

RELATIONSHIPS AND JUVENILE OFFENDERS: THE EFFECTS OF INTENSIVE AFTERCARE SUPERVISION

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The purpose of this study was to examine the impact of participation in the Intensive Aftercare Demonstration Project on relationships between youth and their service providers. Successful intensive case supervision often assumes that providers develop positive relationships with their clients. The study employed an experimental research design in which participating youth were randomly assigned to treatment (received intensive aftercare services) or control conditions during the assessment phase of their commitment. A total of 97 youth participating in the pilot study completed survey questionnaires, at up to four separate phases, to assess change over time. Two survey instruments were used to measure youth perceptions of relationships with service providers as well as case manager perceptions of youth strengths. The findings suggest that participation in the experimental group was strongly associated with youth's perceiving positive relationships with their client managers.

During the past decade, there has been mounting interest in aftercare services for juvenile offenders. As greater numbers of youthful offenders are being confined to secure facilities for longer periods of time, the impact on future reoffending behavior is compromised in the absence of effective community transition and aftercare programming. There is little evidence that the increased practice of placing juveniles in secure confinement has translated into lower recidivism rates once these same youth reenter their communities.

This research was funded in part by the Intensive Aftercare Research and Development Project, which was supported by Grant 95-MU-MU-K016 from the Office of Juvenile Justice, Office of Justice Programs, U.S. Department of Justice. An earlier draft of this article was presented at the 1999 American Society of Criminology conference in Toronto, Canada. The author would like to thank Jae Taylor and Elizabeth Traver for assisting in administering Intensive Aftercare Project survey instruments. Additional thanks to Troy Armstrong, Joanne Belknap, Ceil Boyles, Bill Dieterich, Elizabeth McNulty, Fred Pampel, Mary Virnoche, and anonymous reviewers for suggestions on emerging analyses.

THE PRISON JOURNAL, Vol. 81 No. 2, June 2001 206-245
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In addition to its impact on public safety, severe overcrowding in secure facilities poses a grave risk to juveniles and their caregivers alike. Moreover, secure confinement is very expensive compared with alternative placement options. Intensive aftercare programming for juvenile offenders has attracted a great deal of attention because it strikes a balance between the legislative mandate to place youthful offenders in secure confinement and the public's need for successful reintegration of these youth once they are released.

The Intensive Aftercare Project (IAP) (Altschuler & Armstrong, 1994a) shows theoretical promise in the area of promoting successful community reintegration and reducing reoffending among juvenile offenders. Two key components of the IAP provide the basis for expecting favorable program outcomes for youth receiving IAP services. To provide intensive case supervision services, the model mandates smaller caseload sizes for juvenile parole officers. Moreover, the model supports a "continuity of care" philosophy that encourages community aftercare providers to work with youth during the institutional phase of their commitment sentences. This study examines the extent to which intensive case supervision and enhanced treatment services facilitate the reintegration experiences of juvenile parolees. More specifically, this research will consider how participation in the IAP might help build stronger relationships between youth and their service providers and better prepare them for community reintegration.

INTENSIVE SUPERVISED AFTERCARE

There have been few scientifically rigorous evaluations of the impact on recidivism rates of administering intensive supervised aftercare services to high-risk juvenile parolees. Historically, program evaluation initiatives in the criminal justice field have not been provided sufficient resources and consequently have produced methodologically questionable findings (Sherman et al., 1997). Common methodological problems have included selection bias or no comparison groups, inadequate measures of treatment (dosage) or outcome (effect), and insufficient follow-up periods. And those evaluations that have employed scientifically rigorous designs often have encountered implementation problems (Altschuler, Armstrong, & MacKenzie, 1999; Fagan, 1990).

Intensive Community Supervision (or Intensive Supervised Probation) without programming and services has not been found to produce a reduction in recidivism rates (Sherman et al., 1997). Yet, there is reason to believe that incorporating treatment services that target the criminogenic risk factors of offenders into the requirements of Intensive Supervised Probation may lead to a reduction in recidivism. It may also prove cost-effective for juvenile jus-

tice agencies. Recent studies (Andrews et al., 1990; Lipsey, 1992; Lipsey & Wilson, 1998) suggest that there may be greater reductions in recidivism if treatment is provided in community settings. There have been numerous models of intensive aftercare implemented during the past 10 years in a variety of settings with very different populations (Deschenes, Greenwood, & Marshall, 1996; Greenwood, Deschenes, & Adams, 1993; Hagan, 1995; Nimick, Halemba, & Torbet, 1994; Sontheimer, Goodsetein, & Kovacevic, 1990; Troia, 1994). Intensive aftercare has also been targeted to specific subpopulations of juvenile detainees (Hevesi, 1995), violent juvenile offenders (Fagan, 1990), juveniles with severe substance abuse treatment needs (Josi & Sechrest, 1993, 1999), probationers (Barton & Butts, 1990), and chronic juvenile offenders (Barnoski, 1999).

Maintaining the integrity of conceptual models during the implementation phase is critical, however, to the success of aftercare initiatives (Fagan, 1990; Goodstein & Sontheimer, 1997). A recent survey of juvenile aftercare programs nationwide (Altschuler et al., 1999) found that inadequate implementation and poor articulation of program frameworks contributed to mixed evaluation results. In light of these observations, the IAP (Altschuler & Armstrong, 1996) has been identified as a promising aftercare initiative.

The Intensive Aftercare Project

The IAP was developed to reduce recidivism among committed juvenile offenders who are at greatest risk for reoffending upon program discharge. To reduce reoffending, the model adheres to the following three principles of "reintegrative confinement" (Altschuler et al., 1999): preparation of youth for community reintegration, establishment of appropriate linkages and agreements with community resources, and provision of required services and supervision.

The IAP model is theoretically grounded within an integration of strain, control, and social learning theories. According to this view, youth are more likely to be drawn to deviant peer groups when their families fail to socialize them to develop internal controls against antisocial behavior. Without involvement, attachment, and commitment to conventional social beliefs, activities, and institutions, youth fail to develop the critical bonds to conventional norms defining prosocial behavior (Hirschi, 1969). Youth who develop bonds to antisocial peer groups are provided the support, rationalizations, and skills to engage in delinquency (Sutherland, 1924). Finally, delinquency becomes an appealing mode of adaptation to the strain youth experience between the desire for wealth and status in society and the legitimate means to achieve such goals (Merton, 1968). It is this strong emphasis on social dis-

organization and weak internal controls in the lives of delinquent youth that provides the theoretical basis for combining intensive community supervision (community restraint) with increased service provision (rehabilitation) to parolees (Altschuler, 1998; Altschuler & Armstrong, 1994a, 1994b, 1996; Altschuler et al., 1999).

The IAP model is distinct from previous intervention programs, targeting high-risk offenders insofar as it emphasizes the following five key programmatic principles (Altschuler et al., 1999, p. 10):

1. preparing youth for progressively increased responsibility and freedom in the community,
2. facilitating interaction and involvement between juveniles and the community,
3. working with offenders and targeted community support systems (families, peers, schools, and employers) on those qualities needed for constructive interactions that advance the juveniles' reintegration into the community,
4. developing new resources and support services as needed, and
5. monitoring and testing the capacity of juvenile offenders to receive—and the community to provide—services and support.

The IAP program model is based on the following five elements of overarching case management (Altschuler et al., 1999, p. 10):

1. risk assessment and classification for establishing eligibility;
2. individual case planning that incorporates a family and community perspective;
3. a mix of intensive surveillance and enhanced service delivery;
4. a balance of incentives and graduated consequences coupled with the imposition of realistic, enforceable conditions; and
5. service brokerage with community resources and linkage with social networks.

The IAP model assumes that the frequency and intensity of case manager involvement with youth varies over the course of a youth's commitment. Consistent with this principle, a case manager would visit a youth more frequently and perhaps for longer periods of time at the beginning of the institutional and aftercare phases (or during any other significant placement change). Once the youth has become acclimated to his or her new placement, the frequency and duration of case manager contacts decrease.

This study examines the extent to which overarching case management, as well as enhanced treatment services, contributes to favorable relationships between youth and their case managers. Intensive case supervision and enhanced treatment services might facilitate the reintegration experiences of juvenile parolees. More specifically, this research will consider how partici-

pation in the IAP might help build stronger relationships between youth and their service providers and better prepare them for community reintegration.

This research is significant because there is some evidence that improved relationships between case managers and youth may have a positive impact on behavioral change and reoffending outcomes. Reducing caseload sizes would likely increase the frequency of contacts between case managers and youth. Increased contact between youth and their case managers may have a positive impact on the quality of relationships youth build with their providers (Cardenas, 1998). In the short term, case managers are better able to respond to sudden crises when they are managing fewer cases. In the long term, stronger relationships between case managers and youth formed in the context of reduced caseload sizes may have a positive impact on the behavior and success of aftercare clients. Other related research, such as studies of student-teacher relationships, has shown that caring relationships among students, teachers, and other adults in school is positively related to school achievement, behavior, and social competence, among other areas (Elias, 1997). There do exist fundamental differences between classroom and juvenile justice treatment settings. Nevertheless, the unequal distribution of power based on age and authority are important common features of both settings and may contribute to similar outcomes.

