

A Controlled Study of Foster Children with Emotional/Behavioral Disturbances: Equivalence of Groups Across Characteristics

Introduction

Many children with emotional/behavioral disturbances are adjudicated dependent, remain in the foster care system for years, experience frequent transfers from one placement to another, and make little or no progress toward reunification or adoption, or toward improved emotional/behavioral adjustment. The Fostering Individualized Assistance Program (FIAP) was developed to provide individualized wraparound supports and services to foster children with emotional/behavioral disturbances and to their families (i.e., foster, biological, and/or adoptive). The outcomes hoped for were a decrease in the rate of placement changes, improvement in emotional/behavioral adjustment, and an increase in the likelihood of family reunification or other permanency arrangements.

The FIAP intervention was evaluated in a controlled, random-assignment study, which compared a sample of at-risk children receiving the individualized, wraparound process (FIAP group, $n = 54$) with a comparable sample of children experiencing practices that are standard in the foster care system (SP group, $n = 78$). The initial demographic variables, scores on certain normed instruments, and history of family and child risk factors, are presented in this article to evaluate equivalence of the two randomly established groups (FIAP and SP) to each other, and to the populations of children with emotional/behavioral disturbances found in other major studies.

Methods

Subjects and Settings

The target population was children in foster homes or group shelter care at the start of the study who had, or were at risk of having, emotional/behavioral disturbances (EBD). Foster

Barbara Lee, Ph.D.
Julie M. Hartman, M.S.W.
Kristin Knapp, Ph.D.
Richard A. Foster, M.A.
Martin Factor
L. Adlai Boyd, Ph.D.
Hewitt B. Clark, Ph.D.
Department of Child and Family Studies
Florida Mental Health Institute
University of South Florida
13301 Bruce B. Downs Blvd.
Tampa, FL 33612-3899
813/974-4487 Fax: 974-4406
E-mail: lee@hal.fmhi.usf.edu

For additional information regarding this study and its outcome findings, write Hewitt B. "Rusty" Clark at the address above.

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care caseworkers completed screening checklists of risk factors identified in previous research (Boyd, Struchen, & Panacek-Howell, 1989) for children in their caseloads between the ages of 7-15, without mental retardation. The “at risk” pool was identified as those children having at least three major risk factors, and 132 children were randomly assigned from this at risk pool to either the FIAP or the SP group.

Data Sources and Analyses

All children and their caregivers in both groups were interviewed in their homes every six months by trained interviewers blind to the group assignments. Both normed instruments such as the Child Behavior Checklist (Achenbach & Edelbrock, 1983) and structured interviews were used. Additional data was obtained from computerized records of foster care placement and delinquency histories, case records, and school records. Differences between groups were tested by Chi-square analysis, and one- or two-way ANOVAs, as appropriate to the data.

Results

Severity and Equivalence of FIAP and SP Groups

There were no significant differences between FIAP and SP groups in the proportion of males vs. females, Whites vs. non-Whites, or in the number of children in each of three age groups (See Table 1). Also, there were no significant differences in the average age of children in FIAP vs. SP groups (11.8 vs. 11.6 yrs.), time in foster care prior to entry into the study (31.6 vs.

30.7 months), or number of placement changes in foster care, per child per year, prior to the study (3.7 vs. 4.2). However, youth ages 13-15 had significantly higher residential placement change rates (6.02 and 6.50) than the other two age groupings ($f = 18.8, df = 2, 126, p = .000$).

All scores on both the CBCL and YSR (Youth Self Report) were reported as *T* scores, with a mean of 50 and standard deviation of 10, in order to combine results from both genders and all age groups. The FIAP and SP groups were not significantly different at entry into the study in total behavior problem *T* scores on either CBCL or YSR. This similarity between FIAP and SP groups also held for the externalizing syndromes on both instruments. The only significant difference between groups was for the internalizing syndrome on the CBCL, for which the SP group had lower *T* scores on the internalizing syndrome than the FIAP group ($\bar{X}_{SP} = 60.0, \bar{X}_{FIAP} = 64.5; p = .02$).

Table 1
Group Demographics at Start of Study

	FIAP <i>n</i> = 54		SP <i>n</i> = 78	
Ethnicity				
White	31	57%	50	64%
Non-white ¹	23	43%	28	36%
Gender				
Male	32	60%	48	61%
Female	22	41%	30	39%
Age groups				
7-9 years	16	30%	27	35%
10-12 years	16	30%	23	30%
13-15 years	22	41%	28	36%

¹ 'Non-white' includes 2 Hispanic youth in both FIAP and SP groups, and 2 bi-racial youth in FIAP.

Equivalence of Risk Factors

Comparison with Other Populations of Youth with EBD

A comparison of the FIAP study sample to the samples in each of two important national studies was made. The first study used was the 812 children in the National Adolescent and Child Treatment Study (NACTS; Silver, Duchnowski, Kutash, Friedman, Eisen, Prange, Brandenburg, & Greenbaum, 1992). Youth in the NACTS sample had all been identified by the school systems as severely emotionally disturbed (SED), and were receiving special educational services for SED, or were receiving publicly funded residential mental health services.

A second comparison was made with a sub-sample of 87 youth from the Alternatives to Residential Treatment Study (ARTS; Duchnowski, Johnson, Hall, Kutash, & Friedman, 1993). Like NACTS, the youth in ARTS were all enrolled in programs considered to be “deep end” placements (primarily residential programs), and were all identified as having emotional disabilities. The youth in the FIAP

study, compared to either the NACTS or ARTS samples, were in less restrictive placement settings, with none currently in mental health treatment settings and only 57% receiving ED/BD school services at entry to this study.

As shown in Table 2, there were some demographic differences between the FIAP study sample and the NACTS and ARTS samples. By comparison, the FIAP study sample was younger (mean = 11.7, range = 7-15 yrs), compared to the sample in NACTS (mean = 13.9, range = 8-18 yrs) and ARTS (mean = 14.2, range = 7-18 yrs). Also, compared to either the NACTS or ARTS samples, the FIAP study sample was less dominated by males (FIAP = 60%, NACTS = 75%, and 64% for ARTS), and had a larger proportion of ethnic minorities (FIAP = 39% minorities, compared with just 29% for both ARTS and NACTS).

