Children's Mental Health Task 11 FY 2004-2005: Evaluation of a Therapeutic Wilderness Family Camp Program Utilizing Family-Directed Structural Therapy Final Report

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EXECUTIVE SUMMARY

As part of the FY 2003 contract, under the "Best Practices" task order, KU staff completed Report #7: Adventure-Based Therapy and Outdoor Behavioral Healthcare. This report summarized the program components and empirical base for nontraditional forms of therapy that employ outdoor, challenge activities as integral treatment components. The report also included a survey of the activities, interests, and needs of the Community Mental Health Centers (CMHCs) in relation to adventure-based programs.

This survey identified a wilderness family camping program at Area Mental Health Center (AMHC) that had been operating for more than ten years and deserving of evaluation. In addition to adventure-based programming, the camps utilized Family-Directed Structural Therapy (FDST), a model of family therapy developed by AMHC therapist Don McLendon. It was anticipated that results of this evaluation could contribute to the literature on services to Seriously Emotionally Disturbed (SED) children and their families, and provide an innovative treatment option for CMHCs in Kansas.

This final report summarizes the program evaluation which took place during FY 2004 and 2005. It includes the structure and schedule of the nine (9), three days camps that took place over two years time. This document also includes a report of the research methodology, results, and recommendations.

Twenty-five families (93 individuals) voluntarily participated in the program evaluation and attended one camp during FY 2004 or 2005. In addition to camp, these families also received AMHC usual services, which may have included outpatient services, Community Based Services (CBS), and/or medication services. During the three day camp, adults attended approximately nine hours of adult FDST group, while children attended child psychosocial groups concurrently. Families spent approximately seven hours in family group, which incorporated FDST. In addition to being facilitated in a primitive camp setting, a therapeutic adventure-based activity was utilized. Finally, families attended a one day follow-up camp which took place six weeks after the three day camp.

In order to measure family functioning and change in functioning over time, data collected at camp included FDST Assessment Tools from all adults, Family Adaptability and Cohesion Evaluation Scales II (FACES II) from all family members, and Child Behavior Checklists (CBCLs) for all children. FDST Assessment Tools and FACES II were collected at the six week follow-up camp. Finally, FDST Assessment Tools, FACES II, and CBCLs were collected via a mailing six months post three day camp.

Families who received usual AMHC services and FDST via camp were compared with families who received only usual AMHC services. These comparison families (n= 15 families with 57 individual family members) voluntarily agreed to participate in the evaluation and were selected from families participating in CBS programming. The data collection timeline was consistent with that of the FDST families. FACES II and CBCLs were collected when families completed the initial battery of research paperwork, FACES II were collected six weeks following that time, and FACES II and CBCLs were collected six months following the initial paperwork collection.

In summary, families who attended camp and received FDST improved to a statistically significant degree on several measures. From baseline to six weeks, statistically significant improvement was seen in four of five FDST core issues and in four of seven FDST roles. From six weeks to six months, one core issue showed statistically significant gain, while three core issues maintained or improved slightly. Additionally, six of seven FDST role scores maintained or improved slightly during this time period. In contrast to the comparison group that also received usual services from AMHC, the families in the treatment group had a statistically significant better outcome on the FACES family cohesion score at 6 weeks that continued to improve at six months. CBCL scores for children in the treatment group improved after six months, while three of four CBCL scores deteriorated for comparison children.

Results from this evaluation support the utility and effectiveness of the FDST model of family therapy within a therapeutic family camp setting. They also provide support for the use of the FDST Assessment Tool as a clinical tool that documents changes in family functioning over time. This evaluation indicates that this innovative and intensive approach can provide families with a vocabulary and visual “road map” to guide their efforts at improving family functioning. The next step in building empirical support for the FDST model, currently underway, is to evaluate its effectiveness in more traditional outpatient settings when used by teams of mental health professionals serving SED children within local community mental health agency settings.

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INTRODUCTION

As part of the FY 2003 contract, under the "Best Practices" task order, KU staff completed Report #7: Adventure-Based Therapy and Outdoor Behavioral Healthcare. This report summarized the program components and empirical base for nontraditional forms of therapy that employ outdoor, challenge activities as integral treatment components. The report found that these programs are focused primarily on the individual child, and that family involvement is confined principally to pre and post treatment of the youth.

The report found very few descriptions of programs which were family based; that is, programs which involved the youth and the family together in an outdoor modality that incorporated a specific family therapy model in addition to challenge-based activities Bandoroff & Scherer, 1994; Clapp &Rudolph, 1993). Moreover, it was observed that much of the work done to date focuses largely on therapeutic games and activities used within the context of family therapy (Bonney & Gillis, 1986; Burg, 2000). The report concluded that the empirical base for this type of programming for families is virtually nonexistent.

The report also included a survey of the activities, interests, and needs of Community Mental Health Centers (CMHCs) in relation to adventure-based programs. This survey identified a therapeutic wilderness family camp program at Area Mental Health Center (AMHC) that had been operating for more than ten years and deserving of evaluation. The camps utilized Family-Directed Structural Therapy (FDST), a model of family therapy developed by then AMHC therapist Don McLendon. It was anticipated that results of this evaluation could contribute to the literature on services to Seriously Emotionally Disturbed (SED) children and their families, and provide an innovative treatment option for CMHCs in Kansas.

Thus, this report summarizes the results of a two year evaluation of the AMHC wilderness family camp utilizing FDST as the primary intervention. The report includes a description of this program, the research methodology, and results.

DESCRIPTION OF PROGRAM

During fiscal years 2004 and 2005, nine camps were held. They took place either at the Spanish Peaks Boy Scout Ranch in Walsenburg, Colorado or the Boy Scout Camp at Ford County Lake in Dodge City, Kansas. Each camp lasted three days (Saturday through Monday) and included three to five families. Families were responsible for transportation to and from camp. Families and staff stayed in cabins and utilized privy-type bathroom facilities. Kitchen facilities were available and the families rotated cooking and clean-up responsibilities.

Staff consisted of one lead therapist, two to three adjunct therapists, and two to four child case managers. Table I summarizes therapy session times, participants, and activities.

Table I: Therapy Sessions, Participants, and Activities

Time	Activity	Participants
1 hour	Camp Orientation	All Family Members and Staff
3 hours	Initial FDST Adult Group Orientation	Adult Family Members and FDST Staff
3 hours*	Child Psychosocial Group	All Children and Child Staff
3 ½ hours#	FDST Adult Group Implementation	Adult Family Members and FDST Staff
3 ½ hours*#	Child Psychosocial Group	All Children and Child Staff
3 hours	FDST Adult Group Implementation	Adult Family Members and FDST Staff
3 hours*	Child Psychosocial Group	All Children and Child Staff
3 ½ hours	Family Adventure-Based Activity	All Family Members and Staff
2 hours	FDST Family Group	All Family Members and Staff
1 hour	Evaluation Group	All Family Members and Staff
3 hours	6 Week Follow up FDST Adult Group	Adult Family Members and FDST Staff
3 hours*	6 Week Follow up Child Psychosocial Group	All Children and Child Staff

*Concurrent with session above
Due to client request for additional group time, these groups added for FY '05

Adult FDST and Family Groups

When meeting with adults in groups or with families, FDST was utilized. Family-Directed Structural Therapy is a time-limited, goal-oriented form of family therapy. It incorporates concepts from Structural Family Therapy, Group Work Theory, and Strengths Model, among others (McLendon, McLendon, & Petr, 2005). It includes an assessment tool that is completed by adult family members that helps both family and therapist to quickly identify areas of family strength, as well as areas of concern. The assessment tool measures adult family members' perception of core issues (commitment, credibility, empowerment, control of self, and consistency), roles, and external stressors. Once areas of concern are identified via assessment tool scores, a framework of interaction provides a means for families to improve family functioning. See Appendix A for a description of FDST.

