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Wilderness Family Therapy: An Innovative Treatment Approach for Problem Youth

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We present a treatment program (The Family Wheel) designed to integrate wilderness therapy interventions with family therapy for the treatment of troubled adolescents. The Family Wheel program was conducted in the high desert of southern Idaho. Participation in this four-day program required parents and their adolescent children to engage in an intensive experiential family therapy while camping and trekking in the wilderness. An evaluation of the program revealed positive outcomes for the programs' participants. The theory, research, and pragmatics of conducting such an innovative program are discussed.

KEY WORDS: family therapy; delinquents; adolescents; wilderness therapy; behavior problems.

Wilderness therapy developed in response to the growing demand for rehabilitation programs for problem youth during the 1960's and 1970's (Kelly & Baer, 1968; Stewart, 1978). It provided an innovative treatment alternative for difficult to treat adolescents (Behar & Stephens, 1978). Recently, therapists have begun to discover the potential of wilderness interventions for the treatment of families (Clapp & Rudolph, 1990; Gass, 1993; Gillis & Bonney, 1986; Mason, 1987). These efforts are based on an ecological approach (Garbarino, 1982) and dovetail with research that consistently has found family factors contributing to the development and

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maintenance of delinquent behavior (Fagan & Wexler, 1987; Henggeler, 1989; Snyder & Patterson, 1987; Tolan, Cromwell & Braswell, 1986).

The Family Wheel Program was designed to meet the need for theoretically sound innovative programming for the treatment of problem youth *and their families.* The family intervention supplemented a standard wilderness program by integrating the experiential immediacy of wilderness interventions with the theory and pragmatics of structural family therapy. Troubled adolescents, following completion of a 21-day standard wilderness program were joined by their parents for four additional days of trekking in the high plains desert of Southern Idaho. The expedition included family therapy sessions, multiple family group discussions, and metaphorical exercises designed to ease the adolescents return home and to challenge the family to establish a healthier family process. The following provides the theoretical foundation for the program and the results of an evaluation designed to examine the effects of the program on the program's participants.

WILDERNESS THERAPY

The Theory Guiding Wilderness Therapy

Kurt Hahn, who established Outward Bound, the pioneer program in outdoor adventure education, postulated that challenging wilderness experiences impelled individuals to learn more about themselves and develop moral character, pride, and dignity (Skipper, 1974; Zwart, 1988). Moreover, the physical and emotional stresses inherent in wilderness interventions are thought to challenge the maladaptive social behaviors of problem youth (Boudette, 1989; Zwart, 1988).

Several considerations contribute to the change process in wilderness therapy with problem youth (Golins, 1980). Wilderness interventions appeal to delinquents' need for high arousal by offering excitement and perceived risk (Kelly & Baer, 1968). The group experience inherent in wilderness therapy is commensurate with the developmental needs of adolescents. It fosters positive peer relationships, emphasizes the necessity of working cooperatively within a community, and provides the opportunity for developing trust, effective communication, and problem-solving skills. The around-the-clock availability of the instructors, who are also sharing the rigors of the wilderness experience, inspire trust, respect, and intimacy lacking in more traditional treatment approaches (Greenwood, Lipson, Abrahamse, Zimring, 1983). Removal from a dysfunctional home environment

disrupts homeostatic interactive patterns that maintain problem behavior. Finally, the wilderness intervention provides individuals with circumstances designed to allow them to demonstrate their competencies and to overcome self-imposed limitations (Kelly & Baer, 1969). Hypothetically, the experience enhances self concept by developing self efficacy and an internal locus of control.

