell and Phillips–Miller (2002) "Hiking, I mean that just boosted my self confidence even more. It was hell at the time but I mean, towards the end I really got used to it and started to enjoy it" (p.173).

### ***Social Self***

Social learning theory (SLT) forms the basis of this final milieu factor—Social Self. The main premise of social learning theory (Bandura, 1977), or social cognitive theory as it is referred to today (Bandura, 1986), is that many of our behaviors originate through watching others, a principle referred to as observational learning. Whether behavior is observed to be reinforced or punished affects the likelihood of whether the observer will perform the behavior. In other words, cognitive factors intervene in the process of pure imitation and determine whether behavior will be performed by the observer. Wilderness therapy, a modality in which group members are almost constantly in contact, provides a highly hospitable environment for SLT principles to flourish. Because of their close physical proximity and the need to work together to accomplish tasks, students are persistently in a position to observe the results of others' actions. Additionally, adolescence is a time in which the influence and importance of peers is especially salient; peer values, behaviors, and judgments acquire high status in the adolescent's world and are a crucial aspect of treatment programs for problem behaviors (Bernstein, 1996). This further insures that SLT is bound to be a key ingredient in determining students' wilderness therapy perceptions and experience.

Though group settings and adolescent populations seem like prime ingredients for SLT to thrive, the question remains: How exactly do SLT principles promote student change within wilderness therapy programs? The communal living environment provides a unique platform for social learning interactions to occur. Research suggests that being in wilderness settings contributes to the dissolution of status barriers, thus enhancing candid interactions and sharing amongst group members (Hendee & Brown, 1987). The mechanism promoting this genuine interaction—social learning process—derives from the necessities associated with wilderness living. During day-to-day activities, participants need to work together to get tasks accomplished, from cooking dinner to setting up tarps to conducting process groups. These task-oriented goals facilitate social learning by encouraging communication among parties and sharing learned knowledge. Students often have to collaborate on jobs in order to meet basic needs. Performance of these activities leads observational learning and, at the same time, mutual collaboration is promoted. In this way, communication between all students—even those who may be at odds with each other—is facilitated. Students, working towards goals, have the opportunity to benefit from interactions with other students who may have valuable skills or attributes to share.

In addition member-to-member interactions, SLT principles also underlie the dynamics of leader-to-member interactions. Group leaders are often young adults, relatively close in age to students. They are selected on the basis of their quality characteristics such as clear focus in life, desire to enhance self-growth and knowledge, and the ability to communicate well and with a wide variety of people (Priest & Gass, 1997). Leaders embody many of the abilities and attributes that young people view as desirable and are often perceived by students as being role models (Cooley, 1998). Leaders, then, have skill sets and abilities attractive to adolescents, and are close enough to students' ages for students to be able to identify with them. Studies assessing SLT show that people are more likely to emulate behavior when the initiator of the behavior is viewed as being similar to the observer and having desirable qualities (Bandura, 1986). Naturally, the behavior that leaders strive to model is positive; they encourage appropriate exploration of student issues, demonstrate stewardship, and show respect for students and fellow group leaders. Thus, wilderness therapy treatment milieus, by virtue of the attributes possessed by group leaders, provide an environment where students can identify with positive role models purposefully demonstrating healthy social skills and fostering empathetic communication.

Still another opportunity provided for social learning to occur is the use of phases in wilderness therapy programs. Students move through various stages as they progress through the program; these phases are associated with increased status, responsibilities, and rewards. Upon entering the program, a student is assigned to a beginner phase, a phase in which the student is only allowed to quietly observe his or her new environment without engaging in social interactions (Russell, 1999). During the phase, students gather information about social norms and the rewards associated with moving further in the phase system. The witness peers being rewarded by staff and attaining privileges and responsibilities students deem desirable. For example, better food rations, getting to know the length/destination of the day's hike, or being the student leader for the day. Quickly, students learn that modeling appropriate behavior is key in progressing through the wilderness phases. Further increasing the power of this phase process is the rewards hold an increased allure for students in this minimalist wilderness environment where all artifacts of culture are removed. Therefore "normal" privileges are more valued more in the wilderness than in a traditional psychotherapy setting. To exemplify this, consider the following response from a wilderness therapy student when asked to describe the most important aspect of the wilderness therapy process:

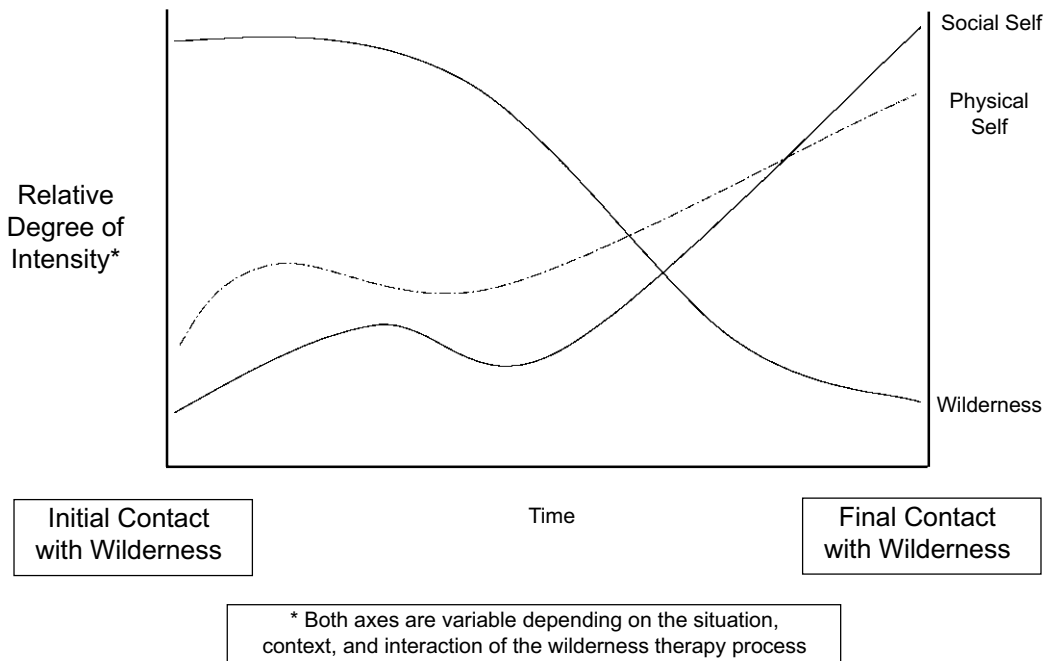
I'd have to say just working hard to move up through the ranks (stages), to come out on top of the program. Just motivation, you have more responsibility and leadership (as you progress through the stages), which I thought I would enjoy (Russell, 1999, p.264).

Considered together, all of these interrelated factors—Wilderness, Physical Self and Social Self—work together to induce change. However, factors may have a varying degree of influence depending upon the stage of the trip. Studies on group development, for instance, indicate that groups—therapy and otherwise—progress through different phases of development (Beck, 1981; Brower, 1989; Tuckman, 1965). Therefore, an evaluation of the temporal nature of these factors is warranted.

**Temporal Considerations of the Wilderness Therapy Model**

As previously discussed, constructing a concurrent model of wilderness therapy treatment has several advantages over a stage model of treatment. Perhaps the most important advantage is that a concurrent model acknowledges that the same change factors may be present throughout the entire process; intensity varies as therapy progresses. Thus, this model strives to illustrate how change factors vary over the course of the wilderness therapy experience. Figure 2.

