

C010114 ABSTRACT: The relative effectiveness of group care (GC) and multidimensional treatment foster care (MTFC) was compared in terms of their impact on criminal offending, incarceration rates, and program completion outcomes for 79 male adolescents who had histories of chronic and serious juvenile delinquency. Results show that boys who participated in MTFC had significantly fewer criminal referrals and returned to live with relatives more often.

Title Comparison of Two Community Alternatives to Incarceration for Chronic Juvenile Offenders.

Authors Chamberlain, P., Reid, J.

Type Journal Article

Source Journal of Consulting and Clinical Psychology, 66(4): 624-633, 1998.

Year 1998 **Length** 9 pages

Medium

Control No: 010114

Comparison of Two Community Alternatives to Incarceration for Chronic Juvenile Offenders

Patricia Chamberlain and John B. Reid
Oregon Social Learning Center

The relative effectiveness of group care (GC) and multidimensional treatment foster care (MTFC) was compared in terms of their impact on criminal offending, incarceration rates, and program completion outcomes for 79 male adolescents who had histories of chronic and serious juvenile delinquency. Results show that boys who participated in MTFC had significantly fewer criminal referrals and returned to live with relatives more often. Multiple regression analyses showed that assignment to a treatment condition (i.e., GC or MTFC) predicted official and self-reported criminality in follow-up beyond other well-known predictors of chronic juvenile offending (i.e., age at 1st offense, number of previous offenses, age at referral).

Over the past decade, the rates of serious crime by male adolescents have shown a disturbing and well-publicized increase (Greenwood, Model, Rydell, & Chiesa, 1996). The public has become increasingly punitive in its attitude about crime, with clear majorities across ethnic and economic groups now favoring the death penalty, mandatory sentencing for serious adolescent and adult offenders, and stiff sentences for recidivists (Mayer, 1992; U.S. Bureau of Justice Statistics, 1993).

The possibility of changing the criminal patterns of chronically delinquent adolescents seems close to being written off by many clinical scientists in the area of antisocial behavior and conduct disorder, despite their earlier optimism. For example, during the 1960s and 1970s, Montrose Wolf and his colleagues championed the idea of the malleability of antisocial behavior at any point in the life course and led the way in the development of empirically based models of systematic group care (GC) interventions for adolescent delinquents. More recently, they have argued that serious delinquency may be part of a significantly handicapping condition that is best dealt with through long-term care in supervised environments (Wolf, Braukmann, & Ramp, 1987). In a recent analysis of the costs and benefits of various strategies for the prevention of serious crime, Greenwood et al. (1996) compared a number of strategies, in-

cluding the California "three strikes" program, parent training, prenatal/infancy home visits, graduation incentives, and programs for the supervision of adolescent delinquents. On the basis of their analyses, they argued that interventions with serious delinquents had the least potential to prevent serious crime. Kazdin (1993) reviewed treatment outcome studies for conduct disorder and antisocial behavior. Although he concluded that there are many promising intervention models for the treatment of youngsters with serious conduct problems, the studies that were reviewed targeted preadolescent children. In discussing his review, he found a consensus that the earlier the intervention the better, but he concluded that there are no studies that have systematically examined the contribution age makes to outcomes.

Despite the obvious difficulties inherent in trying to intervene with chronic offenders, there is some evidence to indicate that intensive family-focused interventions can reduce the criminal activity of youngsters whose delinquency has not developed to the point at which out-of-home placement is mandated. In two studies, Henggeler and colleagues (Borduin et al., 1995; Henggeler, Melton, & Smith, 1992) found positive effects with juvenile offenders using a multisystemic therapy (MST) approach relative to community treatment as usual. In a study with chronically offending delinquents (Bank, Marlowe, Reid, Patterson, & Weinrott, 1991), participants in an intensive parent-training intervention committed significantly fewer crimes and spent less time incarcerated over a 3-year follow-up period than did delinquents in a comparison condition. In a reanalysis of those data, Reid and Eddy (1997) found that youths exposed to parent training also spent one third fewer days in out-of-home placements.

Compared with families of younger antisocial children successfully treated in previous studies (e.g., Patterson, Chamberlain, & Reid, 1982), not only were older delinquents more aggressive and further behind in social and academic skills, but their families were distressed, demoralized, defeated, and cynical. These observations are consistent with data reported in intervention studies by Wahler (1980) and Webster-Stratton (1989) showing that the most distressed and troubled families showed the poorest follow-up adjustment. In the early 1980s,

Patricia Chamberlain and John B. Reid, Oregon Social Learning Center, Eugene, Oregon.

Support for this project was provided by Grant RO1 MH 47458 from the Center for Studies of Violent Behavior and Traumatic Stress, National Institute of Mental Health (NIMH), and Grant P50 MH 46690 from the Prevention Research Branch, NIMH. For more information, contact our web site at www.oslc.org. We acknowledge Mark Eddy for conducting the analysis on clinical significance. We also extend our appreciation to James Breiling, NIMH Project Officer; Keith Flicker and Malcolm Tabor at the Oregon Services to Children and Families; and Joni Zimmerman and Brian Florip at the Oregon Youth Authority. Special thanks go to J. P. Davis and Karla Antoine for guiding clinical efforts and to Judy Boler for her work on this article.

Correspondence concerning this article should be addressed to Patricia Chamberlain, Oregon Social Learning Center, 160 East Fourth Avenue, Eugene, Oregon 97401. Electronic mail may be sent to patric@osl.org.

when the intervention phase of the Bank et al. (1991) study was in progress, our clinical observations led us to conclude that chronic delinquents indeed profited from improved parenting but that parents had seriously diminished resources by this advanced point in the development of their child's antisocial behavior. In this study, the challenge was to provide corrective or therapeutic parenting for these adolescents whose parents, for one reason or another, could not do it.

The intervention strategy tested in this study was based on a developmental model that specifies key proximal antecedents for antisocial behavior and delinquency during early to midadolescence that include lack of adult supervision, lack of consistent discipline, association with delinquent peers, and poor academic performance (Chamberlain, 1994, 1996; DeBaryshe, Patterson, & Capaldi, 1993; Reid, 1993; Reid & Eddy, 1997). The model assumes not only that the development of antisocial behavior leads to increasingly serious delinquency, but also that the behavior itself wears down and neutralizes the normative socialization forces that could potentially guide the youngster into more prosocial patterns of adjustment. Embroiled in increasing conflict, the family is no longer capable of supervising, mentoring, setting limits, or negotiating with the youngster. The youngster's homework, attendance, and behavior at school deteriorate, as do relationships with teachers. The youngster becomes increasingly committed to and influenced by delinquent peers, who in turn reinforce alienation and isolation from corrective adult influences. Finally, when the youngster's behavior significantly compromises community safety, the courts intervene and require that the youngster be contained and held accountable. At this point in their developmental trajectory, when close parental supervision and guidance are absolutely critical, the behavior of youths most at risk often becomes so dangerous to society that they are removed from their homes. During this risky period, the challenge is to re-create the powerful socialization forces of functional family life for these youngsters while protecting the community, the adults in charge of the youngsters, and the youngsters themselves.