The Efficacy of Wilderness Therapy

The proponents of wilderness therapy claim that it is effective in producing changes in attitudes and behaviors in problem youth (Stewart, 1978; Wright, 1982). The majority of studies report evidence of improved self concept, self esteem, or self confidence (Kelly & Baer, 1969; Gaston, 1978, Gibson, 1981) and improved social attitudes following the wilderness intervention (Boudette, 1989; Kelly & Baer, 1969; Stewart, 1978). Researchers also have concluded that wilderness therapies reduce the rate and seriousness of recidivism among juvenile delinquents (Cyntrynbaum & Ken, 1975; Hileman, 1979; Kelly & Baer, 1968). However, empirical support for wilderness therapies has been equivocal (Bandoroff, 1989). The majority of the studies are quasi-experimental in design, plagued by threats to internal validity, and some are seriously flawed by the lack of a control group (Bandoroff, 1989; Winterdyk, 1980; Zwart, 1988). Researchers debate the effectiveness of wilderness therapies to change locus of control (Gaar, 1981; Gaston, 1978; Plouffe, 1980; Wright, 1982; Zwart, 1988), improve problem solving (Gaston, 1978; Wright, 1982), and create enduring behavior change. The majority of wilderness programs do not offer a follow-up evaluation of their services. Those that do follow-up (from 6 weeks to 14 months after the intervention) have found results varying from maintenance of effects, to increased effects, to wearing off of effects (Cyntrynbaum & Ken, 1975; Plouffe, 1980; Stewart, 1978).

Researchers have identified the unchanged home environment as a potential source of resistance to generalizing the changes that the adolescent has made in the wilderness (Skipper, 1974; Winterdyk, 1980). The salience and power of the family system may override the beneficial effects that the individual experienced in the wilderness. Lacking a theoretical model for providing treatment to families in the wilderness, interventions have remained focused on the individual. Recently, family systems theories have been integrated with wilderness therapy to create a theoretical foundation for wilderness family therapy (Gass, 1993; Gillis & Bonney, 1986).

A WILDERNESS FAMILY THERAPY MODEL

Blending Family Therapy with Wilderness Therapy

There have been few attempts to utilize adventure programming with families and only one study. Clapp and Rudolph (1990) concluded from qualitative data from ropes course activities with families that an adventure-based approach offers a viable medium for facilitating family change and growth. A comprehensive model for family involvement in wilderness therapy requires theoretical guidance. To this end, we have used the fundamentals of structural family therapy, combined with research on healthy family process, and the tactics employed in multiple family therapy as the primary components of The Family Wheel, an innovative wilderness family therapy.

Contributions from Structural Family Therapy

The primary tools used by the structural family therapist to promote change (joining, enactment, intensity, and unbalancing) (Minuchin, 1974; Minuchin & Fishman, 1981) are central to the wilderness family therapy model. Joining is facilitated by the family's dependence upon the outdoor knowledge and experience of the therapist. The experiential nature of wilderness therapy require family members to display their family structure and process similarly to a structural family therapist's use of enactment. Therapeutic intensity is generated by the wilderness environment, the physical and emotional stress of the experience, as well as the amount of time that the family is together without opportunity for distraction. The wilderness family model accommodates therapeutic unbalancing by presenting the youth as a valuable resource to the parents by virtue of the youth's prior wilderness experience. This challenges the parental dyad to view their child in a new light of competence and capability.

Contributions from Research on Healthy Family Processes

Many of the challenges that confront families are related to family development (McGoldrick & Carter, 1982). Adolescence, in particular, challenges families to accommodate adolescent individuation (Garbarino, 1982). Wilderness family therapy attempts to address this issue by offering rites of passage that accentuate the reality of change (Wolin & Bennett, 1984). The wilderness family experience provides an opportunity for demonstration of the adolescent's transformation to the parents and the acquisition of parental support.

Another key to wilderness family therapy is requiring families to use the family resources of trust, effective communications, problem-solving, and emotional repair (Karpel, 1986). Adapting a competency approach emphasizing family strengths rather than weaknesses will develop these family resources (Waters & Lawrence, 1993). Much of this is accomplished through the metaphorical activities of wilderness family therapy. The experiential and metaphorical activities are framed to resemble a family problem so the activity acquires symbolic meaning for the family. This experience provides the family with an opportunity to assume new roles and respond in ways that expand their typical patterns of interaction, reframing the problem in the process (Gillis & Bonney, 1986). The successful completion of these progressively difficult challenges enable family members to notice positive qualities in each other that had been lost in their coercive cycle of conflict. Moreover, families can learn that they are capable of coping constructively and effectively during periods of high stress. Through this process, healthy functioning is reinforced and self-empowerment is achieved (Gass, 1993).