Child Psychosocial Groups

Child Psychosocial Groups were facilitated by child case managers. These groups focused on helping the children identify familial strengths, aspects of their family they would like to change, and how they saw themselves functioning within the context of their family. Group discussion and structured play were used to enhance problem solving skills, appropriate expression of emotion, and to assist children in identifying behavioral changes they could make which could contribute to improving family functioning. Aspects of FDST were utilized in Child Psychosocial Groups via the use of core issues (e.g. How committed is the child to changing a certain behavior? Is he or she able to take control of self to change problem behaviors? How consistent does he or she think they can be in implementing these changes?) and the Framework of Interaction (e.g. building on family strengths; encouraging children to express what they think, feel, and need; and helping children to think about rules by which to resolve conflict).

Adventure- Based Activity

The Family Adventure-Based Activity was a vehicle for families to put into practice the skills and ideas discussed in FDST group sessions. Safety was the ultimate priority and at no time were family members allowed to place themselves in a potentially dangerous situation. Staff members were wilderness first-aid trained and experienced in the facilitation of adventure-based activities.

The families were divided into two groups, usually with all female participants on one side of a real or imagined stream (depending if the camp was held in Dodge City or Colorado) and male participants were placed on the opposite side. Participants were then challenged to build a rope bridge across the stream. They were supplied all needed equipment and also given parameters regarding ways in which they were allowed to communicate. One team leader was assigned for each group and this designation was usually made by staff. Spoken communication was allowed only between team leaders and if any other members spoke to the group across the stream, he or she received a ten minute "time out". Moreover, the male leader could only communicate in the form of a question. Finally, all the needed equipment was placed on the female side.

While some variation in this arrangement occurred over the nine camps, the previously described design was often the scenario because it seemed to help all participants carefully consider they ways in which they communicated (e.g. not being able to call out at one's child or spouse/partner across the stream and tell him or her what to do). This bridge building activity placed the family members in a novel, somewhat stressful situation in which they were able to utilize skills discussed in group. For example, if an outwardly verbal husband and more verbally passive wife were assigned as team leaders, this situation challenged the ways in which the couple usually interacted.

Several staff members were present on both sides to facilitate communication and problem solving among the individual teams, and ensure participants' safety. They were also present to encourage all family members' participation in the bridge building project,

as well promote the use of skills discussed in group. For example, a child historically tended to become verbally aggressive when he felt people around him weren't listening to him. During Child Psychosocial Group, he committed to trying to speak in a quiet voice in this type of situation. During the Adventure-Based Activity, a case manager was present to coach and support the child to express himself in a more quiet and appropriate manner.

Following the bridge building activity, all family members participated in a debriefing group. During this time, all participants were encouraged to talk about the adventure activity, what they learned, and how they could apply what they learned to their daily lives. Using FDST language and concepts, therapists and case managers guided the participants to think about family strengths and areas of concern discussed in group, how those dynamics played out in the adventure activity, and how they could apply the experience of the bridge building activity to their family life.

Six Week Follow-Up Groups

Six weeks after each camp, all staff and families met for a three hour follow-up group. Both the Adult FDST Group and Child Psychosocial Group were very similar in structure to the groups held during camp. The purpose of these groups was to talk with the families about their progress since attending camp, reinforce the FDST framework, and address any struggles the families encountered since attending camp.

DESCRIPTION OF RESEARCH PROJECT

The goal of this project was to compare, over time, families who were receiving usual services from AMHC and attended camp, with families receiving only usual services from AMHC. Practitioner adherence to the FDST modality was also examined throughout the project.

General Data Collection Procedure

Written consents were collected from all adult participants, parental family members completed consents for their children, and the children completed a verbal child assent. All consents and procedures were approved by the University of Kansas Internal Review Board for Human Subjects Approval.

Data was collected at "Time One" (T1), which, for the treatment families, occurred at camp. T1 for comparison families was the time at which they completed the initial battery of research paperwork. All comparison family data was collected by AMHC case managers. Data was then collected at "Time Two" (T2), which took place 6-weeks post T1. For treatment families, this occurred at the six week follow-up group. A final set of data was collected at "Time Three" (T3), which was 6-months post T1. Treatment families completed T3 collection via mail. See Table II below for a summary of the data collection process and timeline.

Data Collection for Treatment Families

Adult family members in the treatment group completed Family-Directed Structural Therapy Assessment Tools at T1, T2, and T3. Adults and children in the treatment group completed Family Adaptability and Cohesion Evaluation Scales II (FACES II) at T1, T2, and T3. As a part of Community Based Service (CBS) provision, Child Behavior Check Lists (CBCLs) were being completed by a parent every six months for children who were participating in that program. Because it is recommended that the CBCL only be completed once every six months, CBCL scores were collected from the AMHC data base as close as possible to T1 and T3 (www.aseba.org/support/frequently/administration/administration.html). Parents completed CBCLs for children who were not receiving CBS at T1 and T3. See Table II below for a summary of the data collection process and timeline.

Data Collection for Comparison Families

FACES II were collected from all comparison family members at T1, T2, and T3. As with the treatment families, CBCLs were being completed once every six months by a parent for children who were participating in CBS programming. Thus, CBCL scores were collected from the AMHC data base as close to T1 and T3 as possible. Because it proved exceedingly challenging to collect the consents and FACES II from the comparison families, CBCLs were not collected from comparison family children who were not receiving CBS. See Table II below for a summary of the data collection process and timeline.

Table II: Summary of Data Collection Process and Timeline

MEASURE/TIME COLLECTED	TREATMENT GROUP ADULT	TREATMENT GROUP CHILD	COMPARISON GROUP ADULT	COMPARISON GROUP CHILD
FACES TIME 1	X	X	X	X
FDST TIME 1*	X			
CBCL TIME 1**		X		X
FACES TIME 2	X	X	X	X
FDST TIME 2*	X			
FACES TIME 3	X	X	X	X
FDST TIME 3*	X			
CBCL TIME 3**		X		X

Time 1 = Baseline Data Collection; Time 2=Post Six Weeks Baseline; Time 3= Post Six Months Baseline
FDST = Family-Directed Structural Assessment Tool
FACES = Family Adaptability and Cohesion Evaluation Scale, Second Version
CBCL=Child Behavior Check List - Parent Report

*FDST Assessment Tool not collected from comparison group adults because they did not receive Family-Directed Structural Therapy

**CBCL only collected at time one and time three because collection occurring more frequently than once every six months is not recommended (www.aseba.org/support/frequently/administration/administration.html)

Data Collection to Examine Fidelity of Modality Implementation

Treatment fidelity, specifically treatment adherence, was studied throughout this project. Treatment adherence was conceptualized as the extent to which terms and interventions specific to FDST were utilized by the therapists. This conceptualization is consistent with the definition of treatment adherence according to Waltz, Addis, Koerner, & Jacobson (1993), who define it as the "extent to which interventions are used" (p 620).