Adolescents who have been removed from their home because of chronic delinquent behavior have traditionally been placed in either secure or community-based GC facilities. Two earlier studies led to this randomized trial. In a matched comparison design, Chamberlain (1990) compared the effectiveness of multidimensional treatment foster care (MTFC)¹ with traditional community GC for a sample of adjudicated delinquents. In a randomized trial, the effectiveness of MTFC was compared with traditional placements for youngsters leaving the state mental hospital (Chamberlain & Reid, 1991). In both of these studies, the results favored the MTFC intervention model: MTFC participants were institutionalized less frequently than their counterparts in traditional placements.

In our randomized study, the effectiveness of MTFC was compared with community GC among delinquents with an average of 14 previous criminal referrals who had been removed from their home by the juvenile authorities. To our knowledge, no previous studies using randomized designs have compared community-based treatment alternatives for such a severe and chronically delinquent population. Two major questions were addressed. First, could chronic delinquents be maintained in alternative family homes in the community? Second, compared with group home placements, would the MTFC intervention

reduce crime and incarceration rates after referral to the program?

Method

Participants

In this study, 79 boys aged 12–17 years with histories of serious and chronic delinquency were referred for community placement by the juvenile justice system over a 4-year period. All referred boys were mandated to out-of-home care and then screened for eligibility by a committee of juvenile court personnel who decided whether youngsters would be placed in the state training school or some less restrictive, out-of-home care setting. Decisions for community placement were based on the level of threat that the youth was perceived to present to the community. Training school slots were "capped," meaning that each new commitment required the release of a current training school student. There was pressure to use community placements as alternatives to training school placements, even for violent offenders, whenever possible. Community placements were not used for youths who were judged to require inpatient drug and alcohol treatment.

All parents of boys referred to the study were sent a letter by the placement coordinator at the juvenile court stating that their son had been selected to participate in a study designed to examine the effectiveness of out-of-home care. Each boy's parents had previously been made aware by the juvenile court worker that their son was being mandated to out-of-home placement. The letter described the goals and voluntary nature of the study and was followed within 3 days by a telephone call from Patricia Chamberlain during which parental concerns and questions about participating were addressed. For families without telephones, a staff member made a home visit and arranged for a telephone or in-person appointment so that parents could have their questions or concerns about participation in the study addressed. Following contact with Patricia Chamberlain, consent forms were mailed to parents. Once parents signed the consent forms, we contacted study boys and obtained their consent to participate.

Eighty-five boys referred for community placement were randomly assigned to either MTFC ($n = 40$) or GC ($n = 45$). Of these, three parents in each group declined to give consent, leaving 37 participants in the MTFC and 42 in the GC conditions. Five boys who were assessed at baseline failed to be placed in either MTFC ($n = 1$) or GC ($n = 4$) and were sent home to live (home condition [HC]). HC boys were not placed because a community program opening was not located before their release from detention. Following the dictum of "once randomized, always analyzed," HC boys were included for analyses in the groups to which they were originally assigned. All analyses also were conducted excluding HC boys, and no differences were found for any analysis when HC boys were included or excluded, except as noted in the rates of boys living with parents or relatives.

Before referral, study boys averaged 14 previous criminal referrals, and participants in both the MTFC and GC groups averaged more than four previous felonies. All 79 participants had been detained in the year before entering the study; the average number of days spent in detention was 76. All of the boys had previously been placed out of their homes at least once. Seventy percent had one prior out-of-home placement, and

¹ The treatment model was originally developed as an extension of the Oregon Social Learning Center's parent-training treatment (reviewed by Patterson, Dishion, & Chamberlain, 1993). The format, however, was informed in large part by existing treatment foster care programs (e.g., R. P. Hawkins, Meadowcroft, Trout, & Luster, 1985). Because the approach has been refined, we think that the program can better be described as MTFC because it integrates multiple intervention modes (e.g., individual and family therapy social skills training) in multiple domains (e.g., family homes, schools, peer groups).

30% had at least two prior placements. The mean age at entry into the study was 14.9 years ($SD = 1.3$), and the mean age at first criminal referral was 12.6 years ($SD = 1.82$). All boys lived in the Pacific Northwest in a medium-sized metropolitan region or in surrounding rural communities. Eighty-five percent were White, 6% were Black, 3% were Native American, and 6% were Hispanic. Table 1 shows the mean age, criminal referral, and pretreatment detention rates for the separate groups. There were no significant differences between the groups on any of these variables.

At referral, the juvenile court worker completed a form that documented risk factors obtained from archival records. Table 2 shows the percentage of participants having these risk factors for the two groups. No significant differences were found between the two groups on any of these variables. For the full sample, 86% of the youths had two or more risk factors and 60% had three or more.

Measures

To assess whether it was feasible to care for chronic juvenile offenders in community placements, we used individual records maintained by the GC and MTFC programs on the number of days each month youngsters were actually in care, on the run, in detention, or in the state training school. We also used these records to determine whether youngsters completed the programs, as judged by GC or MTFC personnel. Because placements billed for services using a daily rate, the quality of the data on days in care and on the run were carefully collected and audited by relevant state or county agencies. Days in detention, in the state training school, or living at home were recorded by the juvenile court, and we verified these data with the probation or parole officers every 2 months. Placement time in each condition was not constrained by the study design. However, the major goals of both the referral committee and the MTFC and GC programs were for an out-of-home placement of 6 months followed, when possible, by the youngster returning home to live with parents or relatives.

To assess whether youths' delinquent and criminal activities would be affected by the intervention condition, we collected two types of data: official criminal referral data recorded by the Oregon Youth Authority (OYA) and data on rates of self-reported delinquency. Criminal referral data included all officially reported misdemeanor and felony offenses on the youth's record and were from two intervals: for 1 year prebaseline and from placement in MTFC or GC to 1 year postprogram discharge or expulsion. Criminal referrals included each offense for which the youth was charged on police reports. In some instances, there was more than one offense per police report. For example, if a boy broke into a home and stole something and then stole the family car, he would be charged with two criminal referrals: one for burglary and one for unauthorized use of a motor vehicle. Self-report data were collected at 6-month intervals, and data from 6- plus 12-month reports postbaseline are reported.