**Figure 2.** Concurrent model of therapeutic factors of the wilderness therapy milieu



When students first enter the wilderness, the Wilderness concept may be the most prominent. Before students begin to get into the routine of outdoor living, the newness and uncertainty of their surroundings takes precedence. The novelty—and apprehension—of being away in a unique and strange environment is palpable to students. Also, the newness instills the sense of soft fascination, of beholding landscape they have most likely never witnessed. Because they are still outdoor living neophytes, the Physical Self is not operating in full force. In fact, during the initial parts of the experience, students generally are not very proficient at accomplishing some of those "basic" tasks. Backpacks are packed incorrectly; starting a fire independently is out of reach; hiking 10 miles a day seems impossible. Nonetheless, students are still managing to accomplish most of the tasks; for this reason Physical Self receives a mid-range intensity rating at the beginning of the trip. Because students come from various regions and have not previously met each other, social aspects of the wilderness experience (Social Self) are minimal.

As the trip continues, the Wilderness influence fades. Students no longer feel so much of a sense of being away, but rather begin to acclimate to their new surroundings. Soft fascination also becomes a bit less influential, as the novelty of nature becomes more anticipated. Instead students are now becoming outdoor living experts; they are maneuvering through tasks and assignments more easily, and are gaining self-efficacy through accomplishing tasks previously deemed impossible (e.g., starting a bow drill fire by oneself). Physical health, and correspondingly, positive judgements about one's self-concept, are increasing. As group members become more comfortable in the wilderness environment and with their own abilities, more social interaction amongst group members occurs. Also, qualities of the group leaders begin to manifest themselves more. Whereas in the beginning leaders may have been perceived as the "enemy," their caring dispositions and the aid they provide allows students to view leaders in a more positive light. As these interactions increase, the third factor—Social Self—emerges most prominently. Students are feeling more confident in themselves and their abilities. As a result they are more outgoing and willing to be part of the group process. Close relationships are formed with other students and staff, cooperative behaviors are developed, and progression through reward phases are experienced. Though students continue to master outdoor living tasks and continue to have some sense of environmental influences (e.g., being away), group living becomes the focus of attention, and interpersonal interaction the most intense causal change agent.

### ***Applying the Model***

There are several potential applications of this model to practitioners, programs interested in training leaders and therapists, and researchers. Practitioners in wilderness therapy work in a treatment team approach with field level staff responsible for the 24-hour care of clients and therapeutic staff overseeing the clinical care and individual treatment plans of clients (Russell, 2003a). Communication of the team is critical in ascertaining client progress, therapeutic breakthroughs and issues with which they may be struggling. A model of wilderness therapy could facilitate communication by guiding discussion of a client's therapeutic issues within the context of the model's factors. Another application could be in training field level staff and therapists that are new to wilderness therapy. The model could serve as a guide to better understand when and how to apply interventions, strategies and curriculum. Because field level staff are often younger and less experienced in therapeutic modalities, it could serve as a useful tool to distinguish when certain therapeutic and educational interventions may be most useful. This would also facilitate communication with therapists.

Therapists often begin practice in wilderness therapy with a background and education in clinical settings, and know little of the way wilderness is used therapeutically (i.e. natural consequences and primitive skills). The model could be useful to help them best understand when to step back and allow wilderness to work and when to intervene with a specific therapeutic application. Finally, the model would be useful to researchers designing studies on the process and subsequent effects of wilderness therapy on clients. By breaking down process factors explained in the model, it would be possible to quantify, using multiple instruments and more advanced statistical techniques (i.e. structural equation modeling and hierarchical linear modeling), the factors presented in the model. It would also be valuable to qualitative researchers who can better observe process factors and therapeutic exchanges within the context of the model.

## **Discussion**

To fill the need for a theoretical foundation for the wilderness therapy process, the present work examined those factors believed to be unique or especially salient within this treatment modality. Three factors—Wilderness, Physical Self, and Social Self—are believed to be the factors that create the therapeutic milieu and allow positive change to occur.