Treatment adherence has gained increasing attention in recent years, with both researchers and clinicians becoming interested in being able to link certain, specific interventions with particular outcomes. Documenting treatment adherence is the first portion of that task (i.e. Does the service provider do what they say they do and to what extent?). While there has been increasing interest in this facet of service delivery, a 2005 meta-analysis of 236 studies of child psychiatric disorders by Weisz, Doss, & Hawley found only 32% of the studies had any form of adherence checks.

Adherence was measured by audio-tape recording, transcribing, and analyzing adult FDST sessions. The examination of treatment adherence was conducted by an FDST trained therapist, who counted the number of times terms and interventions specific to FDST were used by group facilitators. Twenty-six adult FDST sessions were audio-tape recorded, transcribed and analyzed. Seven transcripts (approximately 25%) were randomly selected to be included in determining the number of times that FDST terms were utilized. Treatment competence, or the level of skill with which the interventions were used (Waltz et al., 1993), was assumed because the lead therapist was the modality's creator.

RESULTS

Analyses were conducted to address the research goal of comparing, over time, families who were receiving usual services from AMHC, attended camp, and received FDST, with families receiving only usual services from AMHC. Relevant findings are reported below.

Characteristics of Participants

In order to describe participants at baseline, key demographic variables (*Age*, *Sex*, *Race*, *Family Type*, and *Marital Status)* and scores on clinical measures were analyzed. The *Adaptability* and *Cohesion* dimensions of the Family Adaptability and Cohesion Evaluation Scales II (FACES II) and the *Total Competence*, *Internalizing*, *Externalizing*, *and Total Problems* subscales from the Child Behavior Checklist (CBCL) were obtained for the FDST and comparison groups. Due to the interest in making group comparisons, results were analyzed by individual rather than aggregating them into family units, whenever possible.

Characteristics of the Treatment Group

Families who participated in the treatment portion of the study voluntarily agreed to attend a three day wilderness family camp where FDST was utilized as the therapeutic modality. The family camp was in addition to regular AMHC services, and did not supplant nor substitute for them. Families were referred to the camping program by AMHC therapists and case managers. Families attended one of nine camps.

The major criterion for referral to camp was a need for family therapy associated with a dysfunctional family situation relating to child behavior problems or a significant adult relationship issue impacting the family unit. In all families with two parents in the home, both parents were required to attend. Families who were experiencing active problems with physical abuse and/or substance abuse were screened out of the participant pool.

The treatment group consisted of 93 individuals (n=93), with an *Age* range from six to 64. It included 52 children and 41 adults. The mean *Age* for this group was 24.77, with a standard deviation of 15.59. *Sex* was about evenly split, with 45 individuals or 48% females and 48 individuals or 52% males. *Race* indicates that the sample was predominantly Caucasian, with 88 individuals or about 95%, while there were four Hispanic individuals and one African-American individual.

Of the twenty-five families who participated in Family-Directed Structural Therapy, nine were one-parent families, and 16 were two-parent families. Eight of these families reported an *Income per Year* under $25,000. Eleven had an income between $25,000 and $50,000, and six made over $50,000. See Table III for a summary of demographic characteristics.

Table III: Treatment Family Demographics vs. Comparison Family Demographics

Demographic	Treatment Families	Comparison Families
Number	25 families consisting of 93 individuals o 52 children (21 SED) o 30 boys o 22 girls o 41 adults	15 families consisting of 57 individuals o 31 children (17 SED) o 17 boys o 14 girls o 26 adults
Structure	16 two parent families 9 single parent families	11 two parent families 4 single parent families
Child Age	Mean age of 12.1 years Range 6-17 years Median age of 12	Mean age of 12.9 years Range of 8-20 years Median age of 12 years
Adult Age	Mean age of 40.9 years Range 27-64 years Median age of 40 years	Mean age of 41.3 Range 30-55 years Median age of 42 years
Race	1 African-American participant	12 Hispanic participants

	4 Hispanic participants 88 Caucasian participants	45 Caucasian participants
Income	8 families < $25,000 annually 11 families $25,000 - $50,000 6 families > $50,000 annually	8 families < $25,000 annually 6 families $25,000 - $50,000 1 family > $50,000 annually
Other Services	n= 21 – only collected on SED children Individual Therapy o Active – 15 o Inactive – 5 o Never Received – 1 Family Therapy o Active -6 o Inactive – 3 o Never Received - 12 Case Management o Active – 14 o Inactive – 7 o Never Received - 0 Medication Services o Active – 11 o Inactive – 6 o Never Received - 4	n= 17 –only collected on SED children Individual Therapy o Active – 11 o Inactive – 3 o Never Received – 3 Family Therapy o Active - 1 o Inactive – 0 o Never Received - 16 Case Management o Active – 14 o Inactive – 3 o Never Received - 0 Medication Services o Active – 12 o Inactive – 1 o Never Received - 4
Diagnoses	n = 21 - only collected on SED children Oppositional Defiant Disorder/Conduct Disorder – 7 Disruptive Disorder NOS -1 Attention Deficit Hyperactivity Disorder – 4 Major Depression – 1 Bipolar Depression – 4 Generalized Anxiety Disorder – 1 Post-Traumatic Stress Disorder - 2 Psychotic Disorder NOS – 1	n=17 – only collected on SED children Oppositional Defiant Disorder/Conduct Disorder -3 Attention Deficit Hyperactivity Disorder – 5 Major Depression – 4 Generalized Anxiety Disorder – 1 Anxiety Disorder NOS – 1 Mood Disorder NOS - 1 Pervasive Developmental Disorder – 1 Autism – 1

At the baseline administration of the FDST instrument, 41 adults provided their assessment of *Core Issues* and *Roles.* Due to missing data, 35 FDST Assessment Tools were examined. *Core Issues* and *Roles* were rated on a four-point scale that included "Positive", scored as a one; "More Positive than Negative" scored as a two; "More Negative than Positive" shown as a three; and "Negative", which was indicated by a score of four.

Within *Core Issues*, *Commitment* had a mean score of 1.77, SD .6. *Credibility* showed a mean of 2.14, SD .85. *Empowerment* displayed a mean of 2.91, SD .74. *Control of Self* had a mean of 2.63, SD .77. *Consistency* produced a mean of 2.29, SD .86. In addition, a constructed variable, *Core Aggregate* provided the sum of responses across the sub-dimensions for each participant. *Core Aggregate* had a mean of 11.73, SD 2.79.
The 26 adults with spouses or partners provided information on *Core Issues Partner*. For these participants, *Commitment Partner* showed a mean of 1.92, SD .74. *Credibility Partner* had a mean of 2.15, SD .73. *Empowerment Partner* displayed a mean of 2.61, SD .75. *Control of Self Partner* had a mean of 2.62, SD .75, and *Consistency Partner* had a mean of 2.42, SD .90. *Core Aggregate Partner* was computed as a sum variable and showed a mean of 11.73, SD 2.79.