Criminal referral data are important for two reasons. First, the OYA

Table 1
Sample Characteristics

Variable	GC		MTFC	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age at referral	15.1	0.96	14.8	1.5
Age at first criminal referral	12.5	1.8	12.8	1.8
No. of previous charges	14.6	7.5	12.6	10.1
No. of lockup days 1 year prereferral	89.0	103.0	71.0	59.0

Note. GC = group care; MTFC = multidimensional treatment foster care.

Table 2
Risk Factors

Factor	Group care (%)	MTFC (%)
Single-parent family	54	59
Target youth adopted	5	9
Parent hospitalized	7	9
Parent convicted of crime	30	25
Siblings institutionalized	22	16
Perpetrator of sexual abuse	7	13
Drug or alcohol abuse	15	3
Chronic truancy	69	61
Fire setting	22	13
Had run away from placement	78	75
2 or more of the above	85	87
3 or more of above	63	56

Note. MTFC = multidimensional treatment foster care.

had removed these youngsters from their home and placed them in out-of-home care because of officially recorded criminal activity. Similarly, criminal referral data provided one important indicator of the clinical significance of treatment effects, and it will be because of additional criminal referrals that some of these youngsters will be incarcerated in the future. Second, repeated criminal offending during adolescence is highly predictive of adult criminality and incarceration (Blumstein & Cohen, 1979). In 10% of the cases, criminal referrals were recoded after having removed all identifying information, and 90% reliability (entry by entry) was achieved. These data were coded by a research assistant who did not know the treatment condition.

Despite their importance as an indicator of general criminality, official reports of criminal activities provide a biased underestimate of the volume or seriousness of delinquent activity. Only a small fraction of delinquent acts are detected by the police, only a fraction of the acts that are detected result in official reports, and different precincts and communities vary widely in which offenses are actually written up (Elliott & Voss, 1974). Particularly for chronic offenders, serious offenses may be recorded only as technical or parole violations to avoid paperwork and court procedures, with the parole officer handling the offense informally (DiJulio, 1995). In fact, serious criminal activity by the most chronic offenders is underestimated in official records (DiJulio, 1995). A number of investigators agree in concluding that compared with arrest records, self-reports better capture the actual nature, incidence, and frequency of juvenile offending (Blumstein & Cohen, 1979; Capaldi & Patterson, 1996; Elliott & Voss, 1974; Erickson & Empey, 1963; Gold, 1963).

Therefore, all study boys completed the Elliott Behavior Checklist (EBC; Elliott, Ageton, Huizinga, Knowles, & Canter, 1983), a confidential self-report of delinquency. The respondent is asked how many times he or she has engaged in any of the criminal behaviors during a specific time frame. We examined three subscales: General Delinquency, Index Offenses, and Felony Assaults. We chose the General Delinquency subscale as an additional measure of overall criminal activity and the other two scales to measure the rates of more serious and person crimes. The EBC has demonstrated good content and construct validity (Elliott, Huizinga, & Ageton, 1985).

Intervention Procedures

MTFC. Community families were recruited on the basis of their experience with adolescents, willingness to act as treatment agents, and nurturing family environment. Recruitment and selection of MTFC parents occurred during a four-step process, including a telephone-screening interview, filling out an application, participating in a home visit, and completing a 20-hr preservice training. Preservice training was conducted by project case managers and a former MTFC parent who served

as the foster parent trainer. Training emphasized using behavior management methods to provide boys with a structured daily living environment, including providing close supervision and setting clear rules and limits. MTFC parents were taught how to implement an individualized plan for each youth that took into account the boy's needs and the MTFC family's schedule and values. A three-level system was used in which the boy's privileges and level of supervision were based on his compliance with program rules, adjustment in school, and general progress.

Ongoing supervision of MTFC parents took place during weekly foster parent group meetings run by a case manager and through daily telephone calls in which data on the boy's progress and problems during the past 24 hr were collected. During those calls, parents identified problems they anticipated and discussed potential solutions. Additional meetings with MTFC parents and boys were scheduled as needed to deal with routine problems or difficulties in implementing the program.

Each boy participated in weekly individual therapy focused on skill building in problem solving, social perspective taking, and nonaggressive methods of self-expression. Individual therapists worked for the program and had training and supervision in behaviorally oriented treatments. The boy's biological family or other aftercare resource participated in weekly family therapy focused on parent management training, including an emphasis on supervision, encouragement, discipline, and problem solving. When the plan was for the boy to return home after placement (85% of cases), there were frequent home visits beginning with 1- to 2-hr visits and increasing to overnight visits as the boy progressed through the program. Family therapists also worked for the program and were experienced in using parent-training treatment.

All boys were enrolled in public schools, with 45% attending at least part of the day in special education classes. Before enrollment in school, a conference was arranged with the school counselor and interested administrators. Boys carried a card to each class and had teachers sign off on attendance, homework completion, and attitude. Program backup was provided to the school if youths became disruptive and needed to be removed during the school day. Boys who were suspended were required to do schoolwork or chores during school hours.

Consequences for rule infractions were tailored for each boy but included point and privilege loss; being demoted to a lower level; work chores for prespecified amounts of time; and, in extreme situations, short stays in detention. Consequences were consistently delivered for even minor rule violations (e.g., being 2 min late, not doing breakfast dishes). Boys were encouraged to accept consequences, to quickly complete any work assigned, and to start each day with a clean slate. MTFC parents were trained to deliver consequences in a nonangry, neutral way and to give boys credit for complying with the conditions of the consequence. All parole violations were reported to parole or probation officers, who followed through with appropriate sanctions, such as privilege loss; short stays in detention; or, in more serious cases, expulsion from the program. Boys were supervised closely, strict rules were established for being on time, their whereabouts in the community were known to MTFC parents and program staff, all free time was prearranged, and their whereabouts during out-of-home time was routinely checked. Boys' peer associations also were closely monitored, and contact with peers with known histories of delinquency was prohibited.

Psychiatric consultation, evaluation, and medication management was used as needed. All treatment and supervision services were coordinated by a case manager, who, along with the program director and clinical consultant, supervised the individual and family therapists in weekly 2-hr meetings. Case managers were on call 24 hr per day, 7 days per week, and MTFC parents were encouraged to call them with questions, concerns, or problems. Biological parents (or other aftercare parents) also had on-call access to case managers. The program has been more completely described by Chamberlain (1994).