Increased understanding of the wilderness therapy process has several advantages associated with model and theory development. First, a model can serve as a guiding framework in training and performance enhancement activities, providing wilderness therapy clinicians and administrators a more concrete way in which to conceptualize the factors involved in the change process. Tailoring student experiences to benefit from these factors may be of interest to programs. For example, if Wilderness is indeed most critical during the first part of a wilderness experience, leaders can capitalize on this by commenting on the history of the land, routing the group through particularly scenic areas, or assigning journaling activities in which students reflect on their reactions to the new landscape. Being cognizant that there is a shift in therapeutic factors throughout the wilderness experience allows for leaders and clinicians to better gauge the climate of the group, and to have a more acute sense of when to stress particular factors over others. In addition, leaders themselves are instilled with an increased awareness of the wilderness treatment process, and are able to better anticipate the issues and concerns that may arise within groups. Thus, an increased sense of continuity and guidance is provided through this model.

Another prime purpose served by models is the establishment of a common language and understanding among those in the field. Wilderness therapy, being a relatively new modality of treatment (Davis–Berman & Berman, 1994), suffers from the inability to share like definitions, beliefs, and models for change. Though a fair amount of industry heterogeneity seems desirable, there needs to be a set of agreed upon fundamentals in order to practice the best standard of care. Recently, there have been several attempts to clarify some of the ambiguity surrounding the nature of wilderness therapy (Russell, 2001): What exactly is wilderness therapy? What are its components? How does it work? This most recent attempt to clarify components in the field—the wilderness therapy process milieu model—presents the opportunity to move beyond delineating what constitutes wilderness therapy and examine it at a deeper level. Clarifying these common elements allows for practitioners and researchers to better communicate amongst themselves and to outside interest groups such as parents and health management organizations.

Establishing this model will also allow for improved testability of theoretical constructs (Kerlinger & Lee, 2000) within wilderness therapy. This allows for the incorporation of evidence-based practices into clinical settings. Building such a model allows programs to assess their own practices according to these general criteria, thus establishing greater cohesion and uniformity across the field. In addition, using a concurrent model—arguably more malleable than a stage-based model—allows for revision, incorporation, and expansion as continued testing occurs. For example, pre-existing measures could be used to assess continuity of fascination intensity over the experience (Laumann, Gaerling, & Stormark, 2001). If fascination were found to be most intense during the first third of the trip, some evidence for Wilderness factor as "first" in the process would be gained. Similarly, self-construct measures (Physical Self) could be administered periodically and assessed as a function of trip segment (first, second, third).

Another way in which this model could be tested is through the development of a specific wilderness therapy treatment milieu scale. Questions associated with each of the factors could be derived and grouped into subscales representing each of the Wilderness, Physical Self, and Social Self factors. For instance, Social Self subscale questions could assess attractiveness of group members, attractiveness of group leaders, belief that good behavior will be rewarded, etc. Wilderness questions could inquire about the degree of novelty associated with the wilderness environment and absorption in the scenery. Using a rating scale response format for such a questionnaire would enable examination of real changes in factor importance while maintaining congruency with the tenets of concurrent modeling—that all factors may be present throughout an experience in changing degrees.

Still another method of evaluation of this model is via qualitative analysis. Conducting semi-structured interviews with students as they progress through the wilderness experience could elucidate the most salient themes at various intervals in the experience. Asking questions about types of encounters that have been the best, worst, or most memorable; eliciting descriptions of relationships with group members and leaders; inquiring about beliefs in personal performance and activities—these types of questions could prove invaluable in determining the model's utility. Also, additional factors worthy of investigation may emerge from qualitative assessment, factors that would supplement the present model and provide greater continuity and clarity.

Recognizing that the current model addresses only wilderness-specific change factors and not general psychotherapeutic factors is worthy of mention. The proposed model answers the question: "What factors are present in wilderness therapy that enhance and/or supplement traditional psychotherapy work?" The factors discussed in this model, then, involve those factors in the wilderness experience that are not present—or present in lesser degrees—in traditional psychotherapy settings. General change factors (e.g., therapeutic alliance) operate within all psychotherapeutic contexts and orientations (Shoham-Salomon, 1990)—cognitive behavioral, outpatient, psychodynamic, inpatient, wilderness therapy etc.—and they are not included in this preliminary model. This is to allow for greater conceptual clarity of the distinction between traditional psychotherapy and wilderness therapy. Though these process factors are not included in the model, they are important in understanding the totality of factors that may create final outcomes. Put another way, though this preliminary model underscores the importance of wilderness therapy specific factors, generalized factors considered active in all psychotherapeutic contexts are also present. As the wilderness therapy process becomes more crystallized, and the current model tested, inclusion of these generalized factors may be considered. For example, examining universality,

instillation of hope, and recapitulation of primary family issues may all be valid variables to measure (Yalom, 1995).