Scores for *Roles* from 27 to 35 adult participants (depending on the roles they occupied) were arranged on the same four-point scale used for *Core Issues*. Means and standard deviations for each role respectively are: *Husband/Partner* , 2.33 and .73; *Wife/Partner*, 2.30 and .54; *Mother*, 2.06 and .73; *Father*, 2.42 and .75; *Parents*, 2.57 and .74; *Individual*, 2.43 and .81; and *Children*, 2.66 and .73. In addition, a sum variable *Role Aggregate* was computed and displayed a mean score of 16.63, SD 3.05.

Adults and children, totaling 90 individuals, responded to the FACES II at baseline. Their mean score was 51.14 on *Cohesion*, SD 10.33. On *Adaptability*, the group mean was 39.26, SD 8.06.

The first administration of the CBCL obtained scores for 49 children. CBCL scores were collected on all FDST group children, both SED and non-SED. Total Competence had a mean of 41.42, SD 9.23. The mean for Internalizing was 59.92, SD 13.31. Externalizing showed a mean of 62.78, SD 12.37, and the Total Problem mean was 60.65, SD 4.64.

Characteristics of the Comparison Group

Families who served in the comparison group were selected from families whose children were receiving Community Based Services (CBS) from Area Mental Health Center. The project was explained to families and they were given the opportunity to voluntarily participate. To be eligible for CBS, at least one child in the family had been diagnosed with a mental disorder. In addition to receiving CBS, these children were receiving other usual services from AMHC. Families in this group did NOT receive Family-Directed Structural Therapy.

The comparison group consisted of 57 individuals (n=57), with an *Age* range from eight to 55. It included 27 children and 16 adults, with 14 cases of missing data. The mean *Age* for this group was 22.74, SD 14.56. *Sex* showed an almost exact split of 29 females and 28 males. *Race* indicated the involvement of 45 Caucasians composing 79% of the sub-sample, and 12 individuals or 21% Hispanics.

Of the 15 families who participated in the comparison group, four were single-parent families and 11 were two-parent families. Eight of these families reported an *Income per Year* under $25,000. Six had an income between $25,000 and $50,000, and one made over $50,000. See Table III (pages 7-8) for a summary of demographic characteristics.

Fifty-seven (57) individuals, including adults and children, responded to the FACES II at baseline. Their mean score was 55.60 on *Cohesion*, SD 11.05. On *Adaptability*, the group mean was 41.74, SD 8.09.

The initial administration of the CBCL obtained scores from 16 adult caregivers of children in the comparison group. CBCL scores were collected only on SED children in the comparison group. *Total Competence* had a mean of 36.94, SD 9.14. *Internalizing* produced a mean of 66.19, SD 8.05. *Externalizing* had a mean of 65.38, SD 12.60, while the mean for *Total Problems* was 66.88, SD 9.08.

Comparability of Treatment and Comparison Groups

Comparability of the treatment group and the comparison group was assessed through tests of their respective values, at baseline, on the descriptive variables and clinical variables detailed above. Tests of significance were selected to match the level of measurement and the characteristics of the distribution for each variable as suggested by Pilcher (1990).

The groups were comparable on *Age* (*t*, 2-sided = .72, *df* 134, $p < .47$), *Sex* (Fisher's Exact Test 2-sided, $p < .867$), *Family Type* (Fisher's Exact Test 2-sided, $p < .730$), *Marital Status* (Pearson chi-square, 2-sided = 5.10, *df* 6, $p < .533$), and *Income per Year* (*t*, 2-sided = 1.65, *df* 38, $p < .11$). There was a statistically significant difference between the groups in *Race* (Pearson chi-square, 2-sided = 10.89, *df* 2, $p < .004$), but given the preponderance of Caucasians in both groups, this difference may not be relevant for purposes of this study.

The FDST and comparison groups were also comparable at baseline on the FACES II clinical variable of *Adaptability* (*t*, 2-sided = -1.82, *df* 145, $p < .07$). There was a statistically significant difference in *Cohesion* at baseline (*t*, 2-sided = -2.48, *df* 145, $p < .01$). The higher mean for the comparison group (55.60 versus 51.14) indicates that initial *Cohesion* was greater in that group than the FDST group. Due to the fact that *Cohesion* was a target of both interventions, this finding appears to advantage the comparison group when a goal of intervention is to achieve a higher level of cohesion.

Finally, CBCL scores from SED children in both the FDST and comparison groups had no statistically significant differences at baseline with one exception: the *Internalizing* scores were lower (better) in the comparison group.

Observed Change in FDST Group from Baseline to Six Weeks

Observed change in the FDST group was assessed by comparing the group mean values for each clinical variable over two phases. Baseline scores were compared with scores obtained at a six-week follow-up, and these six-week scores were compared with those obtained with an administration of the instruments at six months post baseline. Paired sample t-tests were used to test for significant changes, and directionality of change was considered. In order to interpret the scores from the FDST instrument, it is necessary to remember that a decrease indicates improvement, as it signifies movement toward the "positive" end of the scale.

Clinicians who operated the program defined levels of clinically significant gain for areas of the FDST instrument from baseline to six weeks. "Slight Gain" was defined as a positive change in scores from .1 to .3 inclusive; "Moderate Gain" was defined as a change of .4 to .6; and "Substantial Gain" was defined as a change of .7 or greater. Using this metric, 69% of participants in the FDST group showed "Moderate" or "Substantial" gains in *Core Issues*. For *Core Issues Partner*, 50% showed the same level of gains, and for *Roles*, about 41% showed this level of gains.

In the area of *Core Issues* (see Figure 1, Appendix B), *Commitment* remained the same from baseline to six weeks, but all other variables showed significant improvement. *Commitment* retained the same mean (1.74) over the first phase. *Credibility* showed improvement from 2.10 to 1.81 (t, 2-sided = 2.33, df 30, $p < .05$). *Empowerment* improved from 2.87 to 2.13 (t, 2-sided = 6.06, df 30, $p < .00$). *Control of Self* improved from 2.61 to 2.03 (t, 2-sided = 3.65, df 30, $p < .00$). *Consistency* improved from 2.29 to 1.87 (t, 2-sided = 2.44, df 30, $p < .02$). In addition, the sum variable, *Core Aggregate* improved from 11.61 at baseline to 9.58 at six weeks (t, 2-sided = 4.51, df 30, $p < .00$).

All variables within the area of *Core Issues Partner* (see Figure 2, Appendix B) showed improvement in mean scores from baseline to six weeks, but only *Consistency* and the sum variable, *Core Aggregate Partner*, achieved statistical significance. *Commitment Partner* improved from 1.91 to 1.59. *Credibility Partner* improved marginally from 2.05 to 1.91. *Empowerment Partner* improved from 2.55 to 2.14 . *Control of Self Partner* improved from 2.50 to 2.23 . *Consistency Partner* improved from 2.36 to 1.91 . The sum variable, *Core Aggregate Partner*, improved from a mean of 11.36 at baseline, to 9.77 at six weeks.