GC. Boys went to 1 of 11 community-based GC programs located throughout the state. GC programs had from 6 to 15 youths in residence, and all GC programs used shift staff. Although programs differed somewhat in terms of their theoretical orientations, variations of the positive

peer culture (PPC) approach (Vorrath & Brendtro, 1985) were used most often (i.e., in 66% of GC placements). The PPC approach assumes that the peer group can best influence and motivate youngsters to change their problem behaviors and attitudes. This takes place through therapeutic group work in which the youngsters are expected to establish prosocial norms, confront each other about negative behavior, and participate in the discipline and decision making (Craft, Stevenson, & Granger, 1964; Vorrath & Brendtro, 1985). Other theoretical orientations identified by GC programs were social and cognitive (5% of placements), eclectic and behavior management (5% of placements), and reality therapy (24% of placements). Sixty-seven percent of GC youths participated in individual therapy; 14% participated monthly or less than monthly, 64% participated weekly, and 21% participated in two to four sessions per week. Seventy-seven percent of GC youths participated in group therapy: 13% monthly, 25% weekly, 6% in two to four sessions per week, and 56% in one or more group therapy sessions each day. They most often attended in-house schools (i.e., 83% of cases). Family contact was encouraged, and when families could commute to program sites (i.e., 55% of cases) family therapy was typically provided. For families who received family therapy, sessions occurred monthly or less than monthly in 83% of the cases. For the other 17% of the cases, family therapy sessions occurred weekly.

Treatment Integrity

Before placing boys into program settings, we interviewed senior line staff (in GC) or foster parents (in MTFC) to examine assumptions about change mechanisms and to assess daily program practices, including discipline strategies, supervision rules and restrictions, and the roles of peers and adults in the treatment process. On the basis of the theoretical and intervention models, we expected to find differences in daily treatment methods, with the MTFC foster parents relying primarily on direct adult interventions in dealing with the youngsters and GC staff using peer-mediated interventions. To examine treatment fidelity for the two approaches, an interview examining program practices was conducted at each placement site after boys had been there for 3 months. We found significant differences between programs in the two treatment conditions in several areas (Chamberlain, Ray, & Moore, 1996). For example, group therapy was conducted at least weekly in 77% of the GC placements, and it was not offered at all in MTFC. Adults in GC and MTFC differed in terms of who they thought had the most influence on the boys' success (i.e., significantly more adult vs. peer influence in MTFC than in GC). In GC, adults spent less one-on-one time with boys than they did in MTFC. In GC, peers had more influence on deciding house rules and discipline than in MTFC. Finally, GC boys spent more time with peers than did their counterparts in MTFC.

In MTFC, several steps were taken to ensure treatment integrity. MTFC parents were telephoned every weekday and asked to report on the number of points the boy earned and lost within the past 24 hr. In addition, during weekly supervision meetings with MTFC parents, the boys' weekly school and point cards were handed in to case managers by MTFC parents. MTFC parents participated in weekly 2-hr supervision and support meetings with case managers. Case managers and individual and family therapists were supervised in weekly 2-hr meetings with the project director and clinical consultant. Individual and family therapy sessions were videotaped and reviewed in these meetings. A book describing the MTFC approach (Chamberlain, 1994) was used as a guide to train new clinical personnel along with other materials developed on parent management training interventions conducted at our center and elsewhere (e.g., Patterson et al., 1982; Wahler & Fox, 1980).

Data-Analytic Approach

To analyze the data on the rates of criminal activity for study boys, we used two methods. First, we conducted 2×2 mixed analyses of variance (ANOVAs; Group \times Time) to examine potential differences

in the rates of official criminal referrals and in the rates of self-reported criminal activities. Second, because the sample consisted of boys who varied substantially on key variables that are known to have strong effects on the rates of delinquency and suspected to affect amenability to interventions (e.g., age, age at first criminal referral, prereferral rates of delinquency), we conducted a series of multiple regression analyses to control for these variables and to examine their influence, if any, on the response to the interventions. The regression analyses allowed for the examination of developmental and offense history issues that the ANOVAs alone did not address. For example, 84% of the sample had their first criminal referral before the age of 14 ($M = 12.6$ years, range = 5.9–16.3) and could be classified as early onset delinquents who were at extremely high risk for continued patterns of chronic offending. Most of the youngsters, however, had their first criminal referral at a far earlier age. A consistent body of research findings indicates that early starters not only commit the most, and most serious, offenses but that they also may have significant cognitive impairments that would reduce their response to intervention (e.g., Moffitt, 1993). Therefore, we examined whether the age at onset would relate to criminal referral rates after program placement. Second, the sample varied greatly in age at referral to the program ($M = 15.0$ years, range = 12.1–17.9). Because of the general consensus that early treatment is better than late (e.g., Kazdin, 1993), we examined the relation of age at referral to continued criminal activity thereafter. Third, although all boys had more than one criminal referral before baseline ($M = 13.6$ prior criminal referrals), the range was considerable (5–55 prior criminal referrals). Therefore, we also took the number of prior criminal referrals into account in determining the effect programs had on subsequent police referrals.

Results

Youth Participation, Incarceration Rates, and Reunification With Family

Our first question was whether it would be feasible and safe to place such chronic and serious offenders in alternative nuclear families in the community. Data on days spent in various settings after referral were collected by coding each boy's individual records and through verification with parole or probation officer reports that we obtained for each boy every 2 months; these data are presented for the year after referral to the program in Table 3.

Fewer boys in MTFC than in GC ran away from their placements (30.5% vs. 57.8%, respectively), $\chi^2(1, N = 79) = 5.59$, $p = .02$. A greater proportion of MTFC boys than GC boys ultimately completed their programs (73% vs. 36%, respectively), $\chi^2(1, N = 79) = 10.96$, $p = .001$. Completion was defined individually by the programs. During the year after referral, boys in MTFC spent significantly fewer days in lockup than did GC boys ($p = .002$). This included fewer days in local detention facilities (MTFC, $M = 32$; GC, $M = 70$) and fewer days in the state training schools ($M = 21$ and 59 days, respectively). Overall, compared with GC boys, boys in MTFC spent 60% fewer days incarcerated during the year after referral.

As stated earlier, a major goal of both the GC and MTFC programs was to reunite boys with their family after their out-of-home placements. For boys who were actually placed in either MTFC or GC (i.e., excluding the 4 HC boys who were not in any placement), we examined the extent to which boys lived with their parents during the year after enrollment in the two programs. Compared with boys in GC, boys in MTFC spent nearly twice as much time living with parents or relatives during

the 12 months after program enrollment ($M = 31$ and 59 days, respectively, $p = .056$).

Criminal and Delinquent Activity

The second question addressed by this study was whether MTFC would be effective, compared with GC, in reducing crime and delinquent activity. For these questions, we analyzed referrals for criminal activity (i.e., all misdemeanors and felonies) that were documented in official juvenile court records. The two periods examined were from 1 year before enrollment and from placement through 1 year postdischarge or expulsion from treatment. We also examined delinquent and criminal activities self-reported by participants for the year after baseline.