The FIAP sample had a mean total problem T score on the YSR of 61.1, almost exactly the same as that reported for the ARTS sample (62.2). On the CBCL, the total problem score mean was

67.4 for the FIAP sample, compared to 71.5 for ARTS, a difference of less than 0.5 SD. The CBCL externalizing syndrome scores for the FIAP study sample (mean = 68.2) were slightly, but not significantly, lower than those of school-based (mean = 69.8) vs. residential (mean = 72.9) NACTS children. CBCL internalizing syndrome scores for the FIAP study (mean = 61.8) were lower than that reported for

Table 2
CBCL and YSR Scores or Clinical Ranges
Compared to Other EBD Populations.

	FIAP	ARTS	NACTS	
			School	Residential
T scores:				
CBCL				
Externalizing	68.2	---	69.8	72.9
Internalizing	61.8	---	66.6	71.6
Total Problem score	67.4	71.5	---	
YSR				
Total Problem score	61.1	62.2	---	
T score 60 or above:				
CBCL % clinical	81%	98%	---	
YSR % clinical	59%	66%	---	

both school-based and residential children in NACTS (mean = 66.6, and mean = 71.6 respectively).

Using the same total problem score cutoffs used by ARTS to classify their sample into probably “normal” ($T < 60$) or “deviant” (see Achenbach, 1991 for discussion of comparison populations), caregivers rated 81% of the FIAP sample’s behavior as deviant (compared to 98% for ARTS), and 59% of the youth rated their own behaviors as deviant (compared to 66% of the ARTS youth).

Family History Risk Factors for FIAP Children.

At entry to the FIAP study, the average time in foster care for FIAP study children exceeded the 18 months legally mandated by the State of Florida by over a year (FIAP = 31.6 months, SP = 30.7 months), ranging from 3 months to 7.5

years. While in foster care, the average child experienced 4 residential placement changes per year (excluding brief runaway episodes; FIAP = 3.7, SP = 4.2). There was a significant difference between the two study counties, (5.2 vs. 3.3 changes/year) with the higher rate occurring in the more urban county ($f = 7.7, df = 1,130, p < .01$), but there were no significant differences between the FIAP and SP groups.

More of the FIAP study sample had experienced out-of-home placements specifically due to abuse and/or neglect reports in the period prior to the study, 72% of a subsample of 87 from one urban county, compared to 56% of the ARTS sample. Over 50% of that sub sample ($n = 63$) had records of 4 or more abuse investigations each (range = 2-14). Child protection investigations found that for only 17% of the youth were no

specific indications confirming the abuse or neglect—no investigations were closed as having no indications.

Many of the FIAP study children reported family and environmental factors that could suggest higher risk for emotional/behavioral disturbances (See Table 3). On the initial interview, 43% of the children reported one or more members of their family had serious substance abuse problems, 54% reported a family member had been incarcerated, 21% reported a family member had a history of suicide attempts or psychiatric

Table 3
Family Risk Factors and Child History for FIAP and SP Groups

Family risk factors	FIAP		SP	
	<i>n</i> = 54		<i>n</i> = 78	
Incarceration	27	50%	44	56%
History of emotional disturbance	24	44%	34	44%
Substance abuse	22	41%	35	45%
Psychiatric hosp./suicidal	14	21%	14	21%
Child history factors				
Time out of home	31.6 mos		30.7 mos	
Placement changes/year	3.7		4.2	
Urban county	5.1		5.3	
Rural county	2.8		3.6	
Abuse/neglect investigations (n=87, urban only)	72%		73%	
Mean investigations/child	4.5		3.9	
Special education	49%		62%	

Equivalence of Risk Factors

hospitalization, and 44% reported a parent with serious emotional disturbance (no differences between FIAP and SP groups were statistically significant across those variables; $p > .05$).

Conclusions and Interpretation

It is apparent from the data presented and from other indicators such as high levels of involvement with the juvenile justice system (Lee, Clark, & Boyd, 1993), and use of psychotropic medications, that the children in the FIAP study showed high levels of EBD, close to that of other identified EBD populations (NACTS and ARTS). Although there was one significant difference on sub-scale scores of the CBCL and YSR between FIAP and SP groups, the preponderance of evidence on adjustment scores and other indicators shows close equivalence of the FIAP and SP groups to each other. Thus, it seems reasonable to conclude that the randomization to control and experimental groups was successful, as was the selection process for identifying a population of EBD children from a general foster care population.

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Impact of an Experimental Foster Care Intervention on Emotional and Behavioral Adjustment: Examination of Preliminary Outcomes Using Growth Curve Analysis

Overview

Over the past several decades, foster care has been expected to be a major solution to the plight of children who were neglected, abused, or abandoned by their families of origin. However, despite many attempts toward meeting the mandates (e.g., permanency, preventing out-of-home placements) of the Adoption Assistance and Child Welfare Act of 1980 (P.L. 96-272), it has been widely asserted that the foster care system is a part of the problem besetting these children (e.g., Bryant, 1993).

Despite evidence from providers and administrators of foster care services that over ninety percent of all children in out-of-home care ultimately return home (“Keeping families together,” 1993), models of family-focused-permanency planning that include family preservation, reunification, and a family-focused therapy orientation have not been consistently incorporated into services for children residing in out-of-home placements. When family-focused programs of family preservation have been tried, improved child placement rates have been obtained. In a review of samples comprised primarily of child welfare cases, placement outcomes were improved with programs that emphasized therapeutic interventions with the family versus program models that emphasized community, and concrete services or crisis intervention (Nelson, Landsman, & Deutelbaum, 1990).