Research examining the impact of relationships on behavioral outcomes specific to juvenile justice populations is inconclusive. Findings from an implementation evaluation of the Philadelphia Intensive Aftercare Probation showed, "The additional attention provided by the IAP officer during placement did aid the youths in the development of postplacement plans" (Goodstein & Sontheimer, 1997, p. 352). Youth receiving the IAP services were more likely than youth on regular probation to have articulated specific postrelease plans for school and work. Yet, other research to date is less promising. Although reduced caseload sizes have been associated with improved relationships between case managers and youth, no association has been found between improved relationships and positive behavioral change (Deschenes et al., 1996; Greenwood et al., 1993).

ENTER COLORADO

The IAP Demonstration was funded by the Office of Juvenile Justice and Delinquency Prevention and was evaluated by the National Council on Crime and Delinquency in four pilot sites across the country. The Colorado Division of Youth Corrections submitted an application to the Office of Juvenile Justice and Delinquency Prevention in September 1994 to participate in the national demonstration and evaluation of the IAP model. The IAP model

appeared to provide a logical fit between the needs of Colorado juvenile justice officials and a theoretically driven, national intensive aftercare effort. In 1993, Colorado juvenile justice officials were facing numerous problems in the management and treatment of juvenile offenders. A new class of delinquent offenses¹ was approved during a summer special legislative session. Coupled with a growing population of repeat offenders, serious overcrowding in residential facilities became an emergent concern for juvenile justice planners. Finally, there was no systematic provision of transition services to juveniles reentering the community following secure confinement (Cardenas, 1998). Colorado joined New Jersey,² Nevada, and Virginia as one of the four original demonstration and evaluation sites for the national study. Training of program participants and hiring IAP case managers began in 1995. Armstrong and Altschuler provided technical assistance in the form of IAP training, program development, and resolution of other site-specific issues.

Youth were screened for program eligibility based on four factors. First, only males committed to the Department of Human Services from the Denver metropolitan area³ were screened during the assessment phase. Second, youth must have received long enough sentences to ensure adequate time spent in both the institution and community aftercare prior to discharge. Youth with commitment sentences shorter than 1 year were not considered for participation. Third, eligible youth must have been placed at Lookout Mountain Youth Services Center (LMYSC) in Golden, Colorado. Finally, an IAP Risk Assessment⁴ instrument was developed by the Division of Youth Corrections to identify and include youth at the greatest risk of reoffending. Incidentally, each of the pilot sites developed its own risk assessment instrument specific to its population.

The national evaluation employed an experimental design in which eligible youth were randomly assigned to either treatment (IAP group) or control conditions. Colorado youth assigned to the IAP experimental group were placed in a specific "cottage" at LMYSC; youth assigned to the comparison group were not housed in the same cottage as youth in the experimental group. The evaluation design included pretesting and posttesting of participants on a variety of behavioral and family functioning measures as well as ongoing collection of service delivery and program progress information.

The institutional phase of the IAP was piloted at LMYSC. IAP youth were eligible to receive the following enhanced services, in addition to the standard level and variety of services provided:

- a multifamily counseling group;
- periodic specialized groups run by the case managers;

- experiential learning opportunities that among other activities included rafting trips, a “ropes course,” and horseback riding;
- additional individual counseling provided by university graduate interns and community providers;
- a vocational skills workshop; and
- increased contact with their case manager.

Another important feature of the IAP model was smaller case manager caseloads. IAP case managers were limited to a caseload of 18 youth. No more than 12 of those youth could be in the community at any one time. In contrast, the average caseload size for non-IAP case managers in the Denver metropolitan area during the demonstration and evaluation period (1995 through 1999) was approximately 35 youth. The mandate of smaller caseloads for IAP case managers facilitated implementation of overarching case management.

METHOD

Shortly after the inception of the general evaluation for the Colorado IAP, the Colorado IAP Management Team⁵ requested additional information pertaining to the uniqueness of the IAP experience. The management team felt strongly that relationship and skill building were likely to be critical outcomes of the IAP experience. The data presented in this article address these issues and inform the following hypotheses:

Hypothesis 1: IAP youth will report stronger relationships with their case manager compared with youth in the comparison group.

However, differences in relationships with other service providers will not vary between treatment and comparison groups because quality and quantity of contacts with other providers will not be markedly different.

Hypothesis 2: Case managers will identify more positive attributes in IAP youth compared with youth in the comparison group.

IAP case management model provides IAP case managers with more opportunities to get to know the IAP youth. Moreover, the IAP model also provides IAP youth with greater opportunities to build strengths that can be identified by case managers.

Hypothesis 3: IAP youth will report stronger relationships with their case manager compared with their relationships with other service providers.

Although the IAP case management model encourages more intensive involvement by case managers, contacts between youth and other service providers should not vary significantly between treatment and comparison groups.

Hypothesis 4: IAP case managers will identify more positive attributes in IAP youth over time.

Hypothesis 5: IAP youth will report stronger relationships with their case manager over time.

Because youth have more frequent contacts with their case managers and because contacts are qualitatively different from the standard case management experience, youth will develop more favorable impressions of their relationship with their case manager.

Hypothesis 6: IAP youth will report greater confidence in skills that they possess than youth in the comparison group.

The IAP model provides greater opportunity and resources for youth to develop a range of skills to facilitate successful community reintegration. The extent to which these opportunities and resources place IAP youth at an advantage compared to youth in the comparison group will be addressed.

Hypothesis 7: IAP youth will report fewer concerns than youth in the comparison group.

The IAP model provides the resources necessary to address concerns youth might have during different phases of the transition and aftercare experience.

SETTING

The IAP was piloted at LMYSC in Golden, Colorado. LMYSC is considered a secure placement for youth committed to the Colorado Department of Human Services. Secure facilities are locked within perimeter fencing and have staff on duty 24 hours per day. Both the IAP experimental and comparison groups were placed at LMYSC. To maintain the integrity of the control group design, however, IAP and comparison youth were placed in separate

TABLE 1: Comparison of Intensive Aftercare Project (IAP) Subsample to Total Sample Size

<i>Treatment Condition</i>	<i>IAP Subsample</i>		<i>Total IAP Sample</i>	
	n	%	n	%
Experimental	49	50.5	82	54.7
Comparison	48	49.5	68	45.3
Total	97	100.0	150	100.0

housing units. Consequently, the comparison group received the standard repertoire of services available to most youth placed at LMYSC.

SAMPLE

The sample for this study was selected based on the random sampling technique of the broader evaluation. Randomization of youth for the IAP evaluation began in August 1995 and ended in November 1998. For the purposes of this study, however, data were collected on a subsample of youth beginning in June 1998 and ending in November 1998. More than half of the IAP sample was included in this subsample (see Table 1).

The IAP and comparison groups were similar on most background characteristics (see Table 2). There were significant differences observed, however, between groups on the need for special education services and gang membership. A greater proportion of youth in the IAP group were identified as in need of special education classes, while a greater proportion of youth in the comparison group reported that they were active gang members when they were committed.

Although the youth participating in this study were ethnically diverse, minority youth were overrepresented in the sample compared to the general juvenile population in Colorado.⁶ Overall, Hispanic or Latino youth represented the largest single ethnic group (36%) followed by African American youth (30%) and Anglo-American youth (29%). The average age of youth was approximately 16 years at time of commitment, and 78% were age 16 or older.

Most of the youth were not making age-appropriate progress in school: Eighth grade was the highest grade completed for a sample with an average age of 16 years. About $\frac{1}{3}$ of the youth were not attending school at the time of commitment. About 20% were being placed into institutional special education classes. However, 81% of the youth appeared to have some employment history.