A 2×2 mixed ANOVA (Group \times Time) was conducted to examine potential differences between MTFC and GC criminal referral rates from baseline to placement plus 12 months posttermination from GC or MTFC. The Group \times Time interaction was significant $F(1, 77) = 3.93$, $p = .003$, with MTFC boys showing larger drops in official criminal referral rates.² The mean rates for criminal referrals are shown in Figure 1. The rate of criminal referrals postplacement was not correlated with the amount of time that boys spent in treatment for participants in either condition.

A series of multiple regression analyses was conducted to examine a number of variables, in addition to the type of intervention, that would likely affect the continued rate of criminal referrals after enrollment in the program. To account for the contribution of these three variables (i.e., age at first criminal referral, age at baseline, and number of prior offenses), we conducted a hierarchical multiple regression analysis in which these three variables were entered first, before the dichotomized intervention variable (i.e., MTFC or GC), to predict the total number of criminal referrals during the period from placement to 1-year posttreatment. The results of that analyses are shown in Table 4. The only significant univariate predictors of postplacement criminal activity were group assignment and prereferral rate, with the MTFC youngsters showing significantly fewer postplacement criminal referrals. Even accounting for these individual differences, MTFC was significantly more effective than GC programs in reducing officially recorded delinquent activity.

Clinical Significance of the Reduction of Criminal Referrals

Although we clearly found a treatment effect for MTFC in a statistical sense, many researchers have pointed out that such a finding may have little real meaning (e.g., Jacobson & Truax, 1991; Kendall & Grove, 1988) in terms of adaptive functioning. We were able to examine the clinical significance of the difference in changes in the criminal referrals of the two groups relative to a normative population of boys living in the same geographic area. To do this, we used the population-based sample of high-risk boys who have participated in the Oregon Youth Study (OYS; Patterson, Reid, & Dishion, 1992).

² For boys who were older than 18 years of age during follow-up, adult records for criminal referrals were obtained and are included in the analyses presented.

Table 3
Days in Settings: Referral Plus 1 Year

Setting	MTFC		GC		<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
In treatment (MTFC & GC)	207.91	96.63	148.00	110.55	.02
Runaway	18.17	45.70	35.82	45.74	.10
Lockup (detention, state training schools)	53.33	85.10	129.32	110.02	.01
Job Corps	2.22	13.33	0.00	0.00	.31
Regular foster care	12.72	35.73	8.84	38.93	.65
Shelter care	8.03	14.15	9.74	21.04	.68
Living on own or with friends	2.31	9.70	0.00	0.00	.15
Home	59.11	66.72	30.74	57.65	.06

Note. Group care days do not total 365 because 1 youth had 21 days when his whereabouts were unknown. MTFC = multidimensional treatment foster care; GC = group care.

The OYS has followed the lives of 206 boys since they were attending fourth grade in 1983–1984. The sample was chosen solely on the basis of an elevated risk of delinquency in neighborhoods (i.e., greater than the urban area average) in which the boys' schools were located. Thus, although the OYS is not truly normative in the sense that participating boys were drawn only from the highest risk schools in the community, the existence of the OYS provided us with the opportunity to compare MTFC and GC boys against the norms of an at-risk population from the same area.

Computing clinical significance traditionally involves the

comparison of the mean and standard deviation of a normative group on a variable of interest with the mean and standard deviation of a treatment group after discharge. In the case of criminal referrals, however, the use of these simple summary statistics is not justified because of the extreme distribution of referrals. Even in the at-risk OYS sample, the distribution of referrals at any given age generally consisted of outlier and extreme values, with the vast majority of boys having no referrals. Across ages 12–18 years, on average, 81.5% (range = 72.3–89.8%) of the OYS boys had no referrals in a given year. Thus, here we make only simple comparisons between the proportions of MTFC or GC boys with no referrals and the proportion of boys with no referrals in our normative group.

Before placement, boys in MTFC or GC had an average of 7.6 referrals in the prior year ($SD = 5.5$, mode = 5, $Mdn = 5$; 0% had no referrals) compared with OYS boys, who averaged 0.32 referrals in any given year ($SD = 0.98$, mode = 0, $Mdn = 0$; 81.5% had no referrals). Clearly, at baseline the MTFC and GC groups were deviant in terms of the number of referrals. From placement through the year after discharge from treatment, 41% ($n = 15$) of MTFC boys had no referrals. By contrast, only 7% ($n = 3$) of GC boys had no referrals. Although these values are obviously discrepant from the average of 81.5% of boys in OYS who had no referrals in any given year, the MTFC group had moved halfway to the normative OYS value, whereas the GC group had moved little.

Three subscales of the EBC (Elliott et al., 1985) were examined: General Delinquency, Index Offenses, and Felony Assaults. On all three subscales, EBC scores for 1-year postbaseline showed significant differences between the groups, with boys in MTFC reporting significantly fewer criminal activities. The means, standard deviations, and significance levels for the EBC subscales are shown in Table 5.

In hierarchical regression analyses we first entered age at first criminal referral, then age at baseline, then number of delinquent acts self-reported before referral, and finally intervention condition (MTFC or GC) to predict the number of acts self-reported during the year after baseline. First, we examined the General Delinquency subscale, which included 22 items describing a range of property and person crimes. The results of this analysis replicated those found in the analysis of total criminal referrals in that the intervention condition accounted for significant vari-

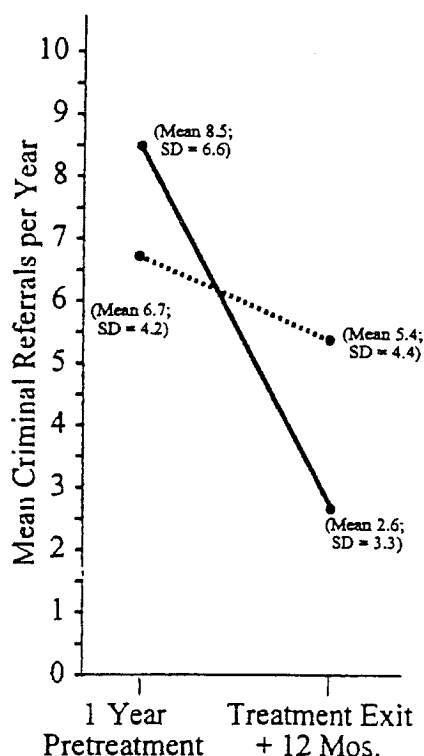


Figure 1. Total number of criminal referrals at baseline and from placement in either multidimensional treatment foster care (solid line) or group care (dotted line) to exit plus 1 year. Mos. = months.