There has also been a call for the children’s service system to adopt alternative values and therapeutic interventions with children and families in order to provide for the protection, nurturance, and development of children and to ensure the integrity of their families (e.g., Boyd, 1992). The Fostering

Mark R. Rose, M.A.
Mark E. Prange, Ph.D.
Paul E. Greenbaum, Ph.D.
Hewitt B. Clark
*Department of Child and
Family Studies
Florida Mental Health Institute
University of South Florida
13301 Bruce B. Downs Blvd.
Tampa, FL 33612-3899*

Individualized Assistance Program (FIAP) study was designed to implement, and to investigate the effects of, an individualized, case-managed, family-focused collaborative intervention with children and their families—natural, relative, foster, or adoptive—in the child welfare system (Clark & Boyd, 1990, 1992). This summary provides preliminary outcome data for a controlled experiment, with random assignment, with a group of children in foster care who received FIAP services and a comparable group who were supported by practices standard to the foster care system. More specifically, findings from analyses of children's wave 1 (time of entry into the study) through wave 7 (3 years after entry) Youth Self-Report (YSR; Achenbach, 1991) data using growth curve analysis (Bryk & Raudenbush, 1992) are reported and the implications of these findings are discussed.

Method

Subjects

Children in the state foster care system were eligible for inclusion in this study if they were (a) in temporary custody of the state, due to having been abused or neglected; (b) 7 years to 15 years old; (c) living in a regular foster home or in an emergency foster shelter facility; and (d) having behavioral and emotional disturbances, or at risk of such, as defined by several behavioral screening indicators (e.g., potential harm to self or others, use of drugs and/or alcohol, engagement in abnormal sexual behavior). Children from this pool were selected using a computer-generated random-number system and assigned to the FIAP enhanced services group or the standard practice (SP) control group. To compensate for a predicted higher attrition rate within the SP group (e.g., due to extended runaways or voluntary dropouts), approximately 50% more subjects were randomly assigned to the SP group than to the FIAP group.

A total of 132 foster children participated, 54 assigned to FIAP and 78 assigned to SP.

Intervention Conditions

Standard Practice Group (control group). The standard practice control group received the prevailing care, support, and services that the state system provides to children who have been adjudicated as dependent and placed in the foster care system.

FIAP Group (experimental group). The FIAP group received services aimed at improving behavioral/emotional adjustment and placement stability, in addition to services received by the standard practice group. These additional services consisted of four major components: strength-based assessment, life-domain planning, clinical case management, and follow-along supports and services (Clark, Prange, Lee, Boyd, McDonald, & Stewart, 1994; McDonald, Boyd, Clark, & Stewart, 1994).

Data Collection and Instrumentation

Data on behavior problems were collected through interviews, conducted at six month intervals for three years (seven waves of data including the first data collection). The data analyzed for this summary were provided by the youths themselves who completed the Youth Self-Report (YSR; Achenbach, 1991). Specifically, we analyzed the YSR Total Problems Scale which was composed of eight problem subscales: (1) withdrawn, (2) somatic complaints, (3) anxious/depressed, (4) social problems, (5) thought problems, (6) attention problems, (7) delinquent behavior, and (8) aggressive behavior.

Analysis

The specific analyses performed consisted of a sequential progression of analyses using two

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through seven waves of YSR data with treatment condition, age, and gender as second-stage or between-subject factors. The first analysis utilized two waves of data, comparing subjects change between waves 1 and 2. For each subsequent analysis, one wave of data was added (e.g., the second analysis, utilizing three waves of data, compared subjects change for waves 1 through 3). This sequence was followed until the final analysis, which utilized all of the current data collected on subjects. Growth curve analysis was used for all analyses except for the analysis of change between waves 1 and 2 which was done using a repeated measures ANOVA. The necessary minimum of three waves of data precluded the use of growth curve analysis in this instance.

Growth curve analysis, known as hierarchical linear modeling, random regression modeling, random effects modeling, “multi-level” modeling, and empirical Bayes modeling, was the primary statistical method chosen for analyzing data. The growth curve approach offers several major advantages compared to more traditional means for analyzing longitudinal data such as repeated measures ANOVA. Specifically, (a) growth curve analysis places explicit focus on how individuals change in addition to how groups change, (b) growth curve analysis is flexible with regard to the treatment of missing data; it is not necessary for subjects to have data across all waves of collection in order to be included in the analysis, and (c) the assumptions underlying the growth curve approach are more realistic than those underlying more traditional approaches (Bryk & Raudenbush, 1992; Gibbons et al., 1993; Hedecker, 1993).

Growth Curve Analysis. In the growth curve framework, change is represented in a two-stage model encompassing both within- and between-subject factors (Bryk & Raudenbush, 1992). In

the first stage, each person’s observed scores are modeled as a function of an individual growth function (i.e., within subjects) plus random error. When these growth functions, which may be linear or non-linear, are applied to each individual’s observed scores, they produce trend patterns for each individual subject (each subject’s personal change pattern). These individual trend patterns are outcomes to be explained in the second stage of analysis. In the second stage, the parameter estimates (e.g., the slopes) describing the individual trend lines, are tested for variation as a function of group differences (i.e., between subject factors such as treatment condition, gender, and age).

Results

Results of the analyses showed that scores from both groups of subjects decreased significantly over time indicating improvement in emotional/behavioral adjustment (e.g., for the wave 1 through wave 7 analysis, $t = -6.41$, $p = .000$). In addition, a significant treatment effect ($F = 3.95$, $p = .049$) in favor of FIAP was shown for the period between waves 1 (entry into study) and 2 (6 months later). This main effect of treatment, however, was not present in results of the analyses from later waves. Instead, results of all analyses from waves 1 through 3 up to waves 1 through 6 indicated that a marginally significant interaction for the effect of status by age by gender on individual change patterns was present. This interaction was found to be significant in the wave 1 through 7 growth curve analysis discussed in detail below.

Wave 1 Through Wave 7 Growth Curve Analysis

In the growth curve analysis for waves 1 through 7, we included an intercept parameter (i.e., where children start out) and a linear slope parameter (i.e., children’s linear change over time) to model children’s individual-level YSR change

patterns. Additionally, it was made apparent through a series of preliminary tests and procedures, including the plotting of individual's YSR scores over time, that while many children exhibited linear patterns of change, many others exhibited curvilinear patterns of change. Therefore, a quadratic parameter was also used to model individual-level YSR change patterns. A sample of the plots used to determine the parameters employed in the level-1 model is presented in Figure 1. Subject A in Figure 1 shows a linear change pattern while Subject B's change pattern is curvilinear, indicating the need for both linear and quadratic parameters.