TABLE 2: Characteristics of Experimental and Comparison Groups at Baseline

	<i>Assignment</i>					
	<i>Experimental (N = 49)</i>		<i>Comparison (N = 48)</i>		<i>Total (N = 97)</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Demographics						
Primary ethnicity						
African American	13	26	16	33	29	30
Anglo-American	18	37	10	21	28	29
Hispanic/Latino	15	31	20	42	35	36
Other	3	6	2	4	5	5
Average IAP risk score	59.7		57.2		58.4	
Age at placement						
Age ≥ 16	41	84	35	73	76	78
Average age (years)	16.3		16.4		16.4	
Education and work experience						
Highest grade completed	8.8		8.4		8.6	
Not attending school	13	27	15	31	28	29
Special education program*	13	27	5	10	18	19
Work experience	36	73	43	90	79	81
Family problems						
Major substance problem	20	41	21	44	41	42
Major mental health problem	7	14	9	19	16	16
Family member incarcerated	36	73	43	90	79	81
Youth problems						
Major substance problem	21	43	29	60	50	52
Major mental health problem	13	27	8	17	21	22
Victim of child abuse or neglect	13	27	17	35	30	31
Sold drugs in past 12 months	26	53	23	48	49	51
On psychotropic medication	11	22	9	19	20	21
2 or more out-of-home placements	32	65	32	67	64	66
Peers						
Peer relationships						
Loner	7	14	6	13	13	13
Most friends nondelinquent	3	6	1	2	4	4
Mixture of friends	21	43	23	48	44	45
Most friends delinquent	15	31	17	35	32	33
Gang membership†	11	22	20	42	31	32
Juvenile justice history						
Type of adjudicated offense						
Violent or person felony	10	20	8	17	18	19
Felony sex offense	3	6	3	6	6	6
Drug or alcohol felony	6	12	2	4	8	8
Weapons felony	1	2	0	0	1	1
Property felony	16	33	20	42	36	37

(continued)

TABLE 2: Continued

	<i>Assignment</i>					
	<i>Experimental</i>		<i>Control</i>		<i>Total</i>	
	<i>(N = 49)</i>		<i>(N = 48)</i>		<i>(N = 97)</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Other felony	3	6	3	6	6	6
Person misdemeanor	7	14	6	13	13	13
Drug or alcohol misdemeanor	1	2	0	0	1	1
Weapons misdemeanor	1	2	0	0	1	1
Property misdemeanor	0	0	2	4	2	2
Other misdemeanor	0	0	1	2	1	1
Probation or parole violation	1	2	2	4	3	3
Average age at first adjudication (years)	13.3		13.4		13.4	
Age at first adjudication ≤ 13	26	53	24	50	50	52
2 or more prior adjudications	34	69	28	58	62	64
1 or more prior felonies	29	59	27	56	56	58
1 or more prior sentences	16	33	18	38	34	35
Possessed firearm	10	20	13	27	23	24

* $p < .05$, using Fisher's Exact Test (one-tailed). † $p < .05$, using Fisher's Exact Test (two-tailed).

A large percentage of the youth reported significant family problems: 80% of the youth had a family member who had been incarcerated, and 40% of the youth had a family member with a major substance abuse problem during the past 5 years. Likewise, the youth themselves were committed with extensive histories of involvement with the child welfare and mental health systems in Colorado. A majority of the youth had been placed out of home at least twice prior to being committed; 8 youth had been placed out of home 10 or more times. Half of the youth reported significant substance abuse problems, and a similar proportion reported involvement in drug dealing during the year prior to their commitment. About $\frac{1}{4}$ were diagnosed with major mental health problems within 5 years of their commitment. A similar proportion was on psychotropic medication at the time of their commitment. Finally, 30% of the youth had reported some history of abuse (physical, sexual, or emotional) or neglect during their childhood.

A sizable proportion of youth were committed for offenses against persons, including about 25% for felony-level assaultive offenses. In addition, 64% of youth had at least two prior adjudications, with a similar proportion of felony adjudications. Thirty-five percent of these youth had also been

incarcerated under prior sentences. Approximately $\frac{1}{3}$ of the youth reported gang involvement. One fourth of the youth reported possession of a firearm at the time they were committed. Although only 30% reported that they considered themselves to be members of a gang at the time of commitment, almost 80% acknowledged that some (45%), if not all (33%), of their peers were delinquent. Clearly, these youth represented an extremely problematic sub-population of offenders.

DATA

Youth were asked to complete a Youth Assets and Relationships Survey (YARS) and a Youth Personal Strengths and Positive Attributes Survey (YPSPAS) at four key points during their commitment experience. The instruments were first administered within 30 days of a participating youth's placement at LMYSC.⁷ They then were readministered within 2 weeks of their release from LMYSC to a community transitional placement.⁸ Youth were asked to complete the same instrument again within 2 weeks of entering parole status. The instrument was administered for the last time within 2 weeks of a youth's termination from the research study.⁹

As can be seen in Table 3, there are far more data at baseline and program discharge on both instruments than at time of release (from LMYSC) and at entry to parole. Given that data were collected toward the end of randomization for the IAP evaluation, data are limited at all four measurement phases. One reason for the small sample size within cells is that a decision was made to begin collecting data on all youth actively participating in the evaluation study, regardless of when they were randomized into the project. Of course, it was not possible to collect baseline data on youth who were already in the study.

In addition, the four measurement phases were not always consistent with the commitment experience of all youth. Some youth never left LMYSC before their sentences expired. Those youth "walked" from LMYSC with absolutely no transition experience.¹⁰ Other youth were terminated from the research study before they left LMYSC or before their sentences had expired. There were also youth who entered parole directly from LMYSC and did not spend any time in a community transitional placement. The analyses that follow therefore are limited by the small sample sizes; yet, multiple techniques are employed to identify common trends in the data that suggest treatment effects. Moreover, this study assumes that attrition occurred randomly between groups.

TABLE 3: Case Totals by Treatment Group, Instrument, and Time of Administration

Time of Administration	Youth Assets and Relationships Survey			Youth's Personal Strengths and Positive Attributes Survey		
	Experimental	Control	Total	Experimental	Control	Total
T ₁ (baseline)	12	15	27	49	46	95
T ₂ (time of release)	13	13	26	13	13	26
T ₃ (entry to parole)	11	16	27	11	17	28
T ₄ (program termination)	38	28	66	39	29	68

Youth Assets and Relationships Survey

The YARS consisted of three distinct sections. In the first section, youth were asked to score 15 items pertaining to different dimensions of relationships with service providers with whom they had worked during their commitment. These providers were broken into five distinct categories, with the youth selecting one person from each group at each phase of survey administration.

The 15 relationship items were the same for each of the five providers about whom the youth was being asked. Youth were asked to rate the extent to which the particular item applied to each of their relationships. The second section was composed of 15 skills. Each youth was asked to score the extent to which they felt the skill applied to them. In the last section of the YARS, youth were presented with five "concerns" and were asked to rate their degree of agreement with each item. Each of the three sections of the YARS was scored using a simple 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Case Manager

The first service provider category about which youth were asked included the youth's case manager or parole officer. Normally, the case manager and parole officer were the same person¹¹; their roles simply changed when the youth entered parole. There have been three IAP case managers. For clarity, this provider will be referred to as the *case manager*.

Focused Provider

The second category was composed of individuals who generally worked with youth on a regular basis in a residential setting. This category included the youth's group leader, tracker or mentor, or proctor parent. The group leader was essentially the youth's case manager within the institution; he or she monitored the youth's institutional progress on a daily basis and, among other duties, ran treatment groups in which the youth was involved (e.g., "Guided Feedback Sessions": an integral part of the normative culture¹² behavior modification strategy employed at LMYSC). The tracker or mentor, although not working in residential settings necessarily, maintained regular contact with youth according to the goals and terms of the youth's "Discrete Case Plan."¹³ In addition to monitoring a youth's whereabouts while on parole or in a community placement, this person also served as an adult role model who would accompany a youth in various activities.¹⁴ Finally, the proctor parent provided family-like living arrangements for a youth until family reunification or emancipation might have occurred.¹⁵ For purposes of simplicity, this category, which includes the above roles, will be referred to as the *focused provider*.

Individual Counselor

The individual counselor was the third provider about whom youth were surveyed. This person was also referred to as the *1-to-1 counselor* and provided face-to-face counseling sessions with youth only while they were in the institution.

Teacher

The fourth provider was the youth's teacher. In responding to the survey items, youth were asked to "think about the teacher with whom you have the best relationship." Sometimes, youth left this section blank when they felt that they did not have a good relationship with any teachers and/or they were not in school during the time period about which they were being asked.

Community Resource

The final provider category consisted of a person in the community who could be viewed as a source of support for youth. The youth were asked to "think about an adult in your community (nonfamily member) with whom you have a strong relationship" in responding to the survey items. Youth were also asked to identify what this person did in the community. Youth identified

a variety of persons in the community providing support (see Table 4). Most of the youth responding to items concerning their relationship with a person in the community provided the identity of that person. Of the 104 surveys in which this section of the questionnaire was completed, 83 (80%) identified a person providing support from the youth's community.

Many of the persons identified were either friends ($n = 23$), family members ($n = 10$), or girlfriends ($n = 5$). These results occurred despite instructions to identify adult nonfamily members in the youth's community. In fact, friends, family members, outreach workers (this includes the youth's case manager and community providers, among others), parents of friends ($n = 9$), and girlfriends accounted for well more than half (76%) of the community support persons identified. These results are noteworthy for several reasons. First, they suggest that the strongest sources of support for these youth were those with whom they had the closest relationship by virtue of age, family ties, history, or frequency of contact. These persons demonstrated a commitment to these youth despite the youth's behavior and involvement with the juvenile justice system. That the youth identified these persons as sources of support despite being instructed to exclude them demonstrates the important role these persons played in the lives of these committed youth. Alternatively, it also indicates that some youth simply did not read the instructions. Yet, in the struggle to identify long-term sources of support in the community, those persons closest to committed youth are sometimes overlooked. As noted in an implementation assessment of the Colorado IAP project, there was not much success cultivating "indigenous community support systems (nonagency people or organizations)," in part due to the large number of adults already actively participating in the lives of youth IAP (Wiebush, McNulty, & Le, 1998, p. 67). These data would suggest that the sources of support that these youth found to be most significant in their lives might be rather different than what was proposed by the IAP model.