All variables within *Roles* also improved from baseline to six weeks (see Figure 3, Appendix B). Only *Husband/Partner*, *Mother*, and *Individual* failed to reach statistical significance. *Husband/Partner* improved from 2.27 at baseline, to 2.18 at six weeks. *Wife/Partner* improved from 2.27 to 2.00. *Mother* improved from 2.00 to 1.90. *Father* improved from 2.37 to 2.04. *Parents* showed a relatively large improvement from 2.55 to 1.97. *Individual* improved from 2.45 to 2.16. *Children* improved from 2.68 to 2.13. In addition, the sum variable, *Role Aggregate*, improved from 16.27 to 14.00.

Clinical improvement for the FDST group from baseline to six weeks was also indicated by scores on the FACES II instrument. Interpretation of these scores was made with the assumption that increases indicated improvement. This linear interpretation of the FACES model follows empirical evidence (Perosa & Perosa, 1990; Green, 1991; Olson & Tiesel, 1991).

Cohesion improved from a mean of 51.35 at baseline to 53.81 at six weeks. Results of a paired samples *t*-test indicate a statistically significant change (*t*, 2-sided = -2.61, *df* 67, $p < .01$). *Adaptability* improved from 39.32 at baseline to 40.87 at six weeks, but this change did not achieve statistical significance.

Sustained Change in FDST Group from Six Weeks to Six Months

FDST seeks to make lasting changes in the lives of participants, so analysis was extended to include comparison of scores obtained on the clinical measures at six weeks and six months. Sustained gains are indicated by maintenance or continued improvement, from six weeks to six months, of a gain realized from baseline to six weeks. (For those variables that indicated a statistically significant gain, no change or a continued decrease in the mean score across the time-series indicates a sustained gain.)

In the area of *Core Issues*, positive changes in mean scores for several variables were evident, but only *Commitment* showed a statistically significant sustained gain (see Figure 4, Appendix B). *Commitment* showed an additional improvement, from six weeks to six months. Its six week mean of 1.73 improved to 1.43 at six months. A paired sample *t*-test indicates that this change is significant (*t*, 2-sided = 2.34, *df* 29, $p < .03$). *Credibility* showed a non-significant change from 1.80 to 1.87. *Empowerment* showed a slight gain from 2.13 to 2.03 that was not statistically significant. *Control of Self* also indicated a statistically non-significant gain from 2.03 to 1.93. *Consistency* made minor movement from 1.90 to 1.87, but the change was non-significant. The sum variable, *Core Aggregate*, showed similar effects with a change from 9.60 to 9.13.

The variables included in *Core Issues Partner* were also tested for sustained gains. Although all but one showed maintained or improved means, none achieved statistical significance (see Figure 5, Appendix B). *Commitment Partner* showed a non-significant improvement from 1.59 to 1.27. *Credibility Partner* showed no change at 1.91. *Empowerment Partner* moved from 2.14 to 2.09. *Control of Self Partner* changed from 2.23 to 2.05. *Consistency Partner* changed from 1.91 to 1.96. The sum variable, *Core Aggregate Partner*, showed non-significant improvement from 9.77 to 9.27.

Role variables indicated continuation or maintenance of desired gains in all but one case-children, but none of these results achieved statistical significance (see Figure 6, Appendix B). The mean score for *Husband/Partner* changed from 2.18 to 1.91. *Wife/Partner* changed minimally from 2.00 to 1.96. *Mother* moved from 1.90 to 1.70. *Father* changed from 1.97 to 1.77 . The mean for *Parents* remained the same at 1.97.

Individual changed from 2.10 to 1.93. *Children* made a minor shift from 2.10 to 2.20. The sum variable, *Role Aggregate* showed a change from 14.00 to 13.23.

The FDST group continued to improve in the area of family functioning, as measured by FACES II, from six weeks to six months. The group mean for *Cohesion* showed a statistically significant movement from 54.05 to 56.55 (*t*, 2-sided = -2.71, *df* 59, $p < .01$). *Adaptability* showed a change in the mean from 40.63 at six weeks, to 41.82 at six months, but this continued gain was not statistically significant.

Observed Change in FDST Group from Baseline to Six Months

CBCL scores were collected for all children in the FDST group, both SED and non-SED. For the purpose of analyzing changes in this group over time, all scores (SED and non-SED) were used. CBCL results for the FDST group indicate improvement, in all variables. Of the variables that showed gains at six months, *Externalizing* and *Total Problem* reach statistical significance.

The mean for Total Competence improved from 40.93 at baseline, to 41.45 at six months, but results of a paired sample t-test indicate that this change did not achieve statistical significance. Internalizing improved from 60.11 to 57.29, but this gain was not statistically significant. Externalizing improved from 64.29 to 60.89 (t, 2-sided = 2.71, df 37, $p < .01$). Total Problem improved from 62.89 to 58.97 (t, 2 sided = 2.58, df 37, $p < .01$).

Contrast between Changes in FDST Group and Comparison Group

Contrast in outcomes for the FDST and comparison groups is possible using data from the FACES II and CBCL. In sum, the FDST group showed larger improvements in all of these variables, with some being statistically significant, and did worse than the comparison group in none of them.

Changes from baseline to six weeks post intervention indicate that the FDST group made strong and significant gains in family *Cohesion*, while the comparison group did not. As noted above, the FDST group made a significant gain of 2.46 in the mean score. The comparison group, however, showed a decrease in *Cohesion* from 55.66 to 54.18 (-1.48), but this change was not significant. Family *Adaptability* indicated a non-significant improvement of 1.55 for the FDST group, and an inappreciable and non-significant change from 41.66 to 41.86 (+.20) for the comparison group.

From six weeks to six months, the FDST group continued significant improvement in *Cohesion* with an additional gain of 2.5 in the mean score. By contrast, the comparison group, which had no significant gain during the first phase, showed an inappreciable gain from 54.04 to 54.53 (+.49) that was not statistically significant. During this phase, the FDST group showed a non-significant gain of 1.19 in the *Adaptability* mean score, and the comparison group showed a drop in this mean score from 41.64 to 41.30 (-.34), but this decrease was non-significant.

When looking only at SED youth in the treatment and comparison groups, the CBCL indicated better outcomes for the FDST group in contrast to the comparison group. The FDST group showed improvement in three of four, none of which were statistically significant. The comparison group scores deteriorated on all four sub-scales, none of which were statistically significant.

Specifically, the CBCL scores for SED youth in the FDST group moved .87 points from 37.82 to 36.95 in *Total Competence,* a slight deterioration. On this variable, the comparison group SED children showed a non-significant deterioration of .50 points in mean *Total Competence* from 37.21 to 36.71. In *Internalizing,* the FDST group improved .26 points from 68.84 to 68.58, while the comparison group deteriorated 1.14 points from 65.93 to 67.07. In *Externalizing,* the FDST group improved 2.16 points, contrasting with the non-significant movement of .05 points for the comparison group which showed a change in the mean from 67.07 to 67.57. Again, the FDST group achieved improvement on *Total Problem,* by moving 1.32 points from 72.58 to 71.26, and the comparison group moved 1.21 points, going from 67.93 to 69.14.

Treatment Fidelity

As referenced in the "Description of Research Project" section of this report, treatment adherence to the FDST model was examined. This study was facilitated via a randomly selected examination of approximately 25% (n=7) of adult FDST sessions. Table IV outlines the mean usage of FDST terms. Please refer to Appendix A for specific definitions of core issues, roles, external stressors, and the framework of interaction.