Results of the first stage of this analysis (i.e., specifying the model of individual change patterns) indicated that significant variation existed in individual change patterns. Results of the second stage of this analysis (i.e., examination of individual change patterns in relation to group-level variables) showed a significant interaction for the effect of status by age by gender on these

individual change patterns ($t = -2.24, p = .025$). This interaction indicates that efficacy of the FIAP intervention depends on the subjects' age and gender. For older FIAP males and younger FIAP females, there was a significantly greater decline in YSR scores compared to their SP counterparts.

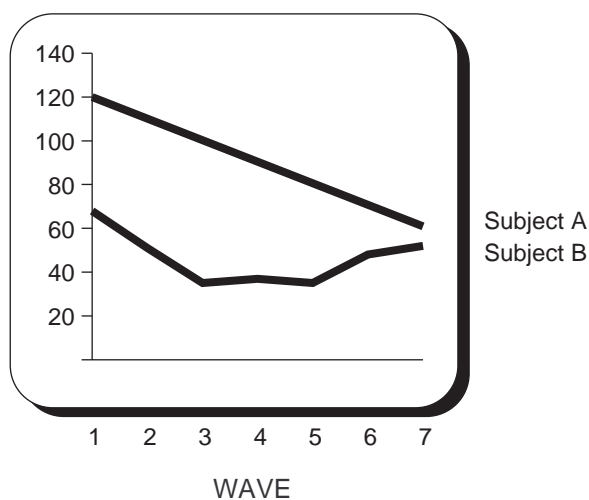
Conclusion

Results of the analyses showed that the FIAP intervention accelerated positive change in emotional/behavioral adjustment for children between waves 1 and 2, and this greater rate of positive change endured for older FIAP males and younger FIAP females, relative to their SP counterparts.

From a systems perspective, older adolescents were more likely to have children—and while females are usually encouraged to remain in the foster care system for the benefit of their child—their male counterparts may be more likely to be promoted to live independently. Because the FIAP intervention was specifically designed to provide support and encouragement for the transition from foster care assistance to independent living, (or to obtain stable placements within the foster care system), it makes some clinical sense that older FIAP males would show greater improvement compared to their standard practice counterparts who may not get this support. The significant impact for younger FIAP versus standard practice females appears to have no direct ties to the specific type of supports given by the FIAP intervention. Possibly this reflects the over-representation of female family specialists who bonded more readily with same sex younger FIAP youth.

These small effects regarding clinical adjustment outcomes may be understandable in light of the complexities involved in use of a non-intensive therapeutic intervention to improve

Figure 1
YSR TotalProblem Raw Scores *



* Two sample individuals

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clinical adjustment with extremely challenging children and their families (e.g., Bickman, 1993; Cross, Fallon, Gardner, Adnopoz, & Saxe, 1992). As wraparound systems of care strategies are refined and ameliorated, as family systems therapy is incorporated more adequately (Henggeler, Melton, Smith, & Schoenwald, 1993), and as personnel selection, clinical training, and field supervision methods are strengthened, the fidelity of the individualized wraparound approach should be improved.

In addition to these results, it should be noted that the impact of FIAP on placement-related outcomes has been substantial (Clark, Lee, & Prange, in press; Clark, Prange, Lee, Boyd, McDonald, & Stewart, 1994). Although tentative at this time, the interim outcome results suggest that: (1) FIAP children are significantly less likely to change placements than are those in the SP group; and (2) FIAP children are significantly more likely than SP children to be in permanency settings with their parents, relatives, adoptive parents, or living on their own. Data also suggest that FIAP children in permanency placements tend to show better emotional/behavioral adjustment than do SP children in permanency placements (Clark, Prange, Lee, Boyd, McDonald & Stewart, 1994). Examinations of community adjustment indicators for subsets of children who have any history of runaways or incarceration, suggest that the FIAP children are showing trends for fewer days in both of these areas (Clark, Lee, & Prange, in press; Clark, Prange, Lee, Boyd, McDonald, & Stewart, 1994). A continuing increase in incarceration days and other deep-end placements by the SP group may ultimately demonstrate the FIAP intervention to be cost effective.

This study also demonstrates some advantages of the growth curve approach for analyzing longitudinal data. The explicit focus on individual,

as well as group change patterns, provides a conceptual focus not offered by more traditional statistical methods. The information provided by this approach on inter-individual variation in personal change patterns and differences in the shape of these patterns (e.g., linear versus quadratic), suggests improved conceptualization. Also, a greater number of subjects included and more realistic assumptions in the HLM analyses resulted in increased statistical power relative to more traditional analyses.

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Examining the Nature of the Independent Variable in a Controlled, Wraparound Foster Care Study: What Worked and Why?

Introduction

The Fostering Individualized Assistance Program (FIAP) was designed to study the outcomes of provision of highly individualized, wraparound services (the independent variable) versus standard practice for two randomly assigned groups of children with severe emotional disturbance in out-of-home foster care (FIAP group, $N = 54$; Standard Practice group, $N = 78$).

For each FIAP child, one of four Family Specialists (FSs) was asked to do whatever was necessary, usually through teams of adults influential in the lives of their clients, to: (1) identify the strengths and needs of each child and the potential permanent placement family; (2) devise and implement a service plan capitalizing on both strengths and needs of each child and family (across 12 life domains); (3) monitor and record progress in each client's notebook; (4) advocate and trouble-shoot, often in innovative, creative and non-standard ways; (5) adapt and modify the plan as dictated by the constantly changing child, family, worker and system circumstances; and (6) follow along and support the client after permanent placement.

Preliminary analysis of the first 30 months of data suggested that the FIAP approach was moderately successful:

- FIAP children were significantly less likely to change placement than those in the Standard Practice (SP) group;
- FIAP children were more likely to show significant initial improvement in emotional/behavioral adjustment, a gain matched by SP children at the 12th month of intervention;
- both groups show significant levels of improvement in emotional/behavioral adjustment over time; and
- FIAP children were significantly more likely to be in permanency settings with their parents, relatives, adoptive parents, or living on their own.