Youth Personal Strengths/Positive Attributes

The YPSPAS was developed as a youth assets inventory by the National Council on Crime and Delinquency as a component of the "IAP Social History Background Information" form. The 22 items on the National Council on Crime and Delinquency form were originally intended to be completed at baseline only. This study was interested in change over time on any of the YPSPAS items and therefore readministered the survey during up to three follow-up meetings with participating youth.

Unlike the YARS, which relied on youth perceptions of relationships, skills, and concerns, the YPSPAS was completed by the youth's case man-

TABLE 4: Adult Community Support Persons Identified by Youth

<i>Person Identified</i>	<i>Experimental Group</i>					<i>Comparison Group</i>					<i>All</i>
	<i>T₁</i>	<i>T₂</i>	<i>T₃</i>	<i>T₄</i>	<i>Total</i>	<i>T₁</i>	<i>T₂</i>	<i>T₃</i>	<i>T₄</i>	<i>Total</i>	
Friend	2	2	1	5	10	4	3	3	3	13	23
Outreach worker	0	3	2	3	8	1	2	1	4	8	16
Family member	1	0	1	2	4	3	1	1	1	6	10
Parent of friend	0	1	1	1	3	1	0	2	3	6	9
Teacher or coach	0	0	0	4	4	0	0	0	2	2	6
Girlfriend	1	0	1	3	5	0	0	0	0	0	5
Family friend	0	0	0	1	1	0	1	1	1	3	4
Business person	0	0	0	0	0	0	0	0	3	3	3
Minister	0	0	0	1	1	1	1	0	0	2	3
Coworker or employer	0	0	0	1	1	0	0	1	0	1	2
Other	0	0	0	0	0	1	1	0	0	2	2
Total	4	6	6	21	37	11	9	9	17	46	83

TABLE 5: Initial and Follow-Up Reliability Coefficients

Scale	<i>Initial Reliability Analysis</i>			<i>Follow-Up Reliability Analysis</i>		
	α	F	p	α	F	p
Relationship with . . .						
Case manager	.9765	11.343	.0000	.9006	13.893	.0000
Focused provider	.9744	6.888	.0000	.9208	9.312	.0000
Individual counselor	.9776	6.579	.0000	.9323	7.461	.0000
Teacher	.9756	10.351	.0000	.9255	13.562	.0000
Community resource	.9655	3.675	.0000	.9510	4.015	.0000

ager. All of the items on the YPSPAS were statements describing a particular strength or positive attribute that a youth might possess. Case managers were simply asked to check off those items that applied to their client, based on their familiarity with their client at different points in time.

Reliability Analysis

Reliability analyses of the scales contained in the YARS and YPSPAS were conducted to determine the proportion of the variability in the youth and case manager responses that was a result of differences in the respondent and not an artifact of the survey itself. The analyses were executed separately on the individual scales pertaining to the youth's relationship with his case manager, focused provider, individual counselor, teacher, and adult in the community. The initial alpha coefficients were in excess of .97. Scales with correlation coefficients greater than or equal to .85 were removed, and testing was repeated. Subsequent reliability analyses produced lower alpha coefficients (see Table 5).

The reliability coefficients obtained during the initial analyses suggest that individual items contained in each measurement scale were too highly correlated with one another. It was clear that many of the youth followed a response set in completing the survey: they simply circled the same scale value in a column in lieu of reading each measurement value available.¹⁶ Individual items pertaining to youth perceptions of skills and concerns were not overly correlated with one another and were therefore left intact. The alpha coefficients for youth skills and youth concerns were .8555 and .7903, respectively. Likewise, the individual items from the YPSPAS were not highly correlated with one another, and the items were left intact, with an alpha coefficient of .8264.

Based on the findings of the reliability analyses, subscales were created using individual relationship items that did not seem to detract from the over-

all goodness-of-fit of the scale. Items that remained after the initial reliability analyses therefore were included in construction of the subscales described below.

Subscale Construction¹⁷

Factor analyses were conducted to locate any statistically common groupings of items pertaining to youth relationships. For each of the five types of relationships, one grouping of items accounted for approximately 70% of the variance in all of the items. Moreover, no discernible factors were located on subsequent analyses of the “skills” and “concerns” items from the YARS. All of the YPSPAS items loaded on one factor as well.

Although no statistically common item groupings were identified using factor analysis, there were groupings of items that fell together intuitively. These groupings also provided additional insight into the observed differences between groups on several composite scores discussed in the section that follows. Relationships subscale items therefore were created that included items that logically fall together and provide added insight into key dimensions of the relationships between youth and providers (see Table 6).

The five Relationships subscale items are considered key dimensions of the case manager role. Although trust, communication, and overall compatibility might be viewed as essential elements of any relationship, the dimensions advocacy and responsivity have been identified as critical to the Client Management System in Colorado (Cardenas, 1998).

A subscale was also created for the “skills” items reported by youth on the YARS. The original 15 items were collapsed into five subscales (see Table 7). These subscales define specific areas of the youth’s social and personal identity in which they felt that they had a particular skill. The Skills subscale items address key areas in which youth might have possessed resources to facilitate successful transition. These subscales also represent protective factors that might diminish the likelihood of future reoffending.

No subscales were created from the “concerns” section because this section contains only five items: “I am afraid of my impulses,” “I am afraid that I will reoffend,” “I am afraid that I won’t be able to control by drug and/or alcohol use,” “Too much is expected of me,” and “I am under a lot of pressure.”

Index Construction

Two indices were created for the 24 items on the YPSPAS. Again, factor analyses did not reveal any distinct variable groupings. Instead, two logically

TABLE 6: Subscale Composition of Relationships Survey Items

<i>Subscale</i>	<i>Case Manager</i>	<i>Focused Provider</i>	<i>Individual Counselor</i>	<i>Teacher</i>	<i>Community Support</i>
Trust	I am pretty honest with my case manager.	I am pretty honest with my group leader.	I am pretty honest with my individual counselor.	I am pretty honest with my teacher. I believe what my teacher tells me.	I am pretty honest with this person. I believe what this person tells me. I trust what this person has to say. This person is pretty honest with me.
Communication	I tell my case manager when something is bothering me.	I tell my group leader when something is bothering me.	I tell my individual counselor when something is bothering me.	I tell my teacher when something is bothering me.	I tell this person when something is bothering me. This person listens to what I have to say.
Advocacy	My case manager is concerned about me. My case manager is responsive to my needs.	My group leader is concerned about me.	My individual counselor is concerned about me. My individual counselor is responsive to my needs.	My teacher is concerned about me.	This person is responsive to my needs. This person is looking out for my best interests.
Responsivity	My case manager is available. My case manager is able to answer my questions.	My group leader is available. My group leader is able to answer my questions.	My individual counselor is available.	My teacher is available.	This person is available.
Compatibility	(No item remained after reliability analyses.)	I like my group leader. My group leader understands me.	I like my individual counselor. My individual counselor understands me.	I like my teacher. My teacher understands me.	I like this person. This person understands me. This person cares about me.

related groupings of indices emerged. The first grouping consisted of four indices. These "bonding" indices were created intuitively as some items seemed to logically fall together more than others. At first glance, the items all seemed to pertain to assets (or positive attributes) that youth might possess. Yet, they also seemed to apply to distinct dimensions of social bonding and might be better understood grouped as constructs of Hirschi's (1969) conceptualization of control theory. These indices were too general to address the specific dimensions of bonding (attachment, commitment, involvement, and belief) articulated in Hirschi's control theory. Nevertheless, they were useful as broad measures of bonding to conforming social groups: family, community, peers, and school and work (see Table 8).

The second group consisted of skills the case manager believed the youth might have in the areas of academics, social interaction, and ability to control antisocial behavior (see Table 9).

In addition to developing subscale scores and indices, composite scores were created, representing the average score on items that remained following the reliability analyses. Mean scores for the "relationships," "skills," and "concerns" items can be interpreted as average scores out of a maximum of 5 on each individual item. Scores on the "assets" indices were calculated by adding the individual item scores (dichotomous variables with values of 0 or 1). The maximum scores on the "assets" indices, therefore, varied according to the total number of items that were included in each individual index. For example, the "family bonds" index consisted of one item, so the score ranged from 0 to 1. In contrast, "school/work bonds" consisted of three items, so the index score varied from 0 to 3.

An important feature of the IAP model was the small caseload sizes for case managers. Presumably, smaller caseloads would provide IAP case managers the opportunity to meet with their clients more frequently than case managers with standard caseload sizes. These and other data¹⁸ generally confirmed this element of the model. At program termination, youth in the experimental group reported that they had seen their case manager an average of 3.7 times during the previous month, compared with 2.2 times for youth in the comparison group ($SS = 31.383$, $df = 1$, $MS = 31.383$, $F = 3.886$, $p = .053$). Differences between groups were not significant at other administration times.¹⁹ The next section examines how involvement in the IAP affected perceptions of relationships, skills, concerns, and assets throughout the commitment experience.