Table 4
Multiple Regression: Official Criminal Referrals

Variable entered	β	R	R^2	t	p	r
Step 1: Age at first criminal referral	0.044	.044	.002	0.15	.88	
Step 2: Age at baseline	0.202	.185	.034	1.34	.18	
Step 3: Annual rate of criminal referrals before referral	0.238	.282	.079	2.16	.03	
Step 4: Group assignment	-2.129	.438	.192	-3.22	.002	
Zero-order correlations with postcriminal referrals						
Age at first referral						.04
Age at baseline						.18
Annual criminal referral rate						.04
Group (MTFC or GC)						.34

Note. MTFC = multidimensional treatment foster care; GC = group care.

ance over and above the contributions made by the age at first criminal referral, age at baseline, and previous rates of general delinquency (see Table 6).

We next examined self-reported rates of index offenses, including nine items describing serious property offenses (e.g., stole a motor vehicle) and person offenses (e.g., aggravated assault). Again, group assignment (i.e., MTFC or GC) contributed significantly to the prediction of the rate of postreferral index crimes over and above the age at first criminal referral, age at baseline, and previous rates of index offenses (see Table 6).

Finally, to assess the effect of the intervention on person crimes, we examined pre- and postintervention rates of the Felony Assaults subscale, which includes three items: aggravated assault, sexual assault, and gang fights. The group assignment variable was a significant predictor of postreferral reports of felony assault rates, even in the context of age at first official offense, age at baseline, and previous rates of felony assault. For all three self-report subscales, the boys' reports of previous rates of criminal activities (i.e., general delinquency, index crimes, and felony assaults) also significantly predicted postreferral rates on those same subscales (see Table 6).

Discussion

Results of this study indicate that participation in MTFC produced more favorable outcomes than participation in GC. Boys ran away less frequently from MTFC than from GC, completed their programs more often, and were locked up in deten-

tion or training schools less frequently. MTFC boys had fewer criminal referrals than boys in GC from the time they were placed through the year after discharge from the programs. They also reported that they committed fewer delinquent acts and fewer violent or serious crimes. Given the high proportion of GC boys who failed to complete their programs (64%) in this sample, traditional GC appears to provide the community with only modest protection from the criminal behavior of program participants.

As has been noted in numerous prospective, longitudinal studies (e.g., Farrington, 1989; Thornberry, Huizinga, & Loeber, 1995), antisocial youths who begin their delinquent careers early in life (i.e., before the age of 14) are at risk for chronic and serious delinquency. Although most of the youngsters participating in this study could be considered early starters, they varied widely in age at first official offense (5.9–16.3 years). We were somewhat surprised not only that MTFC had at least short-term beneficial effects on this difficult group, but also that, despite the range demonstrated by our sample, the age at first official offense did not account for any significant variance in offending rates after treatment. Along similar lines, it was interesting that the age at referral did not account for significant variance in outcomes. The older youngsters responded as well as the younger ones. Taken together, these two analyses suggest that placing even the older, early onset delinquents in fresh, strong, and well-trained families has the potential of changing their delinquent trajectories.

Reviews of the delinquency treatment literature during the 1970s have indicated that interventions with serious delinquents were not successful (e.g., Lipton, Martinson, & Wilks, 1975; Romig, 1978). More recent reviews by Lipsey (1992) and Kazdin (1987) have noted that tightly structured and empirically driven treatments are promising. There is a growing consensus among prevention researchers that the next stage in the development of effective interventions must carefully focus on the multiple domains of antecedents of antisocial developmental trajectories that come into play as the young child moves out of the home and into school and the community (e.g., Bierman, & Conduct Problems Research Group, 1997; Coie & Jacobs, 1993; J. D. Hawkins & Weiss, 1985; Reid, 1993; Reid & Eddy, 1997; Tolan & McKay, 1996). Key among the most proximal antecedents for the development of antisocial behavior patterns during adolescent are poor parental supervision, association with a delinquent peer group, low emotional parental involvement, and

Table 5
Elliott Behavior Checklist Self-Report Scales

Variable	M	SD	$F(1, 77)$	p
General Delinquency				
Group home	28.9	32.4		
MTFC	12.8	20.5	6.5	.01
Index Offenses				
Group home	8.6	11.9	5.3	.03
MTFC	3.2	7.2		
Felony Assaults				
Group home	2.7	3.8	4.1	.05
MTFC	1.2	2.7		

Note. There were 42 boys in GC and 37 in MTFC. GC = group care; MTFC = multidimensional treatment foster care.

Table 6
Multiple Regression: Self-Reports of Criminal Behavior

Variable	β	R	R ²	t	df	p
General delinquency						
Age at first criminal referral	0.096	.096	.009	0.66	1, 77	.51
Age at baseline	0.121	.142	.020	0.73	2, 76	.47
Prereferral rate of general delinquency	0.418	.436	.190	5.41	3, 75	.000
Group (MTFC or GC)	-0.234	.491	.241	-2.14	4, 74	.036
Index crimes						
Age at first criminal referral	0.028	.028	.008	0.05	1, 77	.955
Age at baseline	0.121	.109	.012	0.42	2, 76	.672
Prereferral rate of index crimes	0.303	.318	.101	2.60	3, 75	.011
Group (MTFC or GC)	-0.238	.392	.154	-2.05	4, 74	.044
Felony assaults						
Age at first criminal referral	0.032	.032	.001	0.07	1, 77	.942
Age at baseline	0.025	.038	.002	0.05	2, 76	.958
Prereferral rate of felony assault	0.361	.363	.135	3.48	3, 75	.000
Group (MTFC or GC)	-0.265	.442	.196	-2.33	4, 74	.023

Note. MTFC = multidimensional treatment foster care; GC = group care.

school failure (Cairns & Cairns, 1994; Elliot et al., 1985; Patterson et al., 1992). The linchpin in the MTFC intervention is not a therapist or social skills trainer but the foster parent. The foster family is carefully selected, trained, and heavily supported to monitor the youngster closely and continuously in the home, at school, and in the community. Behavioral expectations at home, at school, and in the neighborhood are well specified, as are the consequences for achievements and rule breaking. A key preoccupation in the program is to insulate youngsters from contact with other delinquents and to promote activities that will bring them into relationships with less troubled youths. It is the confluence of these elements that we think differentiates MTFC from group care and perhaps from other treatment foster programs. These same elements also characterize MST, another promising intervention for delinquent youngsters.

Compared with individual treatment, Henggeler and colleagues (e.g., Borduin et al., 1995) have reported positive and persistent effects using MST for samples of juvenile offenders who were living at home and had less advanced criminal histories than the boys enrolled in our study (i.e., in the Simpsonville sample, referral criteria were at least one arrest for a violent crime or at least three arrests for nonviolent crimes; in the Columbia sample, it was at least two arrests; Borduin et al., 1995; Henggeler et al., 1992). Although the aim of MST is to prevent the removal of youths from their family home and although MTFC treats youths after removal by authorities has been made, the two interventions have much in common. Both interventions target multiple settings (e.g., home, school, community) and determinants (e.g., deviant peer relations, parental supervision). Both are delivered with high ecological validity in community (vs. clinical laboratory) settings. Finally, both emphasize the importance of the parental (or other adult caregiver) role in providing the youngster with consistent close supervision, limit setting, and emotional involvement and support. In terms of a continuum of care, MTFC is an alternative to residential placement to be used in instances in which family preservation programs, such as MST, have not been successful or when the youngster is perceived to pose too great a threat to the community to remain in the family home.