L. Adlai Boyd, Ph.D.

*Academic Administrator
813/974-6408 Fax: 813/974-4406
boyd@hal.fmhi.usf.edu*

Beth A. McDonald, M.A.

Project Coordinator

Vanessa McKinney, M.A.

Research Associate

Mark E. Prange, Ph.D.

Consultant

*Department of Child & Family
Studies*

*Florida Mental Health Institute
University of South Florida*

*13301 Bruce B. Downs Boulevard
Tampa, Florida 33612-3899*

The Fostering Individual Assistance Program (FIAP) Study, a collaborative research and demonstration project between the Florida Mental Health Institute of the University of South Florida and the Florida Health and Rehabilitative Services Department was funded, in large part, by the Child and Family Support Branch of the National Institute of Mental Health (Grant No. 1-R18-MH47910) and the Child, Adolescent, and Family Branch of the Center for Mental Health Services (Grant No. 9 HD5 SM51328-04).

Additionally, the data suggest that FIAP children in permanency placements tend to show better emotional/behavioral adjustment than do SP children in permanency placements. Finally, community adjustment indicators for subsets of children who have a history of runaways or incarceration show that FIAP children accrue fewer days in these areas (see Lee, et al.; Rose, Prange, Greenbaum & Clark, this volume).

It has always been the intent of the authors to evaluate, not only the effectiveness of the overall FIAP approach, but also what aspects of its individualized methodology (the independent variable) appear to be most and least successful in meeting the needs of children and their permanency families. As the clinical application of FIAP neared its ending date, efforts were made to identify the ten children with whom FIAP had been most successful (Top Group) and the ten with whom FIAP had been least successful (Bottom Group). Success, of course, related to how well each child was doing in relationship to permanency, number of placements, length of stay, school progress, absence of illegal or otherwise handicapping behaviors, and other highly individualized, clinical variables.

Relevant factors for these two subsets of the experimental group are being analyzed in an effort to discern and describe what worked, what did not work, and why. Preliminary findings are relevant to the study's research questions and to the role and nature of independent variables in the field of applied human service research.

Method

Context

FIAP was established as a collaborative effort between the state/district offices of mental health and child welfare and the University of South Florida. FIAP, however, was administratively separate from these offices and was permitted an adjunctive role, without being assigned control over either mental health or child welfare services for its clients. Thus, FIAP FSs provided a type of co-case management, *with* the regular foster care counselors already assigned to these children, who maintained primary legal and service relationships with the children and families. This proved to be reasonable workable and successful in some cases, and almost impossible in others. Family Specialists attempted to do necessary assessments, create the teams, devise, implement, monitor and track individualized service plans *within* the prevailing system.

The real world result was the formation of somewhat loosely knit teams, per child, co-case managed by a FIAP FS and the assigned foster counselor. In many cases, the FS role became primary, in light of the overburdening active caseloads of each state foster counselor (e.g., 40-60 clients). Consequently, the first 18 to 24 months of the study were spent in adjunctive clinical and administrative balancing, while developing and practicing individualized programming as consistently as possible.

The philosophy of individualization which FIAP sought to develop and implement implied rigorous practice of specific methods, consistent with its inherent values. Initially, one to one, office-based supervision of each FS by the FIAP clinical supervisor was provided using a mentoring model. This was augmented by consultation and weekly feedback and brainstorming sessions of the FIAP clinical team. However, what did not develop was

The Independent Variable in a Wraparound Foster Care Study

an effective method of hand-on, field based oversight and supervision which may be necessary to enhance clinical accountability and program fidelity.

The Family Specialist Log

About 18 months into the program, a FIAP Family Specialist (Daily) Log Per Activity, per client, was developed and implemented for ten months—long enough to derive data to analyze what, how, when, where, how long and with whom FS activities were actually occurring. The log was a matrix for recording FS activities for each 24 hour period, including the following defined activities: Prepare Follow Up; Advocate; Facilitate or Coordinate; Inform or Communicate; Monitor or Supervise; Observe or Assess; Plan or Problem Solve; Counsel or Support; Provide or Broker; Reinforce; and Train. These activities were cross referenced with specific definitions for date, clock time, number of minutes, contact person(s), contact method, place of contact, and life domain(s) involved. An overall 65% inter-observer reliability was obtained across definitions, across Family Specialists.

These data have been only partially analyzed as relates to the mean number of contacts, the total intervention time, and the types and times of contacts. Additional analyses are in process, especially as to relationships among program activities, children, FSs, and outcome measures, and as to variations in practice and effectiveness among the four FSs.

Using data from these logs, client records, and clinical impression, 10 most and least successful FIAP clients were identified from the original 54. Demographic data and log data for these 20 children were analyzed, to begin to discriminate any critical aspects of FIAP's independent variable. Additional analyses are in process, especially as to variations in practice and effectiveness among the four FSs.

Results

Preliminary analysis indicated that the two groups of ten were homogenous as to ethnicity, gender, length of time spent in foster care, and mean total number of FS/client contacts. The two groups, however, were essentially different from each other in several ways, as shown in Table 1.

Table 1
FIAP Subset Differences
N = 20

	Top Group n = 10	Bottom Group n = 10
Age at entry	11.2 years (range: 8-16)	13.0 years (range: 8-14)
Urban setting	7	5
Rural setting	3	5
Monthly mean contact time (in minutes)		
phone	102	98
in person	127	91
total contact time	229	189
Distribution across FSs		
Family Specialist A	5	1
Family Specialist B	0	2
Family Specialist C	3	1
Family Specialist D	2	6
Family Specialist Turnover		
no turn over	7	0
one turn over	3	3
two turn overs	0	6
Permanently placed	70%	40%

Implications

1. Individualized wraparound programs should begin at the earliest possible moment, at the earliest possible age.
2. To the degree possible, staff support and supervision should be field based, perhaps, as opposed to mostly office or group based.
3. Staff turn over is to be avoided, if at all possible. When it occurs, attempts to pair the incumbent with the new staff member should be made, for at least 2-3 weeks. This may enhance essential personal and professional familiarity with each child and family, as well as other key players.
4. The differences in approaches and activities used by different Family Specialists need further analysis, however, this variable is probably the most difficult to measure. If it is assumed that intense, daily supervision of highly accountable, effective individualized wraparound services is required, personality profiles, prior experience, and specialized training for persons willing to work under such circumstances will be needed.