TABLE 7: Subscale Composition of Skills Survey Items

<i>Well-Being</i>	<i>Learning</i>	<i>Social</i>	<i>Civility</i>	<i>Internal Control</i>
I feel safe from harm. I have the opportunity to be alone.	I ask questions. I learn from my experiences. I have the opportunity to learn what I want to learn.	I make friends easily. I excel in sports. I talk with other people about my feelings.	I help other people. I accept other people's faults. I accept people who are different from me.	I say "no" to others. I control my anger. I accept "no" for an answer. I ask permission before I act.

TABLE 8: Bonding Indices From YPSPAS Survey Items

<i>Family Bond</i>	<i>Community Bond</i>	<i>Peer Bond</i>	<i>School/Work Bond</i>
Close relationship with positive, prosocial parent or caregiver	Close relationship with other positive prosocial adult in the community Regularly involved in organized activities in the community	Close relationship with nondelinquent	Strong attachment to school or work Strong interest in learning Strong vocational interests or plans

NOTE: YPSPAS = Youth's Personal Strengths and Positive Attributes Survey.

TABLE 9: Skills Indices From Assets YPSPAS Survey Items

<i>Academic Skill</i>	<i>Social Skill</i>	<i>Internal Control</i>
Good problem-solving skills Good reading and/or math skills Intelligent Goal oriented Artistic talents	Good social and communication skills Good-natured, enjoys social interaction, gets positive attention from others Assertive Positive self-image Often a positive influence on peers	Able to ask for support Usually responsible Beliefs/values are generally prosocial Rejects use of weapons Rejects use of drugs

NOTE: YPSPAS = Youth's Personal Strengths and Positive Attributes Survey.

RESULTS

As expected, participation in the IAP was associated with youth's reporting more favorable relationships with their case managers than youth who did not receive IAP services. Relationships between IAP youth and their case managers were characterized by better communication than what was reported by youth in the comparison group. Moreover, IAP youth described their case managers as being more responsive to their needs and playing a stronger advocacy role. However, IAP youth viewed their relationship with their case manager less favorably over time.²⁰ Nevertheless, IAP youth still reported more favorable relationships with their case manager than with their focused provider (at baseline and entry to parole), individual counselor (at baseline only), and teacher (at program discharge only). Only relationships with resource persons in the community were viewed more favorably than case manager relationships (at program discharge only). In contrast, youth in the comparison group consistently felt that their relationship with a resource in the community was more favorable than their relationship with their case manager (at baseline, entry to parole, and program discharge). Finally, the quantity and types of assets case managers identified in the experimental group were very different than what was identified by case managers working with the comparison group. Although both groups of case managers identified more assets in their clients over time, IAP case managers identified more assets in their clients compared with case managers working with the comparison group.

**TABLE 10 Main Effects of Treatment Condition on Provider Relationships:
ANOVA Table**

<i>Source (between groups)</i>	SS	df	MS	F	<i>Eta-squared</i>
Case manager					
Composite score: T ₁	10.649	1	10.649	9.892**	.284
Composite score: T ₄	6.172	1	6.172	5.448*	.078
Communication: T ₁	10.980	1	10.980	7.628*	.234
Communication: T ₄	8.355	1	8.355	4.832*	.070
Advocacy: T ₁	14.834	1	14.834	11.913**	.323
Advocacy: T ₄	8.247	1	8.247	5.413*	.078
Responsivity: T ₁	10.837	1	10.837	9.291**	.271
Focused provider					
Composite score: T ₁	1.606	1	1.606	1.315	.052
Composite score: T ₄	5.715	1	5.715	5.883*	.092
Communication: T ₄	13.558	1	13.558	7.607*	.116
Friendship: T ₄	9.612	1	9.612	6.965*	.107
Individual counselor					
Composite score: T ₁	0.449	1	0.449	0.593	.023
Composite score: T ₄	0.018	1	0.018	0.016	.000
Teacher					
Composite score: T ₁	0.020	1	0.020	0.013	.001
Composite score: T ₄	1.653	1	1.653	1.446	.027
Advocacy: T ₃	6.696	1	6.696	5.471*	.199
Community resource					
Composite score: T ₁	0.008	1	0.008	0.175	.012
Composite score: T ₄	0.016	1	0.016	0.076	.002

* $p < .05$. ** $p < .005$.

YOUTH PERCEPTIONS OF PROVIDER RELATIONSHIPS

Between Group Differences

Subscale composite scores for each of the provider relationship categories were compared between experimental groups. ANOVA testing was conducted to determine if the differences between groups on subscale scores were significant at different points in time (see Table 10).

As expected, IAP youth generally reported more favorable relationships with their case manager compared with youth in the comparison group. At baseline and program discharge, IAP youth reported that there was better communication with their case manager and that their case manager was playing a stronger advocacy role (see Table 11). In addition, IAP youth reported that their case manager was more responsive to their needs at baseline compared with what was reported by the comparison group. IAP youth reported the same degree of trust in their case manager relationships as reported by the comparison group.

Youth in the experimental group reported more favorable relationships with their focused providers at program discharge compared with what was reported by the comparison group. Specifically, IAP youth were more likely to characterize their focused provider relationships in terms of better communication and being more compatible with their needs.

The eta-squared coefficient provides a good measure of the impact of IAP participation on youth perceptions of their relationships with their case managers.²¹ As can be seen by the large eta-squared at baseline, group membership—at least statistically—accounted for a large proportion of the variance in scores between experimental groups (see Table 10). Overall, 28% of the variation in case manager scores at baseline can be accounted for by group membership. At baseline, group membership accounted for 32% of the difference between groups on the Advocacy Case Manager subscale. Twenty-seven percent of the difference between groups on the Responsivity Case Manager subscale item can be explained by group membership at baseline.

At program discharge, however, the strength of the relationship decreases dramatically for all significant subscale items to less than 10%. Because the eta-squared coefficient is not influenced by sample size, it is possible that group membership has a diminished influence on group differences at program discharge than it did at baseline.

Within-Group Differences

Paired samples testing was used to determine whether IAP youth reported more favorable relationships with their case manager at each of the four test administration points compared to their other provider relationships. Where significant differences were present between case manager scores and other provider scores, they generally favored the case manager (see Table 12). That is to say that at baseline, IAP youth reported more favorable relationships with their case manager compared with their focused provider and individual counselor relationships. At entry to parole, IAP case manager relationships were viewed more favorably than focused provider relationships. However, small cell sizes compromise the power of the observed differences between case manager and focused provider relationship scores. Program discharge composite scores for case managers were significantly lower than those for community resources. This is not necessarily surprising given the previous discussion describing who youth identified as sources of support in their communities. In fact, it is encouraging that youth gave more favorable impressions of their relationship with someone in the community at program discharge because they would no longer have the support of their case man-

TABLE 11: Main Effects of Treatment Condition on Provider Relationships: Descriptive Statistics^a

Provider	Subscale Item	Treatment Condition					
		Experimental			Comparison		
		T ₁	T ₃	T ₄	T ₁	T ₃	T ₄
Case manager	Composite score						
	<i>M</i>	4.7639**		4.2009*	3.5000		3.5821
	<i>n</i>	12		38	15		28
	<i>SD</i>	.2794		.9944	1.3642		1.1534
	Communication						
	<i>M</i>	4.7500*		4.1842*	3.4667		3.4643
	<i>n</i>	12		38	15		28
	<i>SD</i>	.4523		1.1591	1.5523		1.5026
	Advocacy						
<i>M</i>	4.7917**		4.1974*	3.3000		3.4821	
<i>n</i>	12		38	15		28	
<i>SD</i>	.3965		1.1183	1.4491		1.3776	
Responsiveness							
<i>M</i>	4.7083**			3.4333			
<i>n</i>	12			15			
<i>SD</i>	.3343			1.4125			
Focused provider	Composite score						
	<i>M</i>	4.0496		3.9580*	3.5510		3.3352
	<i>n</i>	12		34	14		26
	<i>SD</i>	.6196		.9381	1.3894		1.0451
	Communication						
	<i>M</i>			3.8824*			2.9231
<i>n</i>			34			26	
<i>SD</i>			1.2251			1.4676	

	Compatibility					
	<i>M</i>		4.0000*			3.1923
	<i>n</i>		34			26
	<i>SD</i>		1.1481			1.2089
Individual counselor	Composite score					
	<i>M</i>	4.4008	3.8745	4.1413		3.9116
	<i>n</i>	12	33	15		21
	<i>SD</i>	.5029	1.0337	1.0736		1.0771
Teacher	Composite score					
	<i>M</i>	3.7143	3.6959	3.7802		4.0497
	<i>n</i>	7	31	13		23
	<i>SD</i>	1.4238	1.1703	1.1060		.9133
	Advocacy					
	<i>M</i>		3.0000*		4.0714	
	<i>n</i>		10		14	
	<i>SD</i>		1.3333		.9169	
Community resource	Composite score					
	<i>M</i>	4.9500	4.7398	4.9015		4.7045
	<i>n</i>	5	29	11		22
	<i>SD</i>	.07450	.4143	.2495		.5018

a. T₁ refers to baseline testing. T₂ refers to testing at time of release from Lookout Mountain Youth Services Center. T₃ refers to testing done at the time a youth enters parole. Finally, T₄ refers to testing done at the time a youth is discharged from the study.
 p* < .05. *p* < .005.