Contributions from Multiple Family Therapy Groups

The multiple family format is a third important aspect of the wilderness family model. Daily groups are held to process issues and feelings that arise during the experience. Inviting other families into the therapeutic relationship offers the possibility of multiple transferences, alliances, and opportunities for identification and seeing one's own problems reflected in others (O'Shea & Phelps, 1985). Moreover, multiple family therapy is a good format for demonstrating systemic interactions. The presence of other families in family therapy also creates a setting where family rules and myths will conflict with the therapeutic group culture and can be challenged and modified (Strelnick, 1979).

THE FAMILY WHEEL WILDERNESS FAMILY THERAPY PROJECT

The Family Wheel was designed as an innovative family-focused intervention for troubled adolescents and their parents. The program was designed to enhance participants' perceptions of their family functioning, reduce problem behavior of the adolescents in the participating families, and improve adolescent self concept beyond what occurs in the standard wilderness program.

The Participants

The participants in the Family Wheel were families (parents and target child) referred to a wilderness survival program for the treatment of their problem adolescents. This standard wilderness survival program consisted of adolescents from predominantly two parent upper middle class families (Hollingshead, 1957). The adolescents ranged between the ages of 13 and 18 with a mean age of 15.9. Sixty-five percent of the youth in the standard wilderness program were male and 35 percent female. The majority were Caucasian, although 10 percent of these adolescents were of Black, Hispanic, or Asian descent. The adolescents were primarily referred by their parents for substance abuse, behavior problems, poor school performance, and delinquent activity. Two thirds of the adolescents and their parents reported that their child had discipline problems in school the year prior to the wilderness intervention. Half of the adolescents had been detained by the police at least once in the two years prior to the program. Half of those detained had been so twice or more. One third of the adolescents had been formally adjudicated in court. Half of the adolescents had been in some previous treatment, and half of those in treatment had been so for over two years. One third of the total group of adolescents had been placed in residential or other out-of-home placements.

All families who had adolescents participating in the standard wilderness program were invited to participate in the Family Wheel program. The family intervention group consisted of 27 families who volunteered to participate. Twenty-five of these families were intact two parent families, one consisted of a single mother and daughter, and the other a single father and daughter. Ten trials of the Family Wheel program were conducted over the course of one summer. Each trial used two therapists. One therapist was present for all ten trials. The additional therapists were advanced graduate students in clinical psychology who had completed course work and practicum training in structural family therapy. A licensed clinical psychologist and structural family therapist served as weekly supervisor for the project and twice served as a therapist for the project. Supervision consisted of reviewing and anticipating therapeutic issues for Family Wheel participants.

Information on family functioning, adolescent behavior, and adolescent self-esteem was also gathered from 39 families who decided not to participate in the family program. This provided an opportunity for informal comparisons between the families and adolescents who chose to participate in the Family Wheel and those families who chose not to participate. Both participating and nonparticipating families were similar on major demographic and SES variables. Nonparticipating families cited

time off of work, family demands such as other children, and scheduling conflicts as their primary motives for not participating.

Unfortunately, without randomized assignment to treatment and non-treatment groups (which was unfeasible in this preliminary work) the effects of selection bias could not be ruled out. Developing an experimental design with random assignment of participants to experimentally test the efficacy of the Family Wheel program proved to be logistically impractical because of the remoteness of the program site, scheduling sufficient participants for each program trial, the advance notice required by participating families, and our inability to offer unselected families an alternative treatment. Consequently, the Family Wheel participants were self-selected volunteers who were potentially more amenable to treatment. Moreover, the relatively small number of Family Wheel participants further hampered efforts to quantitatively analyse the efficacy of the Family Wheel program. Recent reviews (Mulvey, Arthur, & Reppucci, 1990) and meta-analytic studies (Lipsey, 1992) have concluded that small effect sizes are the norm for interventions designed to treat adolescent delinquents. To achieve even modest statistical power under this circumstance requires several hundred subjects (Rosenthal & Rosnow, 1984). Unfortunately, these considerations limit the value of statistical analyses for evaluating the efficacy of the Family Wheel intervention. Consequently, this report is best regarded as a study of the feasibility of a wilderness family therapy.