Initially, FIAP thought that each child's service or treatment team would help ensure reliable, consistent Family Specialist activities once agreement was reached on a service plan—especially when paired with weekly FIAP team meetings and periodic one-to-one supervisory meetings. The variability of outcomes for children across FSs suggests that something more may be necessary to monitor and promote program fidelity, consistency and accountability. Unpredictable and essentially unmeasurable child, family, worker, system and program variables may require constant on-site monitoring and feedback—a very expensive and proposition—especially with professionals who believe they work best alone.

5. The effectiveness of case managers can be maximized by matching case loads to the severity of the families' problems. Many "discharged" clients required rather constant checking and fine tuning—unfortunately, some families may never reach the independence to become their own successful case managers. FIAP found that 12 cases were often too many to handle effectively, and children who were "permanently placed" often required periodic, intensive follow along monitoring and supports.

Discussion

The authors are encouraged by the positive results of the FIAP study, to date, including significantly better placement and permanency outcomes for FIAP children (Clark, Lee, & Prange, in press). We are confident that the recommended intervention practices that were developed will assist other professionals to more effectively establish individualized services for children and families lost in the foster care system (McDonald, Boyd, & Clark, in press).

The difficulties of accountable, consistent, reliable, faithful application of the programmatic philosophy, values, and enabling methods of highly individualized, wraparound services to foster children with severe emotional disturbance are varied and many. FIAP has learned that efforts to maintain, record, and reliably measure all aspects and activities of the application of its independent variable in the field are complicated and often confounded by the nature of individualized programming, itself. Yet, assuring the implementation of the essential elements of experimental independent (treatment) variables is critical to the validity of measures of experimental dependent (outcome) variables, regardless of research design.

The Independent Variable in a Wraparound Foster Care Study

Though FIAP has been highly successful with certain of its clients, mean data analysis of the entire FIAP group may not discriminate either these successes, nor those specific factors within the independent variable most contributory to either success or failure. FIAP shall continue to try to ferret out those factors, through continued analyses of sub-group independent and dependent variables, in both experimental groups (e.g., FIAP and standard practice), but it remains unclear what to recommend to the field, as to how best to accomplish this in field-based research.

The field of applied research in human services may need to recognize that far more (and sometimes far less) goes on in the real world of day to day treatment than projected, planned, or claimed by researchers, at times badly skewing results. Surely, this is even more true in highly individualized methodologies. Analysis of variance, and many other mean-based statistical analyses, do not allow for these inconsistencies, inadvertently resulting in Type I and Type II errors.

It may be implausible to base scientific conclusions as to the efficacy of human service interventions and treatment paradigms on anything less than necessary and sufficient, accountable, reliable, accurate measures of treatment application, aggregated client by client. This being extremely difficult and unlikely, perhaps some sort of combination analyses of case study data, sub-group data (e.g., top/bottom groups), and total group mean data—involving reasonably reliable, multi-measured estimates of both types of variables—would be more effective. Perhaps FIAP can let you know. Keep tuned.

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The Characteristics of Urban Children and Families Served by Child Welfare Agencies: The Satellite Family Outreach Program

Introduction

In recent years, child welfare agencies have been challenged with a drastic increase in referrals. For example, in 1992, 1.3 million reports were made on 2.7 million children nationally (Wells, 1994). These reports were made for a number of reasons, including neglect (45%), physical abuse (27%), sexual abuse (17%), and emotional abuse (7%) (McCurdy & Daro, 1994). In addition to the abuse and neglect, the children served by child welfare agencies often experience difficulties in school, struggle with substance abuse problems, and exhibit antisocial behaviors (Trupin, Tarico, Low, Jemelka, & McClellan, 1993). As reflected by the *National Commission Report on Child Welfare and Family Intervention* (1990), the social service agencies designed to help these multi-need children and youth often cannot provide adequate services to them. As a result, these children and youth may lose their ability to cope with a complex society, fail to successfully transition into adulthood, and drift into institutions and prisons.

Kaleidoscope, Inc., Chicago, Illinois is an agency whose priority is to provide services to those children and youth that have not been effectively served by other social service agencies. These children have been diagnosed as seriously disabled, disturbed, or incorrigible and are in need of intensive treatment service efforts toward integrating them into their home communities and/or family life. The services Kaleidoscope provides are based on the philosophy of *Wraparound Care* which underscores the importance of unconditional care, intensive case management, individual planning, family involvement, flexible funding, and cultural competence.

Kaleidoscope's Satellite Family Outreach Program uses these principles in serving their children and families that have

Jennifer Soderlund
Research Associate
Excellence in Education
425 Fisk Ave.
DeKalb, IL 60115
708/876-9772 Fax: 708/876-9893

Michael H. Epstein
Professor/Project Director
Department of Special Education
Northern Illinois University
DeKalb, IL 60115
815/753-8443 Fax: 815/753-9250

Carla Cumblad
Project Director
Excellence in Education
425 Fisk Ave
DeKalb, IL 60115
708/876-9772 Fax: 708/876-9893

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experienced numerous difficulties and separations. In the present study, an extensive archival review was conducted on the files of all children and families served by Satellite during the years 1990 through 1993. The purpose of this study was to address the question, *Who are the children and families served by the Satellite Family Outreach Program and what services did they receive prior to Satellite?*

Method

Setting

This study was conducted at Kaleidoscope, Inc., a not-for-profit child welfare agency in Chicago, Illinois. In January 1994, Kaleidoscope received a grant from the Annie E. Casey Foundation to evaluate its Satellite Family Outreach Program. This study is one component of that overall evaluation. The Satellite program serves approximately 25 families at any one time and employs a staff of four administrators, three supervisors, four social workers, and 20 family workers.