Consistent with the work of Waltz et al (1993), data analyzation for this portion of the project was not a search for a "magic number" that demonstrated "sufficient" usage of any particular term. Instead, this was a process which documented that camp therapists were indeed utilizing Family-Directed Structural Therapy.

Table IV: Summary of Mean Usage of FDST Terms

Term	Mean Number of Times Used Per Session
Core Issue	**12**
• **Commitment**	**25**
• **Credibility**	**26**
• **Empowerment**	**28**
• **Control of Self**	**18**
• **Consistency**	**16**
Roles	**32**
• **Husband**	**15**
• **Wife**	**12**
• **Partner**	**18**
• **Mother**	**19**

• **Father**	**20**
• **Parent**	**28**
• **Adult/Individual**	**27**
• **Child**	**55**
External Stressors	**10**
• **Ex Relationships**	**12**
• **In-Laws**	**7**
• **Parents (as External Stressor)**	**10**
• **Grandparents**	**8**
• **Jobs**	**12**
• **Living Conditions**	**5**
• **Finances**	**8**
• **Religion/Spirituality**	**5**
• **Legal Concerns**	**7**
• **Hobbies and Interests**	**6**
• **School and Activities**	**6**
• **Friends**	**10**
• **Alcohol and Drugs**	**7**
• **Healthcare/Medical/Mental Health**	**8**
• **Other External Stressors**	**2**
Framework of Interaction	**3**
• **Identify Family Strengths**	**6**
• **Family Members Express What They Think, Feel, and Need**	**5**
• **Utilize "I/Me" Not "You/We" Messages**	**3**
• **In Healthy Families, More Need Are Met Than Not Met**	**1**
• **Rules of Engagement**	**8**
• **Avoid Use of the Word "But"**	**2**
• **60/40 Rule**	**8**
• **Learn to Agree to Disagree**	**3**
• **Consider "Reasonable Expectations"**	**6**
• **Address Conflicts Via Appropriate Role**	**2**

LIMITATIONS

The limitations of this program evaluation are as follows:

- Relatively small sample size: The treatment group consisted of 25 families (93 individuals) and the comparison group consisted of 15 families (57 individuals). It proved very difficult to recruit comparison families and collect complete data sets from them.

- Collection of CBCL data from AMHC system: As a part of CBS service provision, CBCLs are collected on SED children every six months by their case managers. Thus, this data was retrieved from the AMHC system for SED children participating in this program evaluation. Because of this dynamic, baseline and 6 month CBCL data were not always collected exactly at those times. CBCL data was, however, collected as close to baseline and 6 months as possible.

- Non-random selection of treatment and comparison groups: Participation in the therapeutic camping program was voluntary and a non-random research design was not a practical methodology for this particular program evaluation.

SUMMARY AND RECOMMENDATIONS

This evaluation of a long standing, innovative program was conducted in the spirit of "service to science" research that is a hallmark of the report of the President's New Freedom Commission on Mental Health. This process includes "moving from science to service and from the field back to science" (New Freedom Commission on Mental Health, 2003, p.72). Practice-based research, with its emphasis on effectiveness in real world settings, is vital to the development evidence-based practices that can be readily adopted in agency settings. The results lend beginning empirical support to the FDST model of family therapy, which was the centerpiece of the weekend therapeutic family camp experience.

The limitations of the study center on the relatively small sample size, and the non-random selection of treatment and comparison groups. These limitations affect the generalizability of the findings. Strengths of the methodology include use of well validated outcome measures, follow-up at six week and six months, and rigorous assessment of treatment fidelity.

In relation to a comparison group that received the usual services from a community mental health center, the families in the treatment group had statistically better outcomes on the FACES family cohesion score at 6 weeks that continued to improve at six months. After six months, SED children in the treatment group improved on all four CBCL scores. While this improvement wasn't statistically significant, it is a reasonable assumption that this dynamic, combined with the statistically significant improvement on the FACES scores, lays a foundation for continued gains.

Results thus support the utility and effectiveness of the FDST model of family therapy within a therapeutic family camp setting. They also provide support for the use of the FDST Assessment Tool as a clinical tool that documents changes in family functioning over time. This evaluation indicates that this innovative and intensive approach can provide families with a vocabulary and visual "road map" to guide their efforts at improving family functioning. The next step in building empirical support for the FDST model, currently underway, is to evaluate its effectiveness in more traditional outpatient settings when used by teams of mental health professionals serving seriously emotionally disturbed children within local community mental health agency settings.

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The University of Kansas School of Social Welfare would like to extend its sincere appreciation to Area Mental Health Center for the facilitation of this project. Area Mental Health staff members participated in the facilitation of the camping program, as well as collection of comparison family data.

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Appendix A: Family-Directed Structural Therapy Description

Family-Directed Structural Therapy (FDST) is a family-driven, time limited helping modality that includes an accompanying assessment tool that is completed by adult family members. Three conceptual areas (core issues, roles and external stressors) are rated on a scale of 1-4 (1=positive, 2=more positive than negative, 3=more negative than positive, and 4=negative). These scores are then used by the service provider and family to identify areas of strength and areas of concern.

In FDST, core issues are the fabric of family functioning and consist of commitment, credibility, empowerment, control of self, and consistency. Commitment is the willingness to see situations through, despite differences and conflicts. Credibility is communicating what one will or will not do and demonstrating the ability to carry it through. Empowerment is having a sense that one's individual opinions are valued and respected, and believing one can effect change. Control of Self is making a conscious change in unproductive behavior that results in reduced conflict and improved relationships. Finally, there is consistency, which is defined as behaviors and communications that are predictable and create a sense of safety within the family unit.

The roles examined in FDST are: husband/partner, wife/partner, individual, parent, father, mother, and child. In FDST, the roles of husband/partner and wife/partner are defined by the intimate adult relationship between the husband and wife or partners, exclusive of the parent, mother, and father roles. The individual role encompasses the wants and needs of an individual, separate from all other roles, and his/her ability to meet those needs. The parent role is defined as the relationship between the adult partners in the family that creates a parental unit and their ability to address the health, welfare, and educational needs of the child(ren). In a single parent family, the parent role is also conceptualized in the same way – the ability of that person to meet the health, welfare, and educational needs of his/her child(ren). Mother and father roles are the individual relationships with the child(ren), exclusive of the parent role. The child(ren) role encompasses how well the child(ren) function and how they impact other people in the family.

External stressors are dynamics that impact the family from outside the basic internal structure. The effects of these stressors may be positive and supportive or negative and destructive. These dynamics include: "ex-relationships" (includes ex-spouses, ex-in-laws, ex-significant others), in-laws, parents, grandparents, employment, living conditions (home, community, location), finances (how resources are allocated and utilized), religious/spiritual, legal concerns, social service involvement, hobbies/interests, school and extra-curricular activities, friends (adult and child), drugs and alcohol, health care/medical, and "other".