The test battery was administered to the adolescents and mailed to the parents on the first day of the adolescents' 21-day expedition (Time 1). The adolescents were given a second administration before completing the expedition (Time 2) to measure the impact of the standard program. This provided a baseline from which to judge the family program. Parents and adolescents completed the measures without consulting one another. There was no contact between adolescent and parent from the time the adolescent began the 21-day wilderness program till they were reunited on Day One of the Family Wheel. The final battery was mailed to the adolescents and parents 6 weeks after the conclusion of the program (Time 3). A six week time span for the follow-up testing was set to minimize participant attrition and to assure a more precise measure of Family Wheel impact rather than other therapies or events following the families' return home.

Instruments

One questionnaire was designed specifically for evaluating this program. *The Family Wheel Evaluation* is a 15 item questionnaire consisting of Likert-like scale responses (1 = not helpful/satisfying to 5 = very helpful/satisfying) rating the various components of the Family Wheel program, the program leadership, and general satisfaction with the program.

In addition, a variety of validated and normed measures were used to gather information from both participating and nonparticipating families. *The Family Assessment Measure III [FAM III],* used to evaluate family functioning, is based on a process model of family functioning that provides quantitative indices of family strengths and weaknesses (Skinner, Steinhauer & Santa Barbara, 1984). It is a 50 item self report instrument with Likert-like scale responses in which higher scores indicate greater family dysfunction. Internal consistency reliability for the General Scale is .93 with an average reliability of .73 for the intercorrelated subscales. The FAM III has been shown to discriminate between problem and nonproblem families. *The Self-Reported Delinquency Checklist [SRDC]* was used to collect information from the adolescents on their problem behavior. This measure was developed for the National Youth Survey Project which involved a series of annual surveys with a representative national sample of adolescents beginning in 1976 (Elliott, Ageton, Huizinga, Knowles & Canter, 1983). Fifty-one delinquent acts are presented and the subjects are asked to respond whether they have engaged in this activity in the past year and if so, how often. The reliability and validity of the SRDC have been demonstrated to be robust with internal consistency and test-retest reliabilities ranging from alphas of .70 to .79. *The Revised Behavior Problem Checklist [RBPC]* (Quay & Peterson, 1983) was utilized to obtain a parent assessment of their adolescent's problem behavior. It is a popular measure which allows rating of 85 problems commonly seen in children and adolescents with high scores indicated increased severity of problems. Internal consistency is high with alphas for the major scales averaging .88 and for the minor scales averaging .74. Furthermore, the RBPC has demonstrated validity and the power to discriminate between clinical and normal populations. *The Self Description Questionnaire III [SDQ III]* (Marsh, 1988) was used to evaluate self concept. The SDQ III measures 13 facets of self concept based on Shavelson's model of self concept (Shavelson, Hubner & Stanton, 1976). Higher scores indicate enhanced self esteem. The internal consistency reliability and stability coefficients range from .80 to the .90s with strong evidence of construct and convergent validity.

The Program Procedures

The Standard Wilderness Program

The adolescents from families who chose to participate in the Family Wheel, as well as those who chose not to, participated in the standard wil-

derness program. This program was a 21-day survival expedition in high desert terrain in southern Idaho. Adolescents were issued basic necessities such as a blanket, a knife, one set of clothing, a journal, and a supply of survival rations. Each day they hiked as a group over several miles of very hilly terrain and had to master a variety of primitive living skills (e.g., matchless fires) to graduate from the course. The final 3 days of the expedition were spent on solo where adolescents had the opportunity for intensive self-introspection and to reflect on incorporating their survival experience into their daily lives. Over the course of the expedition, a therapist visited the group on three occasions and conducted individual sessions with each student.

The Family Wheel Program

The Family Wheel program followed immediately after the standard program. The family intervention had three main structural components which were repeated each day. A theme for each day represented a critical family resource. The theme was introduced in a didactic session then demonstrated through exercises and structured experiential activities that served as metaphors for family functioning. One daily metaphor was the survival skill training. The adolescent who had acquired these skills during his or her wilderness experience was responsible for teaching the skill to his or her parents. This served to demonstrate the adolescent's competence, provided a forum for family enactments, and informed parents about the survival program their son or daughter had experienced. Therapists observed these enactments and used these opportunities to work individually with the family. The final component was the multiple family therapy group which was used to integrate the theme and process the day's experiences. Group members were encouraged to share insights about their own family functioning as well as observations of other families.