Participants

The families participating in this study were parents and children who had received services from Satellite during the years 1990 through 1993. Files were reviewed for 101 families that consented to participate. Information was collected on 133 parents/grandparents and 269 children. The parents and grandparents ranged in age from 19 years to 74 years old ($M = 33.8$ years). The racial composition of the adults was 71% African-American, 17% Caucasian, 8% Latino, and 4% Other. The majority of the parents were women (78%). The children ranged in age from 3 months to 20 years old ($M = 8.93$). The racial composition of the children consisted of 73% African-Americans, 12%

Caucasians, 10% Latinos, and 5% Other. A slight majority of children were male (51%).

Instrument

The Demographic Overview Form¹, Child Version (44 items) and Adult/Family Version (42 items) were designed to identify specific characteristics of Satellite clients. Specifically, the forms focused on background data, reason for referral to Satellite, presenting problems, and previous service utilization.

Procedure

Data collectors were oriented to file format and data collection methods in three steps. First, each data collector met with the first author to review and complete Demographic Overview Forms for a file. This was repeated until the data collector was knowledgeable about the file format and data collection procedures. Second, the data collector and the first author reviewed and completed forms independently. The completed forms were compared and any discrepancies were discussed. If the discrepancies were minimal, the data collector began to review files independently. Additionally, the first author reviewed 20% of the files to assess reliability. Reliability ranged between 89% to 95% across the items with the average reliability being 93%.

Results

Parents

English was the primary language of 92% ($N = 122$) of this group. Many of the parents were single; 37% ($N = 49$) were never married, 16.5% ($N = 22$) were divorced, 5% ($N = 7$) were widowed, 21% ($N = 28$) were married, and 11% ($N = 15$) were separated. Most of

¹ A copy of the Demographics Overview Form can be obtained from the first author.

Kaleidoscope Satellite Family Outreach

the parents lived either alone with their children or with their spouse or significant other. A majority of the parents were not employed (63.2%).

Prior to entering Satellite, the parents had received services from an average of 3.06 different agencies (see Table 3). The most frequently used agencies were the Department of Children and Family Services (96.9%), the Department of Public Aid (65.5%), private agencies (63.3%), and the Department of Mental Health (23.3%). Twenty-three percent ($N = 30$) of the parents had been admitted to a medical hospital at least once, 14% ($N = 18$) had been admitted to a psychiatric hospital, and 10% ($N = 11$) had participated in an in-patient substance abuse treatment program. Many of the parents and their families lived at or below the poverty level (68.4%) and received assistance from the Department of Public Aid (65.5%).

Children

Forty-four percent of the children served by Satellite ($N = 119$) were in the guardianship of their mothers and 42% ($N = 114$) were in the guardianship of the Illinois Department of Children & Family Services. The guardianship of the remaining children was 5% ($N = 13$) both parents, 3% ($N = 9$) other relatives, 2.6% ($N = 7$) father, and 2.6% ($N = 7$) other. The children had been served by an average of 4.12 agencies prior to Satellite. Before entering Satellite, 75% of the children had been residentially placed outside of their natural home on at least 3 different occasions. A great number of the children placed (83%) had been in either relative, general, or private foster care.

Families

When a family was referred to the Satellite program, the referring agency indicated an average of 3.83 reasons for referral. The top four reasons for referral were: the parent lacked the skills or

resources to nurture her/his children (69.5%), the referring agency wanted to reunify the family members (47.5%), the parent needed treatment for her/his behavior and emotional difficulties (46.8%), and the family unit had unmet mental health needs (45.3%). The permanency goals involved providing families services so that the children could remain in their home (55%), return to their natural home (42%), remain permanently in the home of a relative (12%), remain with a foster family (6%), or remain in a long-term care facility (1%).

Discussion

The present findings indicate that the children and families served by an urban child welfare agency present many challenges to service providers. Many of the children live in single parent families that are financially supported through public aid. These parents struggle to provide for their children on incomes below the poverty level. A large percentage of families have been involved with state child protective services. Almost half of the children are wards of the state. It is important to note the lack of stability in these families' (especially the children's) lives. Many of the children had lived in multiple residential placements by the time they were 10 years old.

The implications of the present findings are numerous. First, the information may be used to improve Satellite's services through an increased understanding of their clients' characteristics. Second, service utilization histories may provide a basis for Satellite staff to identify unique and creative resources their clients may need but are lacking. Finally, the findings may identify some characteristics of those children and families who seemingly fall through the cracks of existing public systems of care. These are the people who most need comprehensive, community-based services

that will help them regain a stable family unit and link them to the resources found in their home areas. With those types of services in place, perhaps these families can become successful and independent.

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Mental Health Screening in Foster Care: A Model for Community-Based Service Delivery and Research in Baltimore

Introduction

A major consequence of the poverty, violence, and drug activity in inner cities, such as in New York, Washington, DC and Baltimore, is the massive influx of children into the foster care system. On any given day, approximately 450,000 children nationwide are in foster care, presenting with more severe and complex problems than were seen a decade ago (Jost, 1991).

The present study extends prior research on the prevalence of mental health problems among foster care children (e.g., McIntyre and Kessler, 1986). Such research is needed to develop effective treatment strategies for these “at-risk” children.

Method/Procedure

Health Clinic personnel administer a combined medical and mental health screening protocol for all abused and neglected children entering out-of-home placement/foster care in Baltimore. A unique public-private partnership, the Health Clinic combines clinical staff from the Baltimore City Department of Social Services (BCDSS); Baltimore Medical System, Inc. (BMSI), a local non-profit community health organization; and Dale and Fogelman Associates, a group of psychologists and other mental health professionals who conduct the mental health screenings. Figure 1 displays the mental health screening model developed by Dale and Fogelman Associates.