TABLE 12: Paired Samples Test of Differences Between Provider Relationship Scores: Experimental Group

<i>Administration Point</i>	<i>Provider</i>	<i>M</i>	<i>n</i>	<i>t</i>	<i>p (two-tailed)</i>
Baseline	Case manager	4.7639	12	3.645	.004
	Focused provider	4.0496	12		
Entry to parole	Case manager	4.7639	12	2.394	.036
	Individual counselor	4.4008	12		
	Case manager	4.0833	8		
Program discharge	Focused provider	3.0714	8	2.703	.031
	Case manager	4.1763	31		
Program discharge	Teacher	3.6959	31	2.158	.039
	Case manager	4.3034	29		
	Community resource	4.7398	29		

TABLE 13: Paired Samples Test of Differences Between Provider Relationship Scores: Comparison Group

<i>Administration Point</i>	<i>Provider</i>	<i>M</i>	<i>n</i>	<i>t</i>	<i>p (two-tailed)</i>
Baseline	Case manager	3.6212	11	-3.410	.007
	Community resource	4.9015	11		
Entry to parole	Case manager	3.8500	10	-3.407	.008
	Community resource	4.6500	10		
Program discharge	Case manager	3.5242	22	-4.786	.000
	Community resource	4.7045	22		

ager. As noted earlier, this was a fairly underdeveloped dimension of IAP implementation in Colorado.

In contrast, youth in the comparison group viewed their relationship with a resource person in the community more favorably than their case manager relationship. These differences were significant at baseline, entry to parole, and program discharge (see Table 13). Although the sample sizes at baseline and entry to parole diminish the strength of the observed differences, the strong difference observed at program discharge suggests a general pattern favoring resource persons in the community.

As previously mentioned, "baseline" testing occurred within 1 month of youth's arriving at LMYSC. Generally, youth met their case manager for the first time when they were committed. Following commitment, youth were in assessment for 30 days and then were held in a detention center as they awaited institutional placement. For some youth, this translated into a wait of

several months. The average length of time between commitment and placement for youth in the experimental and comparison groups was 3.5 months. Length of stay did not vary significantly by group membership. By the time they were asked to complete the YARS, they already had at least some contact with their case manager. Frequent contacts with their IAP case manager might account for higher scores on the relationship items at baseline compared with the comparison group.

Number of case manager contacts was not related to case manager relationship scores for youth in the experimental group. For youth in the comparison group, however, number of case manager contacts was positively associated with more favorable case manager relationship scores at entry to parole (Pearson correlation = .731, $n = 16$, $p = .001$) and program discharge (Pearson correlation = .478, $n = 27$, $p = .012$). For IAP youth, therefore, the perception of those contacts seemed to be different than what was reported by youth in the comparison group. It should be noted that there were two IAP case managers and that they were equally represented in the baseline and program discharge relationships data.

Whether group membership in and of itself explained the variation in case manager composite scores at baseline and program discharge is not clear. Although this study did maintain an experimental design, youth's knowledge of their involvement in either the experimental or comparison group might have influenced reported scores. Youth in the experimental group might have had inflated expectations of their case manager when they entered the project, and such perceptions might have affected the scores they provided on individual relationship items. As time passed, this Hawthorne effect might have diminished. One way to determine whether knowledge of group membership was affecting reported relationship scores is to examine within-group differences over time.

Within-Group Differences Over Time

Paired samples testing was used to determine if relationship scores changed significantly over time. Due to the small number of cases that can be matched across administration points, only cells with 12 or more cases were considered meaningful to the analyses.

Paired samples testing revealed a somewhat significant decrease in the mean case manager composite score reported by IAP youth between baseline and program discharge. Although this represents a statistically significant drop in the average score ($t = 2.711$, $df = 4$, $p = .053$), there were only five cases available. At baseline, youth in the experimental group reported an average case manager score of 4.8000. By program discharge, the mean

score had dropped to 3.667. There were no significant differences in provider relationship scores over time as reported by youth in the comparison group.

Next, change scores were calculated to represent observed differences between relationship scores at different administration points. ANOVA testing was used to determine whether change scores observed among the IAP youth were significantly different than change scores observed in the comparison group. Again, cell sizes were extremely small, with less than 10 cases in each group providing change scores. The decrease in the mean case manager composite score between baseline and program discharge reported by the experimental group was significantly different than what was reported by the comparison group ($SS = 6.944$, $df = 1$, $MS = 6.944$, $F = 5.519$, $p = .047$). Where IAP youth reported a decrease (mean change = -1.433 , $n = 5$) in the mean case manager composite score, youth in the comparison group reported a slight increase (mean change = 0.2333 , $n = 5$). There was also a significant difference between groups on the mean focused provider change score reported at time of release and program discharge ($SS = 10.583$, $df = 1$, $MS = 10.583$, $F = 7.908$, $p = .020$). Where IAP youth reported an increase (mean change = 1.6667 , $n = 3$) in the mean focused provider composite score, youth in the comparison group reported a decrease (mean change = -0.5397 , $n = 8$). Again, the extremely small cell sizes significantly diminish the power of these findings.

SKILLS AND CONCERNS DATA

Between Group Differences

The Learning Skill subscale at baseline produced the only significant difference between groups of any of the skills and concerns items. IAP youth reported greater confidence in their learning skills at baseline compared with youth in the comparison group. IAP youth reported an average score of 4.6 on the Learning Skill subscale, compared with 4.0 for youth in the comparison group ($SS = 2.226$, $df = 1$, $MS = 2.226$, $F = 4.569$, $p = .043$). Moreover, 16% of the variation in the Learning subscale mean at baseline can be accounted for by group membership ($\eta^2 = .155$). There were no significant effects on the concern items from group membership controlling for time of administration.

It is worth noting that all youth in the study generally reported few concerns throughout the study. Composite scores for all youth ranged from an average of 1.9 at baseline to 2.1 at program discharge. Whether these scores changed significantly over time will be addressed in the next section.

TABLE 14: Main Effects of Treatment Condition on Youth Asset Index Items: ANOVA Table

<i>Source (between groups)</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Eta-squared</i>
Bonds with family: T ₁	0.954	1	0.954	3.893*	.040
Bonds with family: T ₄	1.417	1	1.417	6.895*	.096
Bonds with community: T ₃	1.652	1	1.652	4.758*	.155
Bonds with school/work: T ₁	4.153	1	4.153	4.758*	.049
Bonds with school/work: T ₄	6.774	1	6.774	6.058*	.085
Academic skills: T ₁	7.663	1	7.663	7.323*	.073
Social skills: T ₄	20.111	1	20.111	7.488*	.103
Number of assets identified: T ₁	94.485	1	94.485	9.130*	.089
Number of assets identified: T ₄	167.578	1	167.578	7.329*	.100

* $p < .05$.

Within-Group Differences Over Time

Similar to the previous analyses, small sizes made it difficult to obtain significant results. Paired samples testing did reveal a significant decrease in the composite skill score reported by IAP youth between time of release and program discharge (mean change = 0.2933, $n = 5$, $T = 4.274$, $df = 4$, $p = .013$). Yet, this difference was not present when skill change scores were compared between treatment groups. There were no significant differences within the comparison group over time on skill scores. Likewise, there were no significant differences within groups on the composite concern score over time.

CASE MANAGER PERCEPTIONS OF YOUTH ASSETS

Between Group Differences

Assets indices were compared between treatment conditions using ANOVA testing. Several significant differences were observed between groups. The mean scores for the “bonds with family” and “bonds with school/work” indices were significantly higher at baseline and program discharge compared with the comparison group (see Table 14). Eta-squared coefficients for these items were relatively low (less than 10%), which suggests that the observed group differences might be better explained by factors other than group membership. For example, there likely exists variation between client managers in the type and quantity of assets they identify in youth. Moreover, individual client managers may identify assets in youth as a function of ethnic, class, and gender differences between themselves and the youth. In terms of skills identified by case managers, the “academic” and “social skills” indi-

TABLE 15: Main Effects of Treatment Condition on Youth Asset Index Items: Descriptive Statistics

<i>Assets Subscale Item</i>	<i>Treatment Condition</i>					
	<i>Experimental</i>			<i>Comparison</i>		
	<i>T₁</i>	<i>T₃</i>	<i>T₄</i>	<i>T₁</i>	<i>T₃</i>	<i>T₄</i>
Bonds with family						
<i>M</i>	.5918*		.7949*	.3913		.5000
<i>n</i>	49		39	46		28
<i>SD</i>	.4966		.4091	.4934		.5092
Bonds with community						
<i>M</i>		.9091*			.4118	
<i>n</i>		11			17	
<i>SD</i>		.5394			.6183	
Bonds with school/work						
<i>M</i>	.9184*		1.3590*	.5000		.7143
<i>n</i>	49		39	46		28
<i>SD</i>	1.0574		1.1353	.7817		.9372
Academic skills						
<i>M</i>	1.2857*			.7174		
<i>n</i>	49			46		
<i>SD</i>	1.2076			.7793		
Social skills						
<i>M</i>			2.7179*			1.6071
<i>n</i>			39			28
<i>SD</i>			1.6214			1.6631
Number of assets identified						
<i>M</i>	5.7347**		9.7949*	3.7391		6.6207
<i>n</i>	49		39	46		29
<i>SD</i>	3.7515		4.5142	2.5249		5.1229

* $p < .05$.

ces were significantly higher for IAP youth at baseline and program discharge, respectively. Seven percent of the variation in “academic” skills and 10% of the variation in social skills can be accounted for by group membership.