The participating families were introduced and engaged in a series of "icebreaker" activities. The first Multiple Family Therapy group followed and focused on disclosure of family problems. This assessment provided the therapists with useful information about family functioning and perceptions of family members.

The first day's survival skill session was flint and steel fires. The family prepared materials and shared equipment to produce a family fire, started by the parents. Again, the adolescents were a resource, teaching their parents the requisite skills and engaging them in a cooperative effort. While dinner (consisting of the same survival rations used by the adolescents in their 21-day ordeal) was cooking, the therapists met individually with each family to develop family goals for the program.

The first theme introduced was emotional repairing of family troubles. Each family member was offered the opportunity to unburden themselves by throwing a written statement of the difficulties they had caused the family into their family fire. This ritual served to indicate the families' willingness to move beyond their previous maladaptive functioning. Each family shared their goals providing the group with the opportunity to explore conceptions of the ideal family and creating an expectation for family change.

The families began day two by breaking camp and hiking one mile to a new site. This was designed to provide a sense of expedition so parents could better relate to what their adolescents had accomplished. A presentation introduced the theme of trust, the lack of trust that characterized the parent-adolescent relationships, and the need to rebuild trust to have healthy relationships. This was followed by a progressive series of trust-building activities.

During the afternoon survival skill session family members were again required to work cooperatively and rely on their adolescent to build a deadfall trap. This served to emphasize the days theme of trust and dependability. After the parents successfully set the completed trap, families directed their energies toward the daily rigors of desert living: establishing a camp site, building a fire and preparing their meal. Tasks had to be divided requiring family members to function as a family unit. The day concluded with an multiple family group addressing the process of rebuilding trust.

Day three began with a morning hike to a new camp. The theme for the day was communication. The didactic presentation introduced three R's of healthy communication: respect, responsibility, and reciprocity. A communication model was presented, emphasizing the expression of feelings and active listening. Finally, a group of experiential problem solving activities requiring effective communication for successful completion were presented.

The remainder of the afternoon was allotted for "parent solos." Parents were encouraged to discuss how they were going to integrate a competent adolescent into their family system. The adolescents remained in a group to discuss how their families would be different when they returned home and what their roles would be. After reuniting to spend their final evening in the wilderness together as a family, a therapist visited each family for conjoint family therapy sessions.

The final theme of the program was negotiation. A basic problem solving model was presented with emphasis on a "win-win" strategy. Several exercises were employed to promote the negotiation process. Once again, structured experiential activities were introduced that required negotiation and problem solving skills. The processing groups were used to address the

incorporation phase of the families' experience. Obstacles were identified and strategies were discussed for generalizing the changes that the families had demonstrated to the home environment.

The final component of the program was the contracting session. This was an opportunity for family members to state explicitly their expectations, and it provided documentation to strengthen the commitment. This process was critical to returning control to the parents. However, adolescents were supported in negotiating for their needs as well.

The closing group returned to the issue of repair. Family goals were revisited and progress was evaluated by the family members. The group concluded with a ritual in which each family received positive feedback from the other group members. Family strengths were highlighted and the families were reminded that they had the resources for healthy family functioning and had demonstrated their ability to implement them.

Results

The program evaluation questionnaire was completed by each participant at the conclusion of the Family Wheel program. Reactions to the program and its leadership were overwhelmingly positive. Ninety-five percent of the participants rated the content of the program as most or very helpful (mean scores from 3.8 for the survival skills sessions to 4.4 for the experiential activities). Many respondents commented that the experiential activities, the metaphors, and processing sessions were particularly meaningful and outstanding aspects of the program. Many commented on the opportunity for family intimacy away from the distractions of home. The training in relationship skills was frequently mentioned as a strength. Numerous participants expressed appreciation for the opportunity to share the experience with other families and benefit from their knowledge and support. When asked to rate their overall satisfaction with the Family Wheel program, 92% of the participants indicated that they were mostly or very satisfied (mean overall satisfaction rating of 4.5).