During the 15 years that we have conducted the MTFC program model in the community, we have been pleased by the response from strong, tightly knit families that were willing to accept training and supervision and to provide a substitute nuclear family experience for program boys. Because of the participation of such commendable families, it is indeed possible that the effects observed in this study were in significant part attributable to a sustained, mentoring relationship with a strong parental figure. Indeed, it was these parents who were the main treatment agents. The MTFC program staff acted as backup to the substitute parents, as consulting behavioral engineers and strategists to help them actually carry out the important things that most parents do for nondelinquent youngsters. In this study, we did not examine potential differences in either the selection or training of MTFC parents and GC staff. If systematic differences in these areas were present, they might account for treatment effects and should be examined in future research. In many ways, the MTFC program was designed to alter behavior in several critical social domains. Not only were the boys taught to be responsible members of the foster families, but the MTFC parents also used behavior management strategies to get them to attend school regularly, to improve their relationships with teachers and peers, and to do their homework. The boys had frequent and structured contacts with parents and relatives while they were in the program, and these contacts were used to teach the boys' family members procedures that were successful in the foster homes. The MTFC program model, although a form of residential treatment, had high ecological validity in that the characteristics of the living and social environments in which boys participated closely resembled that to which they returned after placement. Although the MTFC intervention appears powerful as a package, at least in the short term, it is not possible to determine whether certain components are potent and others superfluous.

In summary, our findings indicate that relative to GC, MTFC was effective in the short run at reducing criminal activity for serious juvenile offenders but that longer term outcomes remain to be demonstrated. Note that the interventions were conducted only for boys in a medium-size metropolitan area with sur-

rounding rural communities and had only 15% minority participants. Further empirical work is needed to examine whether the treatment effects could be generalized to larger cities, to female delinquents, and to populations with a larger proportion of minority participants. Although the MTFC intervention was developed to target several well-known antecedents of delinquency, additional research must be conducted to determine whether there are specific program components that best predict success or failure in follow-up years. On the basis of our findings, and those of other studies reviewed here, it is becoming clear that developmentally appropriate, intensive, and individualized family focused treatment is both feasible and superior to GC at any point in the developmental trajectory of antisocial youngsters.

References

Bank, L., Marlowe, J. H., Reid, J. B., Patterson, G. R., & Weinrott, M. R. (1991). A comparative evaluation of parent training for families of chronic delinquents. *Journal of Abnormal Child Psychology*, 19, 15-33.

Bierman, K. L., & Conduct Problems Research Group. (1997). Implementing a comprehensive program for the prevention of conduct problems in rural communities: The fast track experience. *American Journal of Community Psychology*, 25, 493-514.

Blumstein, A., & Cohen, J. (1979). Estimation of individual crime rates from arrest records. *Journal of Criminal Law and Criminology*, 70, 561-585.

Borduin, C. M., Mann, B. J., Cone, L. T., Henggeler, S. W., Fucci, B. R., Blaske, D. M., & Williams, R. A. (1995). Multisystemic treatment of serious juvenile offenders: Long-term prevention of criminality and violence. *Journal of Consulting and Clinical Psychology*, 63, 569-578.

Cairns, R. B., & Cairns, B. D. (1994). *Lifelines and risks: Pathways of youth in our times*. Cambridge, England: Cambridge University Press.

Capaldi, D. M., & Patterson, G. R. (1996). Can violent offenders be distinguished from frequent offenders: Prediction from childhood to adolescence. *Journals of Research in Crime and Delinquency*, 33, 206-231.

Chamberlain, P. (1990). Comparative evaluation of specialized foster care for seriously delinquent youths: A first step. *Community Alternatives: International Journal of Family Care*, 2, 21-36.

Chamberlain, P. (1994). *Family connections: Treatment foster care for adolescents with delinquency*. Eugene, OR: Castalia.

Chamberlain, P. (1996). Treatment foster care for adolescents with conduct disorders and delinquency: The Oregon Social Learning Center Monitor Program. In E. D. Hibbs & P. S. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders* (pp. 475-490). Washington, DC: American Psychological Association.

Chamberlain, P., Ray, J., & Moore, K. J. (1996). Characteristics of residential care for adolescent offenders: A comparison of assumptions and practices in two models. *Journal of Child and Family Studies*, 5, 259-271.

Chamberlain, P., & Reid, J. B. (1991). Using a specialized foster care treatment model for children and adolescents leaving the state mental hospital. *Journal of Community Psychology*, 19, 266-276.

Coie, J. D., & Jacobs, M. R. (1993). The role of social context in the prevention of conduct disorder. *Journal of Development and Psychopathology*, 5, 263-275.

Craft, M., Stevenson, G., & Granger, C. (1964). A controlled trial of authoritarian and self-governing regimes with adolescent psychopaths. *American Journal of Orthopsychiatry*, 34, 543-554.

DeBaryshe, B. D., Patterson, G. R., & Capaldi, D. M. (1993). A performance model for academic achievement in early adolescent boys. *Developmental Psychology*, 29, 795-804.

DiJulio, J. J. (1995, May). *Net repairing: Rethinking incarceration and intermediate sanctions—A comment on Professor Joan R. Petersilia, "Diverting nonviolent prisoners to intermediate sanctions."* Paper presented at the Conference on the Future of Criminal Justice Policy in California, Berkeley, CA.

Elliott, D. S., Ageton, S. S., Huizinga, D., Knowles, B. A., & Canter, R. J. (1983). *The prevalence and incidence of delinquent behavior: 1976-1980. National estimates of delinquent behavior by sex, race, social class, and other selected variables—The National Youth Survey Report* (Rep. No. 26). Boulder, CO: Behavior Research Institute.

Elliott, D. S., Huizinga, D., & Ageton, S. S. (1985). *Explaining delinquency and drug use*. Beverly Hills, CA: Sage.

Elliott, D. S., & Voss, H. (1974). *Delinquency and dropout*. Lexington, MA: Heath.

Erickson, M. L., & Empey, L. T. (1963). Court records, undetected delinquency and decision-making. *Journal of Criminal Law, Criminology, and Police Science*, 54, 456-469.

Farrington, D. P. (1989). Early predictors of adolescent aggression and adult violence. *Violence and Victims*, 4, 79-100.