Finally, there is a framework of interaction that guides interaction and expectation among family members. The framework of interaction is comprised of suggested ideas and techniques to aid the family in discussing role identification, boundary clarification, and addressing external stressors and areas of concern. This framework is as follows:

1. Identify family strengths and build on them
2. Identify areas of concern
    a. Apply five core issues to each area of concern
    b. Be very specific about control of self and what behaviors need to change
3. Develop rules of engagement

    Suggestions:

    a. All family members have the right to express what they think, how they feel, and what they need
    b. Utilize "I" and "me" messages, not "you" and "we" messages
    c. Avoid use of the word "but"
    d. Learn to agree to disagree
    e. Family identifies rules specific to their situation
4. Guideposts for the family and service provider when working on areas of concern:
    a. 60/40 rule – Are things moving in a healthy direction?
    b. Remember - In healthy families, more needs are met than not met. In no family are all needs met.
    c. Consider "reasonable expectations"
    d. Address conflict via appropriate role

During the initial assessment, the FDST Assessment Tool is given to adult family members. The family circle, that begins the Tool, provides a visual interpretation of the concepts of roles and boundaries. The Assessment Tool allows adult family members to conceptualize their perception of core issues, roles, and external stressors, via their scoring of these items

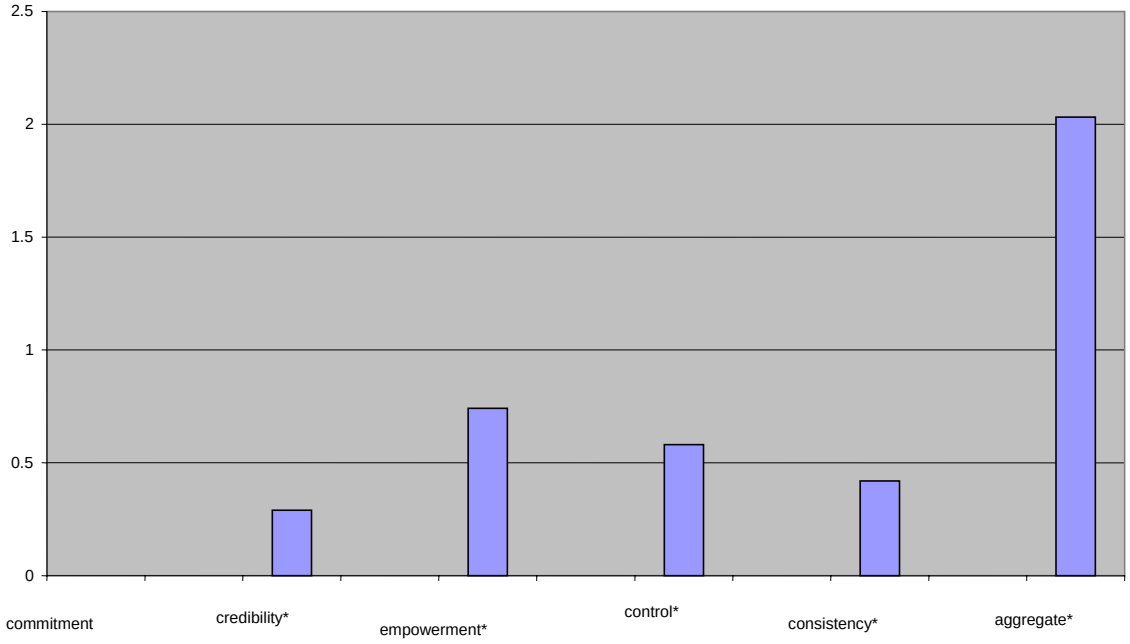
Core issues, roles, boundaries, and external stressors are explained by the service provider. This process begins to familiarize adult family members with FDST and it also provides them with a common vocabulary and a context within which to discuss and address their strengths and areas of concern. Once areas of concern are identified by the family and service provider, the framework of interaction provides possible ways to begin to address these issues. Children are brought into the process once adult family members have prioritized areas of concern and established a plan to address them.

The FDST Assessment Tool can be a valuable tool in ongoing assessment and evaluation. As the adult family members discuss their respective rating on the FDST Assessment Tool, they begin to learn the FDST theoretical framework, including

adopting the language of core issues, roles, boundaries, and external stressors, and a structure for therapeutic work, both inside and outside the clinical setting is established. Additionally, the regular administration and scoring of the Assessment Tool can monitor progress and the final outcomes of the therapeutic process.