Also relevant to this discussion is the further consideration of the Walsh and Golins (1976) model of the Outward Bound process. In one of the few empirical tests of the model, Sibthorp (2003) used canonical analysis to explore the interrelationships of the antecedent characteristics of the participants, their perceptions of the experience, and changes in self-efficacy to explore interrelationships of the variables in the model. The results showed that students, who (a) were motivated to attend, expected to learn, and expected to change as a result of the experience, felt (b) personally empowered, that learning was relevant, and indicated a greater change in their ability to self regulate their lives (p. 98). These results are promising and seem to support the Physical Self construct of our model, as they reflect process and outcome relationships that are very "self" oriented, yet do not address the Wilderness or Social Self aspect reasoned to be powerful factors in the wilderness therapy experience. As was stated earlier, the model is linear and does not take into account multiple factors that are reasoned to be working simultaneously to facilitate the experience for the participants.

In the late 1960s, a debate was waged in the Outward Bound (OB) community that had on the one side the idea that "mountains speak for themselves" (MST), and that participants who were involved in an OB process would naturally draw from the "mountains" that which they needed to make the experience worthwhile. The other side contended that with guided facilitation, participants may be more likely to see hidden meaning in the mountains" and leave the experience with learning that may be more relevant and transferable. It is not the purpose here to take sides on this debate which still exists today, but to point out an interesting observation regarding the proposed model. This model suggests therapeutic factors that are reasoned to be working, regardless of whether the mountain is speaking for itself or the leaders are taking a more active and facilitated role in applying a clinical treatment model. The model may help illustrate how the wilderness therapy process is speaking for itself, regardless of the clinical treatment model integrated into the experience. As stated earlier, this may be a valuable tool for therapists new to the field to better understand factors that may be at work in the experience.

One final caveat worthy of mention is the applicability of this model across programs and interventions. Obviously, each program will have its own unique ideologies and practices, and certain factors may be more or less applicable as a function of those individual differences. Central to this discussion is the confusion as to the difference between wilderness therapy (addressed herein) and adventure therapy, as defined by Gass (1993). This model may be applicable to adventure therapy practice that does not take place in wilderness environments; the model's factors are reasoned to be present in adventure therapy experiences in non-wilderness environments, but perhaps to different degrees. For example, an adventure therapist may be working with a family in a ropes course environment that is outside and in a wooded setting (Wilderness); this environment may be new and unfamiliar, and contain several physical challenges (Physical Self), and utilize group processing to illustrate social learning of the family through intense interpersonal interaction (Social Self). In this way, the factors in the model are present, just to different degrees and experienced in a more rapid time frame (hours instead of days and days instead of weeks). Applying this model to the experiences might also help practitioners and researchers work with these processes and could be another area for future research.

The model nonetheless provides an overview of what is believed to be occurring in most wilderness therapy programs most of the time. It is a best attempt at describing an eclectic and dynamic modality with a great deal of diversity in practice, philosophy, and geographic parameters. The proposed model also represents a cogent, testable, and united explanation of factors proposed to facilitate student change within wilderness therapy treatment programs. Though there are certainly other factors not included in the model, the ones outlined here are those that are unique to, or especially active in, wilderness therapy. This model can be used as a guiding framework for individual wilderness programs and a general conceptualization of the process for the industry as a whole. Further testing and refinement promises to elucidate those aspects of the model that contribute most to outcome and to examine traditional psychotherapeutic factors within the wilderness therapy treatment milieu.

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