Variation between groups on assets identified by case managers was also assessed in terms of the total number of assets identified at different points in time. Case managers identified at least two more assets, on average, among IAP youth at baseline compared to youth in the comparison group (see Table 15). At program discharge, the average group difference grew to 3.2 assets. It is noteworthy that according to their case manager, 7 youth (1 IAP and 6 comparison youth) out of the total 97 were found to have no strengths or positive attributes during at least one phase of their commitment.

TABLE 16: Paired Samples Test of Differences on Youth Assets Indices: Experimental Group

<i>Index Item</i>	<i>Administration Point</i>	M	n	T	<i>p (two-tailed)</i>
Bonds with family	Baseline	0.5385	39	2.512	.016
	Program discharge	0.7949			
Bonds with community	Baseline	0.0909	11	4.500	.001
	Entry to parole	0.9091			
Bonds with peers	Baseline	0.1026	39	3.791	.001
	Program discharge	0.5385			
	Baseline	0.0256			
Bonds with school/work	Baseline	0.0256	39	3.620	.001
	Program discharge	0.2821			
	Entry to parole	0.0000			
Academic skills	Baseline	0.6667	6	3.162	.025
	Program discharge	0.7273			
	Entry to parole	1.7273			
Internal controls	Baseline	0.8718	39	2.246	.031
	Program discharge	1.3590			
	Baseline	1.2308			
Social skills	Baseline	1.7949	39	2.375	.023
	Program discharge	1.7949			
	Baseline	0.3636			
Number of assets	Baseline	2.0000	11	3.614	.005
	Entry to parole	2.0000			
	Baseline	0.8205			
Social skills	Baseline	0.8205	39	4.104	.000
	Program discharge	1.8205			
	Baseline	1.3077			
Number of assets	Baseline	1.3077	13	3.787	.003
	Time of release	2.7692			
	Baseline	1.5385			
Number of assets	Baseline	1.5385	39	3.736	.001
	Program discharge	2.7179			
	Baseline	6.5385			
Number of assets	Baseline	9.6154	13	3.825	.002
	Time of release	9.6154			
	Baseline	5.0000			
Number of assets	Baseline	5.0000	11	4.849	.001
	Entry to parole	9.6364			
	Baseline	5.3333			
Number of assets	Baseline	5.3333	39	5.119	.000
	Program discharge	9.7949			

Within-Group Differences Over Time

In addition to examining differences between groups on the number of assets identified, analyses were also conducted on differences within groups over time. Paired-samples testing was used to determine whether scores reported by youth within each treatment condition changed over time.

IAP case managers identified significantly more assets in youth between baseline and time of release, entry to parole, and program discharge (see Table 16). Likewise, case managers working with youth in the comparison group identified significantly more assets in youth between baseline, entry to parole, and program discharge. Paired-samples testing was conducted to also

identify significant within-group differences over time on specific "assets" indices.

There were significant increases over time within groups on specific indices (see Table 16). Within the IAP experimental group, case managers gave significantly higher scores on all of the "bonding" indices between baseline and program discharge. They also gave higher scores between baseline and program discharge on each of the case manager-reported "skills" indices. Moreover, there was a significant increase in the mean social skills index between baseline and time of release.

Case managers working with youth in the comparison group gave significantly higher scores on the "community" and "peers bonding" indices between baseline and program discharge. Each of the case manager-reported "skills" indices were significantly higher at entry to parole and program discharge compared with baseline. Finally, change scores were calculated to represent the differences in the number of assets identified over time. There were no significant differences between groups on number of assets change scores. (See Table 17.)

CONCLUSION

The findings presented here suggest that participation in the IAP was significantly related to stronger relationships between youth and their case manager. The IAP model provided a framework for overarching and intensive case management. According to these data, youth receiving the benefits of IAP services reported stronger relationships with case managers than youth in the comparison group. In addition, IAP youth reported better communication with their case managers and viewed their case managers as stronger advocates who were more responsive to the needs of youth. IAP youth were also more positive about their case manager relationships than they were about relationships with most of their other service providers.

Although small sample sizes reduced the strength of some of the findings, analyses also revealed that IAP youth viewed their case manager relationship less favorably over time. This somewhat puzzling finding is actually consistent with the IAP principle of reduced case supervision as youth approach their discharge date. According to this view, as youth have been on parole for longer periods of time, the frequency and duration of case manager contacts would decrease. However, the data did not reveal a significant reduction in the number of case manager contacts over time. Yet, there is another possible explanation for youth being less satisfied with their case manager relationship over time. IAP youth would logically be more positive and optimistic

TABLE 17: Paired Samples Test of Differences on Youth Assets Indices: Comparison Group

<i>Index Item</i>	<i>Administration Point</i>	<i>M</i>	<i>n</i>	<i>T</i>	<i>p (two-tailed)</i>
Bonds with family	Baseline	0.3636	11	2.390	.038
	Time of release	0.7273			
Bonds with community	Baseline	0.0000	11	2.193	.053
	Time of release	0.4545			
Bonds with peers	Baseline	0.1538	26	2.560	.017
	Program discharge	0.5000			
	Baseline	0.0000			
Bonds with school/work	Baseline	0.0000	26	2.739	.011
	Program discharge	0.2308			
	Baseline	0.8182			
Academic skills	Baseline	0.8182	11	2.283	.046
	Time of release	1.4545			
	Baseline	0.2941			
Internal controls	Baseline	0.2941	17	2.634	.018
	Entry to parole	1.0000			
	Baseline	0.6471			
Number of assets	Baseline	0.6471	17	2.915	.010
	Entry to parole	1.6471			
	Baseline	0.7692			
Internal controls	Baseline	0.7692	26	2.316	.029
	Program discharge	1.3462			
	Baseline	0.6471			
Number of assets	Baseline	0.6471	17	3.498	.003
	Entry to parole	1.7647			
	Baseline	0.6154			
Number of assets	Baseline	0.6154	26	3.467	.002
	Program discharge	1.8846			
	Baseline	3.3529			
Number of assets	Baseline	3.3529	17	3.216	.005
	Entry to parole	7.0000			
	Baseline	3.7407			
Number of assets	Baseline	3.7407	27	3.162	.004
	Program discharge	6.7407			

about their case manager relationship toward the beginning of their commitment because they often had inflated impressions of what would be provided by the IAP program. This disjuncture between the inflated expectations youth had of the IAP and the actual program experience is a more likely explanation for less favorable impressions of IAP case manager relationships over time.

A related finding was that IAP youth viewed their relationships with resource persons in the community more favorably than their case manager relationship. This is an important finding in respect to the emphasis placed on developing "indigenous community support systems" for IAP youth (Wiebush et al., 1998, p. 67). Once discharged, youth lose the support of their case manager, so it is encouraging that some youth placed greater stake in their relationship with community resources toward the end of their commitment. In fact, a large proportion of the community resource persons identified were within the youth's immediate social network (family, peers, and

partners). This is consistent with a component of IAP programming in Colorado that encouraged family involvement at all stages of a youth's commitment. However, there were no significant differences between IAP and comparison groups on the proportion of community resource persons who were from the youth's immediate social network.

Compared to the non-IAP case managers, case managers working with IAP youth reported more assets in their clients. IAP case managers also reported stronger bonds with family, community, and school and work than what was reported by non-IAP case managers. Moreover, IAP case managers identified more academic and social skills in their clients compared to what was identified by non-IAP case managers. These findings are consistent with the model's theoretical focus on addressing social disorganization and weak internal controls among high-risk committed youth. Likewise, Colorado IAP case managers were encouraged to follow a "strengths-based" perspective when developing case plans for their clients. According to this perspective, IAP case managers were trained to be more sensitive and aware of the skills and strengths in their clients rather than the deficits and problems. Although IAP case managers were hired directly from the pool of existing case managers, they participated in numerous training activities offered by the IAP coprincipal investigators. In this respect, the case management skills as well as creative strategies of the IAP case managers to effectively work with this population of youth were likely enhanced during the duration of this project compared with non-IAP case managers. Therefore, the reliability of the youth assets information was likely influenced by variation among individual case managers in how attuned they were to specific assets that youth may have possessed.