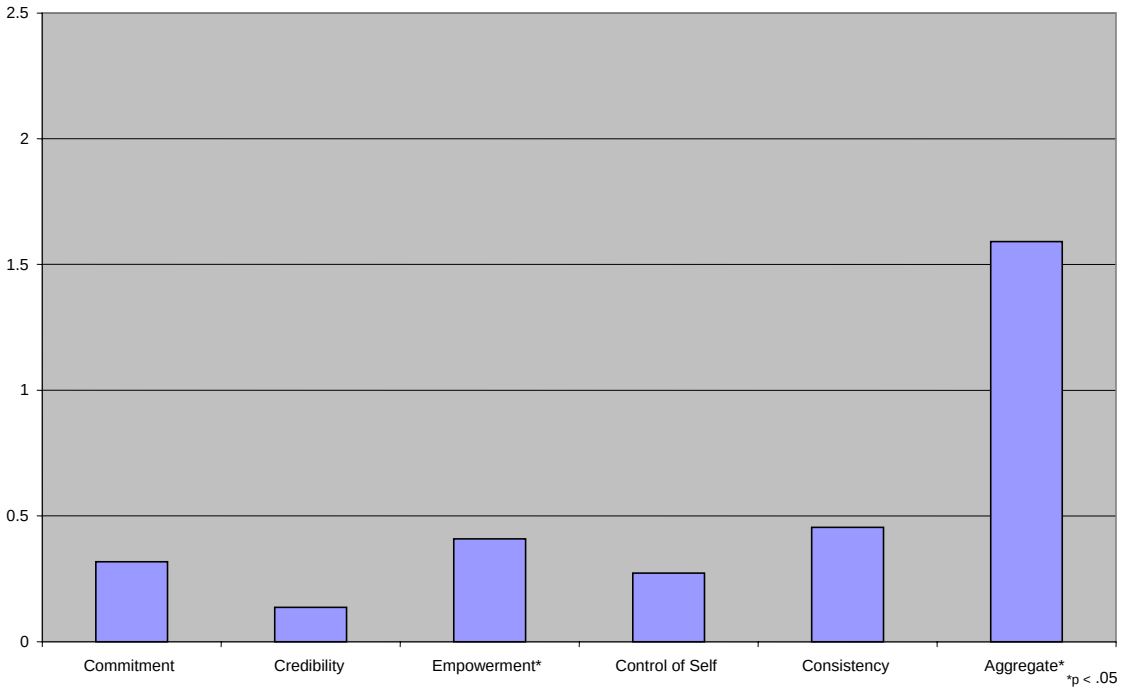
Appendix B

Figure 1-Core Gains: Intake to 6 wks



* p<.05

Figure 2-Core Partner Gains: Intake to 6 weeks



*p < .05

Figure 3-Roles Gains: Intake to 6 weeks

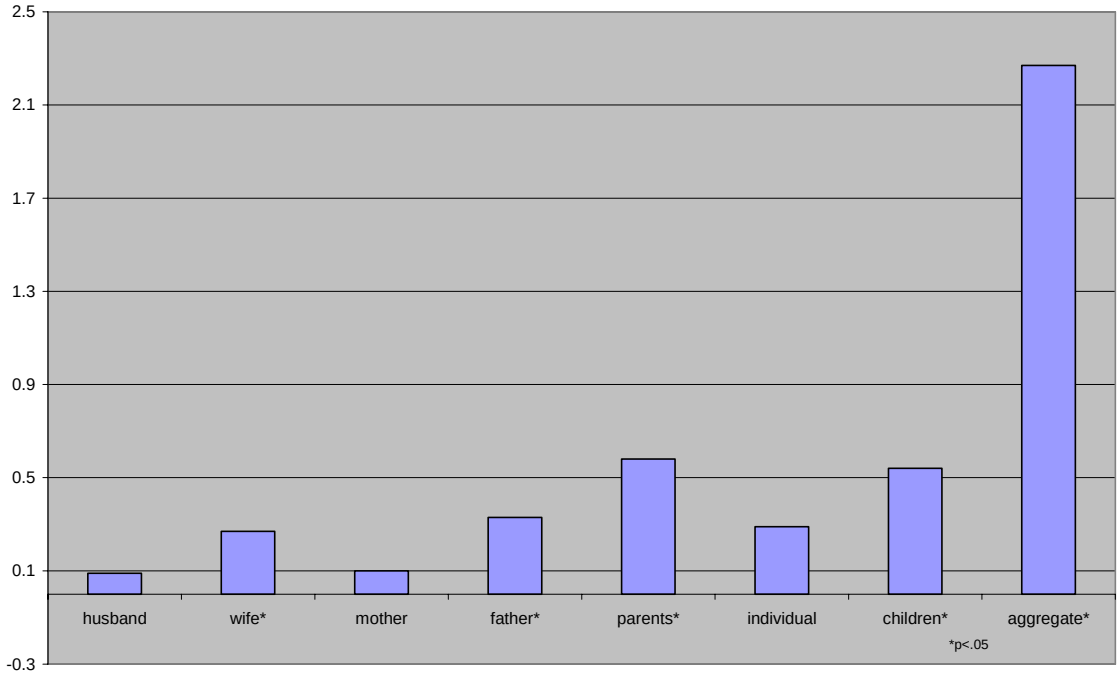


Figure 4-Core Gains: 6 weeks to 6 months

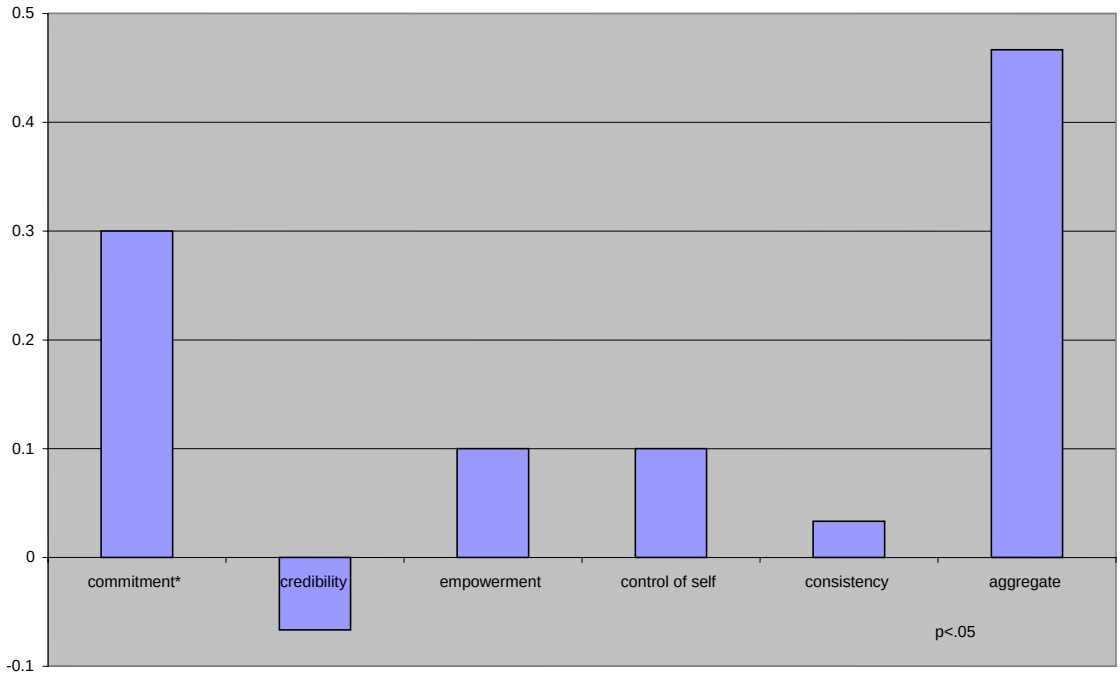


Figure 5- Core Partner Gains: 6 weeks to 6 months

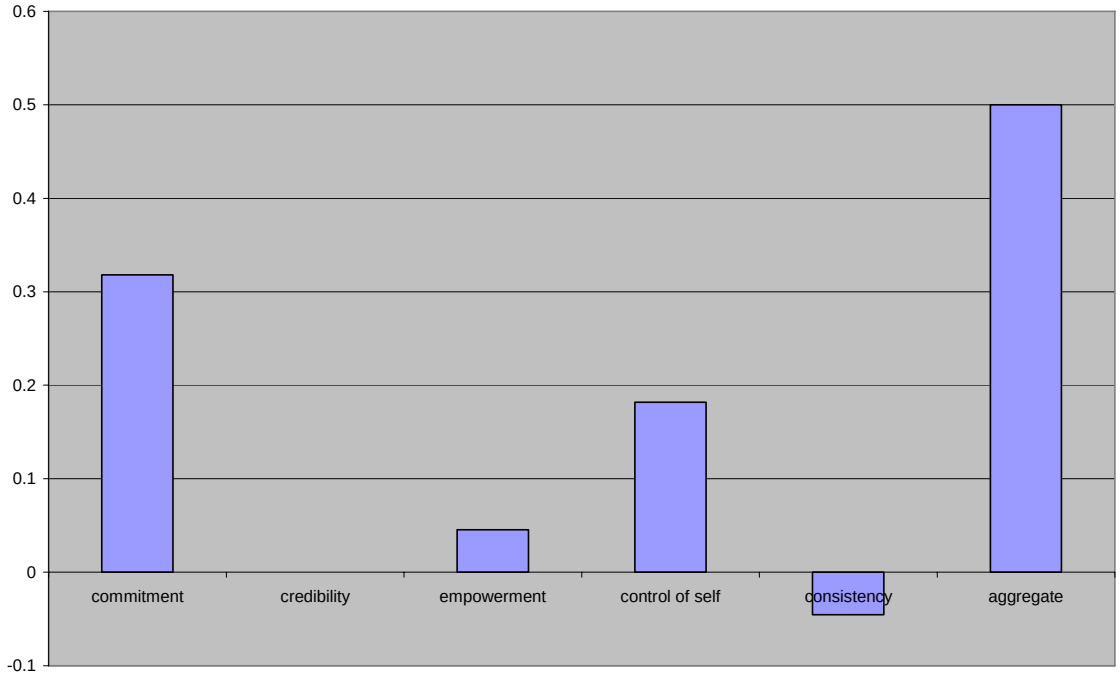


Figure 6-Role Gains: 6 weeks to 6 months