The impact of the standard wilderness program and the Family Wheel program on family functioning (as measured by the FAM III), their efficacy in reducing problem behavior (as measured by adolescent reports on the SRDC and parent report on the RBPC, and their effect on enhancing adolescent self concept (as measured by the SDQ-III) are presented in Table 1.

Examination of these ratings reveal several interesting features. Scores from the FAM III reveal that at pretest the Family Wheel families rated their family functioning within the clinical range. By the time of the follow-up Family Wheel participants were uniformly describing their family

Table 1. Means and standard deviations for pre-, post-, and follow-up evaluations on the FAM III, SRDQ, RBPC, and SDQ.

		Family Wheel Participants			Nonparticipants		
		Time 1	Time 2	Time 3	Time 1	Time 2	Time 3
Measure	Respondant	M (sd)	M (sd)	M (sd)	M (sd)	M (sd)	M (sd)
FAM III	Adol.	8.6 (2.0)	7.0 (2.1)	6.7 (2.0)	7.5 (2.4)	6.0 (2.2)	6.2 (2.0)
	Father	6.9 (1.3)	n.a.	6.0 (1.4)	6.5 (1.0)	n.a.	6.0 (1.4)
	Mother	7.3 (1.6)	n.a.	6.1 (1.5)	7.1 (1.8)	n.a.	6.1 (1.7)
SRDQ	Adol.	.66 (.51)	.58 (.32)	.31 (.46)	.98 (1.0)	.61 (.57)	.29 (.44)
RBPC	Father	9.0 (3.1)	n.a.	6.8 (3.8)	9.0 (3.9)	n.a.	6.8 (3.8)
	Mother	10.8 (4.9)	n.a.	6.0 (3.7)	10.7 (4.4)	n.a.	6.3 (4.8)
SDQ	Adol.	5.2 (.62)	5.6 (.87)	5.5 (.83)	5.2 (.72)	5.9 (.84)	5.5 (.81)

as functioning within the normal range. Adolescent ratings of delinquency dropped for both Family Wheel adolescents and nonparticipating adolescents. Parent ratings of problem behavior also improved for both groups. Moreover parent and adolescent reports of police and court contacts decreased for both Family Wheel participants (3) and nonparticipants (21). Adolescent ratings of self concept also revealed increases in self concept for adolescents in the Family Wheel and adolescents who took part in the standard wilderness program only.

DISCUSSION

Is a wilderness family therapy a possible and a viable adjunct to standard wilderness interventions with adolescents? Theoretically, there is a definite overlap in family and wilderness therapies. The Family Wheel is an example of a carefully designed marriage between wilderness and family therapies. The intervention relies on constructs from structural family therapy, healthy family process research, and multiple family therapy to capitalize on the power and efficacy of wilderness therapy.

Family Wheel participants rated all aspects of the Family Wheel program highly. Family Wheel families indicated that the program helped them to put issues in perspective and offered them direction. Many participants believed that the program was essential to rebuilding their relationships and a critical component to their continued success (e.g., "This program . . . help[ed] our family to reach out and slowly rebuild . . . progress[ing]

from basic trust to negotiating a contract . . . an amazing feat for our previously dysfunctional family"). Following the standard wilderness program, both parents and students typically express substantial apprehension about the future of their families. In contrast, the Family Wheel families expressed confidence that they would be able to sustain the gains they had achieved in the wilderness (e.g., "Without Family Wheel as a transition period for my daughter and I, we never would have made it past the anger and guilt and distrust . . .").

Follow-up contact with many of the families supported the positive perceptions of the program that families shared in their evaluations. Nearly a third of the families wrote letters of appreciation for the Family Wheel and encouraged its continuation. Even the less successful Family Wheel families reported that the communication and negotiation skills they acquired in the Family Wheel program were helping at home (e.g., "We have made real progress at our house in implementing some of the principles for constructive approaches to conflict, successful negotiation, and expression of feelings."). They noted that in spite of the difficulties, they have maintained good relationships and talk about their differences even when they cannot agree upon a solution.