The findings also suggest that the standard case management experience for many youth in the comparison group was rather favorable. The comparison group reported fairly high scores on provider relationships and skills. Likewise, their case managers identified multiple strengths in their clients despite maintaining fewer contacts per month. These data therefore suggest that the "standard" commitment experience in Colorado, at least as reported by this small sample, can be characterized by fairly positive relationships between youth and their providers.

The observed differences between the IAP and comparison groups on relationship scores, although statistically significant, were not great. It is unclear whether this is an indication of weak implementation of the IAP model, a broad repertoire of standard services available to non-IAP youth, or weak effects of the model. Without an examination of recidivism data, it is difficult to determine the meaning of slightly different survey scores associated with participation in the IAP. Future research might also address how

gang involvement might affect relationships between committed youth under intensive supervision and their case managers. As previously noted, a greater proportion of youth in the comparison group reported gang involvement. Perhaps due to the norms and role expectations within youth gang subcultures, youth in the comparison group were more resistant to developing positive relationships with service providers. Recent research has indicated that compared to non-gang members, gang members tend to distrust others, especially those in positions of authority (Thornberry, 1998). In other words, such "nonprogrammatic factors" (Palmer, 1995) of model implementation may have contributed to the comparison group's reporting less favorable relationships with their case managers and therefore could have important implications for improving the matching of IAP services to delinquent youth.

Incomplete data at all four phases of survey administration compromised some of the data analyses. For example, the significance of mean differences within groups could not be assessed on several items because there were not enough valid cases at all four phases. Although the study was plagued by a fairly small sample, the experimental design of the project contributed to the statistical strength of the findings. These findings are generalizable to the overall IAP study population given the use of random assignment of cases. Because the IAP demonstration project exclusively targeted males, these findings are unique to male juvenile offenders. Given findings from recent research (Belknap, Holsinger, & Dunn, 1997; Chesney-Lind & Shelden, 1992) on gender differences in the way in which juveniles are processed and treated within the juvenile justice system, the impact of IAP supervision may vary by the gender of the youth.

This study is also limited in its ability to sort out whether it is quantity (frequency or duration) of contacts with youth or the quality (content) of such contacts that is associated with more positive impressions of case manager relationships. It was impossible to determine whether these findings were a function of the use of smaller caseload sizes, a combination of other IAP model components, the youth's knowledge that they were participating in a "special study," or variation among individual case managers. Others have noted that reduced caseloads and increased case contacts do not necessarily equate to improved case supervision. In the absence of adequate training in the "creative application" of increased resources, case managers are sometimes more concerned with meeting quotas for case contacts than with developing effective strategies to handle reoffending behavior as it occurs (Goodstein & Sontheimer, 1997, p. 342).

It is also not clear from this study how intensive case supervision and enhanced treatment services facilitate the reintegration experiences of juvenile parolees. Future research should directly relate these survey findings to

recidivism data to determine if the IAP program helped prepare youth for community reintegration. Although findings from educational research (Elias, 1997) suggest a positive association between the quality of student-teacher relationships and education-related outcomes, intensive after-care evaluation findings are inconclusive (Deschenes et al., 1996; Goodstein & Sontheimer, 1997; Greenwood et al., 1993). Even if the impact of relationships on recidivism cannot be established, there may still be value in improving the quality of relationships between case managers and youth. For ethical as well as treatment reasons, there may be numerous benefits to promoting positive case management relationships. For example, youth who develop positive relationships with service providers may be more likely to develop prosocial relationships with peers and other adults in their community. Although the association between the quality of case manager relationships and recidivism rates has not yet been established, this study provides direction for future research.

NOTES

1. The Colorado Children's Code was revised to include new delinquent offenses involving the use or possession of handguns.
2. The New Jersey site dropped out of the national evaluation due to implementation issues related to system reform and agency restructuring.
3. This originally included Adams, Arapahoe, Denver, and Jefferson counties.
4. The Colorado Intensive Aftercare Project (IAP) risk assessment tool consisted of three items: age at first adjudication, living arrangements prior to the current commitment, and number of out-of-home placements prior to the current commitment. The Colorado IAP included youth who tended to be adjudicated for the first time at a young age; were living somewhere other than with both biological parents, in an independent living situation, a group home, or residential child care facility prior to commitment; and had been placed out-of-home multiple times. These youth were found to be at highest risk of being charged with a new criminal offense within 1 year of discharge. These variables were identified through multiple regression analyses of common recidivism predictors among a cohort of youth committed from the targeted counties and discharged between 1989 and 1991 from Lookout Mountain Youth Services Center (LMYSC). Recidivism was operationalized as the filing of a new charge within 1 year of institutional release. A cutoff score was then identified, which would provide a sample of youth with recidivism rates projected to be in excess of 68%.
5. Each of the four pilot sites were encouraged to form a management team composed of juvenile justice officials as well as community stakeholders to collaboratively plan, coordinate, and troubleshoot implementation of the IAP model.
6. The ethnic breakdown of 10- to 17-year-old youth in Colorado during 1999 was 74% Anglo, 17% Hispanic/Latino, 5% African American, and 4% Other (Meisel, 2000, p. xi).
7. It is important to note that youth are assigned a case manager as soon as they are committed to the Department of Human Services. Because youth must go through separate assessment and orientation programs before being placed in a treatment facility, they will have known their case manager for approximately 3 months at the time of baseline testing.

8. Transitional placements were often community based. (The exception was an out-of-state wilderness-experience-type program.) A community placement is considered a far less restrictive living situation than confinement to LMYSC. Youth in community placements generally have greater freedoms of movement within and outside the facility. These facilities are often group home-type living arrangements.

9. Termination from the research study occurred when a youth's sentence expired and he or she was discharged from the Division of Youth Corrections or when a youth was recommitted on new charges, disappeared for more than 30 days on escape or AWOL status, was unwilling to participate in the research, or was moved for programmatic reasons to another secure residential facility.

10. The number of youth being discharged from LMYSC with no transition experience has been declining since the passage of mandatory parole legislation. This legislation mandated 1 year of parole for all youth committed on offenses that occurred after January 1, 1997.

11. Due to staff turnover, medical conditions, or transfer of jurisdiction, a youth might be assigned to a different case manager.

12. The primary mechanism for change at LMYSC is the use of normative culture. This treatment philosophy attempts to promote behavioral change by encouraging youth to internalize prosocial values through holding one another accountable for their conduct during daily guided feedback sessions.

13. The Discrete Case Plan originally was designed to reduce fragmentation of services between state and privately operated institutional and community placements as well as to support the transitioning of youth through the system on a timely basis. This plan, developed by the case managers with input from other agency professionals as well as from a youth's family members, outlines the goals and objectives of treatment and services for a youth and his or her family. The plan establishes the placement and the service continuum for the youth during his or her commitment.

14. One case manager emphasized that the tracker or mentor is carefully matched with youth according to culture, ethnicity, general interests, and personality, among other criteria. The tracker or mentor serves dual roles: a role model of prosocial values and interests, a confidant to the youth, and a friend. Of course, the "tracking" responsibilities necessitate holding the youth accountable for his other conduct.

15. Proctor families are matched with youth according to the same criteria used in matching youth with tracker or mentors. Functioning as a surrogate family for a youth, proctor homes differ from foster placements insofar as the emphasis of a proctor home is more on promoting independence in the youth than a long-term nurturing family environment.

16. An alternative would have been to mix up both "positively" and "negatively" phrased items to force youth to read each individual item. However, responding to "negative" phrases often confused youth completing other IAP evaluation instruments. A decision therefore was made to employ "positive" phrasing in item construction to minimize confusion for youth rating the item.

17. The subscales constructed were not statistically sound, yet they provide a logical basis for future research, examining the different dimensions that characterize relationships between clients and providers in the juvenile justice and human services fields.

18. Where this study is relying on youth reports of the most recent contact with their case managers, the national evaluation design draws on case manager monthly reports of contacts with clients. According to this latter data source, IAP case managers saw their clients 2.3 times per month while in the institution and 3.3 times while in the community (on parole). Case managers working with youth in the comparison group saw their clients an average of 1.1 times while in the institution and 1.5 times while in the community (The National Council on Crime and

Delinquency, 1999). Cardenas (1998) found that it was not uncommon for youth and case managers to report conflicting numbers of contacts.

19. In a related question, youth were asked if their case manager had ever met with the youth's family. There were no significant differences between groups on this item.

20. This finding should be viewed with caution, given extremely small cell sizes ($n = 5$).

21. Most any differences between means will be statistically significant if the sample size is large enough. The strength of these differences can be assessed by examining the eta-squared, the proportion of the variance in the subscale means that is explained (statistically rather than causally) by group membership (Bohrnstedt & Knoke, 1988).

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