Gold, M. (1963). *Status forces in delinquent boys*. Ann Arbor: University of Michigan, Institute for Social Research.

Greenwood, P. W., Model, K. E., Rydell, C. P., & Chiesa, J. (1996). *Diverting children from a life of crime: Measuring costs and benefits*. Santa Monica, CA: RAND.

Hawkins, J. D., & Weiss, J. G. (1985). The social development model: An integrated approach to delinquency prevention. *Journal of Primary Prevention*, 6, 71-97.

Hawkins, R. P., Meadowcroft, P., Trout, B. A., & Luster, W. C. (1985). Foster family-based treatment. *Journal of Clinical Child Psychology*, 14, 220-228.

Henggeler, S. W., Melton, G. B., & Smith, L. A. (1992). Family preservation using multisystemic therapy: An effective alternative to incarcerating serious juvenile offenders. *Journal of Consulting and Clinical Psychology*, 60, 953-961.

Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59, 12-19.

Kazdin, A. E. (1987). Treatment of antisocial behavior in children: Current status and future directions. *Psychological Bulletin*, 102, 187-203.

Kazdin, A. E. (1993). Treatment of conduct disorder: Progress and directions in psychotherapy research. *Development and Psychopathology*, 5, 277-310.

Kendall, P. C., & Grove, W. M. (1988). Normative comparisons in therapy outcome. *Behavioral Assessment*, 10, 147-158.

Lipsey, M. W. (1992). Juvenile delinquency treatment: A meta-analytic inquiry into the variability of effects. In T. D. Cook, H. Cooper, D. S. Cordray, H. Hartman, L. V. Hedges, R. T. Light, T. A. Louis, & F. Mosteller (Eds.), *Meta-analysis for explanation: A casebook* (pp. 83-127). New York: Russell Sage Foundation.

Lipton, D., Martinson, R., & Wilks, J. (1975). *The effectiveness of correctional treatment*. New York: Praeger.

Mayer, W. G. (1992). *The changing American mind*. Ann Arbor: University of Michigan Press.

Moffitt, T. E. (1993). The neuropsychology of conduct disorder. *Development and Psychopathology*, 5, 135-151.

Patterson, G. R., Chamberlain, P., & Reid, J. B. (1982). A comparative evaluation of parent training procedures. *Behavior Therapy*, 13, 638-650.

Patterson, G. R., Dishion, T. J., & Chamberlain, P. (1993). Outcomes and methodological issues relating to treatment of antisocial children. In T. R. Giles (Ed.), *Handbook of effective psychotherapy* (pp. 43-88). New York: Plenum.

Patterson, G. R., Reid, J. B., & Dishion, T. J. (1992). *A social learning approach: IV. Antisocial boys*. Eugene, OR: Castalia.

Reid, J. B. (1993). Prevention of conduct disorder before and after

- school entry: Relating interventions to development findings. *Journal of Development and Psychopathology*, 5, 243-262.
- Reid, J. B., & Eddy, J. M. (1997). The prevention of antisocial behavior: Some considerations in the search for effective interventions. In D. M. Stoff, J. Breiling, & J. D. Maser (Eds.), *The handbook of antisocial behavior* (pp. 343-356). New York: Wiley.
- Romig, D. A. (1978). *Justice for our children*. Lexington, MA: Lexington Books.
- Thornberry, T. P., Huizinga, D., & Loeber, R. (1995). The prevention of serious delinquency and violence: Implications from the program of research on the causes and correlates of delinquency. In J. C. Howell, B. Krisberg, J. D. Hawkins, & J. J. Wilson (Eds.), *Sourcebook on serious, violent, and chronic juvenile offenders* (pp. 213-237). Thousand Oaks, CA: Sage.
- Tolan, P. H., & McKay, M. M. (1996). Preventing serious antisocial behavior in inner-city children: An empirically based family intervention program. *Family Relations*, 45, 148-155.
- U.S. Bureau of Justice Statistics. (1993). *Sourcebook of criminal justice statistics* (20th ed.). Washington, DC: U.S. Department of Justice.
- Vorrath, H., & Brendtro, L. K. (1985). *Positive peer culture*. Chicago: Aldine.
- Wahler, R. G. (1980). The insular mother: Her problems in parent-child treatment. *Journal of Applied Behavior Analysis*, 13, 207-219.
- Wahler, R. G., & Fox, J. J. (1980). Solitary toy play and time out: A family treatment package for children with aggressive and oppositional behavior. *Journal of Applied Behavior Analysis*, 13, 23-39.
- Webster-Stratton, C. (1989). Systematic comparison of consumer satisfaction of three cost-effective parent training programs for conduct problem children. *Behavior Therapy*, 20, 103-116.
- Wolf, M. M., Braukmann, C. T., & Ramp, K. A. (1987). Serious delinquent behavior as part of a significantly handicapping condition: Cures and supportive environments. *Journal of Applied Behavior Analysis*, 20, 347-359.

Received May 6, 1997

Revision received September 26, 1997

Accepted January 13, 1998 ■



AMERICAN PSYCHOLOGICAL ASSOCIATION SUBSCRIPTION CLAIMS INFORMATION

Today's Date: _____

We provide this form to assist members, institutions, and nonmember individuals with any subscription problems. With the appropriate information we can begin a resolution. If you use the services of an agent, please do NOT duplicate claims through them and directly to us. **PLEASE PRINT CLEARLY AND IN INK IF POSSIBLE.**

PRINT FULL NAME OR KEY NAME OF INSTITUTION _____

MEMBER OR CUSTOMER NUMBER (MAY BE FOUND ON ANY PAST ISSUE LABEL) _____

ADDRESS _____

DATE YOUR ORDER WAS MAILED (OR PHONED) _____

CITY _____

STATE/COUNTRY _____

ZIP _____

☐ PREPAID ☐ CHECK ☐ CHARGE
CHECK/CARD CLEARED DATE: _____

YOUR NAME AND PHONE NUMBER _____

(If possible, send a copy, front and back, of your cancelled check to help us in our research of your claim.)

ISSUES: ☐ MISSING ☐ DAMAGED

TITLE _____

VOLUME OR YEAR _____

NUMBER OR MONTH _____

_____	_____	_____
_____	_____	_____
_____	_____	_____

Thank you. Once a claim is received and resolved, delivery of replacement issues routinely takes 4-6 weeks.

(TO BE FILLED OUT BY APA STAFF)

DATE RECEIVED: _____
ACTION TAKEN: _____
STAFF NAME: _____

DATE OF ACTION: _____
INV. NO. & DATE: _____
LABEL NO. & DATE: _____

Send this form to APA Subscription Claims, 750 First Street, NE, Washington, DC 20002-4242

PLEASE DO NOT REMOVE. A PHOTOCOPY MAY BE USED.