Adolescents and parents in both groups agreed that their families were functioning more effectively at follow-up than before the wilderness intervention. At the time of the pretest Family Wheel families FAM III scores were in the clinical range (more than one standard deviation greater than the norm). By the follow-up testing Family Wheel participants rated their families in the normal functional range. There was also movement toward more consistent perceptions among family members. Family Wheel adolescents were having less legal trouble than their comparison group cohorts. These were encouraging findings suggesting that the Family Wheel program may have some value in easing wilderness therapy adolescents' transition back home and improving the families attitudes toward one another.

The Family Wheel participants were often quite troubled families. For example, the Family Wheel therapists consistently observed high levels of marital discord in the participating families. This suggests that wilderness family therapies would be a more effective treatment for families functioning in the borderline or better ranges of family functioning (Beavers & Hampson, 1990). Dysfunctional families with less capacity for cohesive family process may be ill-suited for the rigors of wilderness therapy. The intensity and demands of the family focus and the wilderness experience may accentuate or reify rather than heal highly conflictual family relationships. The multiple-family format limits the amount of individual attention given to any single family. Severely dysfunctional, particularly disengaged, chaotic, or dissolving families, tend to detract from the group process. It is difficult to build competence in the absence of family structure and this intervention is not designed to provide the treatment of longstanding marital and family conflict that some families require. Correspondingly, wilderness family therapies, not surprisingly, seem to be most effective with younger adolescents with a less severe history of behavioral disturbance. It should also be noted that our Family Wheel participants were primarily middle-class Caucasians. It is entirely unclear how ethnic minorities or underprivileged families would react to the intensity and stress of the Family Wheel.

The evaluation of this program was quite limited by constraints on design of the study. The self-selection of the Family Wheel participants may have resulted in a biased sample of participants. There was some evidence to suggest that Family Wheel participants were more troubled families prior to the intervention and they may have been more amenable to treatment. This potential amenability to treatment could have led to greater improvements over time for the Family Wheel participants. On the other hand, the intervention may have sensitized families to problems that they were unaware of or were unwilling to acknowledge previously. As a consequence, their less functional family dynamics may have been exacerbated by the Family Wheel intervention. Other limitations concern the use of self-report measures and the relatively short follow-up time. The initial effects of the Family Wheel program may be too subtle to be detected until there is a cascading effect due to the changes initiated in the family intervention. These instruments may not have been sensitive enough to detect early changes in family process and structure that may more accurately be judged by observational techniques. A longer range follow-up also might facilitate detecting family change. However, the positive outcomes experienced by Family Wheel participants suggest that the intervention may be an effective adjunctive therapy following the completion of a standard survival or wilderness program.

Implementing a Family Wilderness Program

Wilderness family therapy has promise as a theoretically sound therapy for families. More sensitive and powerful research will be necessary to determine the cost-benefit effectiveness of such a program. Being a competency-based program, the Family Wheel helps families to focus on their abilities and discover new strengths. Consequently, the wilderness experience in the Family Wheel program is critical. The physical demands of desert living clearly takes its toll on participants. The timing and setting of

the experience are crucial since they create an environment that fosters family intimacy. The Family Wheel seizes this "therapeutic moment" to create a bond that will serve these families in confronting setbacks that lie ahead.

Two components of this intervention are particularly critical. It is essential in a wilderness family therapy to create an opportunity for the adolescent to assume a position of responsibility and competence. This serves to unbalance the family system and enables parents to see their child in a more favorable light. Equally important is the need to restore an appropriate balance with an effective parental hierarchy. This is accomplished by the contracting session.

Finally, the intensity of the intervention requires participants to take substantial risks and commit to the process and their fellow family members. This foundation of trust is strengthened throughout the program as family members must depend upon each other. However, families that experience a successful and rewarding connection in the wilderness may feel betrayed when the same quality of attachment is inconsistent at home. For this reason families are reminded repeatedly to regard their Family Wheel achievements as a foundation and a beginning.

In recent years innovative family and multisystemic therapies have been increasingly employed with problem teenagers (Henggeler & Borduin, 1990). Developing treatment for troubled adolescents cries out for the involvement of families. Using the intensity provided by the wilderness environment and emphasizing the competence of parents and their adolescents, families can be guided into healthier more adaptive functioning.

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