The following research findings are based on a random sample of 300 children from the 4073 who received mental health screenings at the Health Clinic in Baltimore between July 1, 1992 and June 30, 1994. It was decided to select 100 subjects from each of three developmental age groups: 2 months to 5 years, 8-12 years and

Grady Dale, Jr., Ed.D.
Joshua C. Kendall, M.A.
Katherine Im Humber, M.A.
Dale and Fogelman Associates
101 West Read St., Suite 309
Baltimore, MD 21201
410/783-0066 Fax: 410/783-4454

The authors are affiliated with Dale and Fogelman Associates, which has been subcontracted to administer the mental health screening program for children entering out-of-home placement/foster care at the Health Clinic in Baltimore. The Health Clinic is located on-site at the Baltimore City Department of Social Services (BCDSS), Foster Care Division. All correspondence regarding this manuscript should be directed to Grady Dale, Jr., Ed.D.

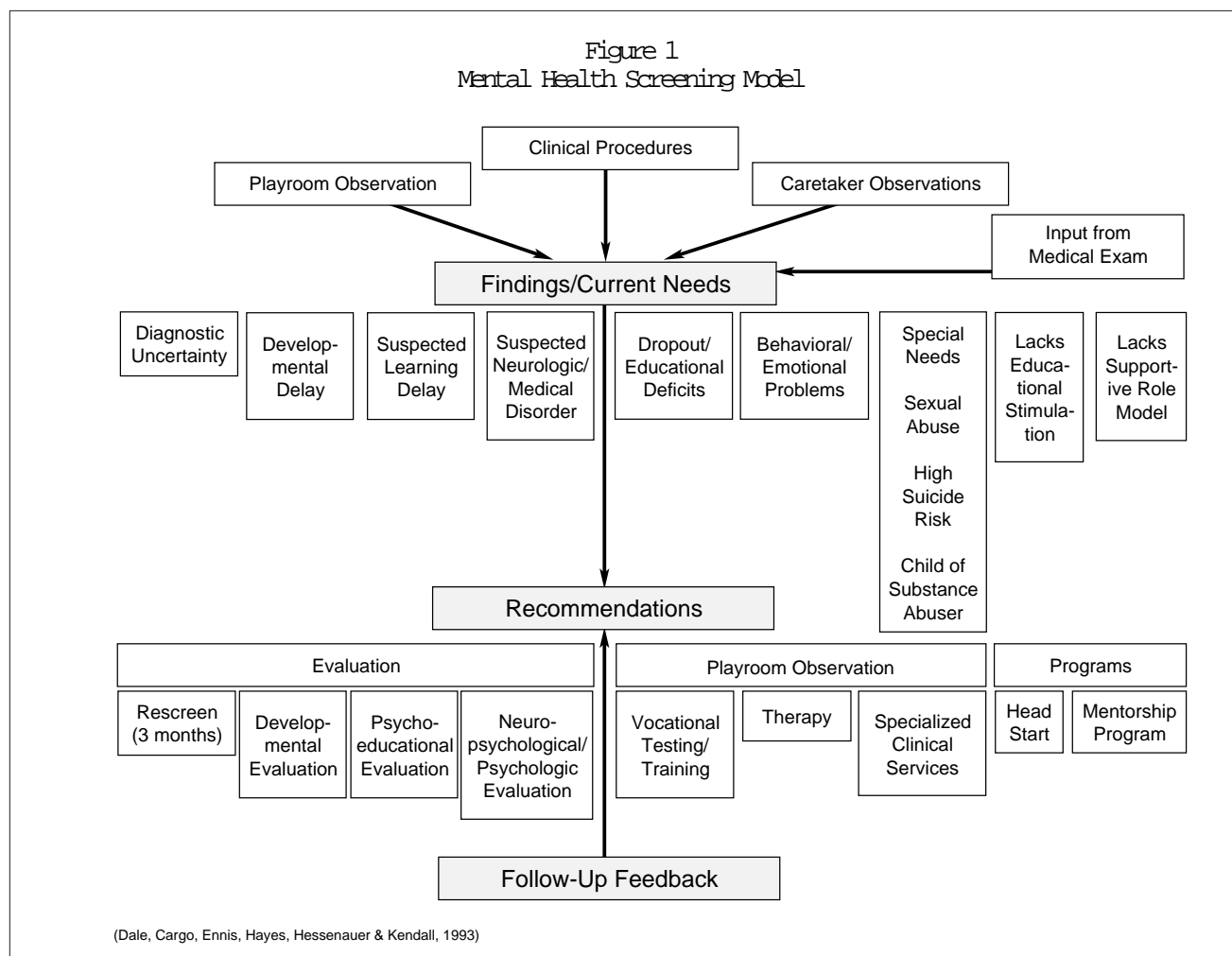
13-19 years (see Table 1 for a summary of the instruments and criteria used). First, background information – such as race, sex and reasons for entering foster care – was tabulated in order to obtain a demographic profile of the population. Second, the cognitive and emotional functioning of these at-risk children was analyzed by developmental age group.

Results: Demographics and Mental Health Functioning

Forty-nine percent of the selected sample were male and fifty-one percent were female. Ninety percent were African-American and nine

percent White (see Figure 2 for a demographic summary). Chi-square analysis and analysis of variance were performed in order to determine whether either demographic variable–gender or race–had an effect on mental health functioning. No significant relationships were found between either demographic variable and scores on the Denver Developmental Screening Test - Version II (DDST-II), Peabody Picture Vocabulary Test - Revised (PPVT-R-L), Developmental Test of Visual-Motor Integration (VMI) or Reynolds Depression Scales (RCDS and RADS).

The most common reasons for entering foster care included maternal substance abuse (54%), neglect (53%), abandonment (27%) and physical



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abuse (22%), as shown in Figure 3. It should be noted that multiple reasons for referral could be listed.

Fifty-one per cent of the children aged 2 months to 5 years were identified as in the "suspect for delay" range on the DDST II (see Figure 4). These findings are in stark contrast to normative data which suggest that 90% of children in this age group fall within the "normal" range (Frankenburg, Dodds, Archer, Bresnick, Maschka, Edelman & Shapiro, 1992).

On the Reynolds Depression Scales (RCDS and RADS), 11% of the 8-12 year-old group and 30% of the 13-19 year-old group reported significant depressive symptomatology (see Figure 5). The difference between age groups reached statistical significance [$\chi^2(1, N=200)=11.08, p=.001$]. The strength of the relationship between age group and depression was found to be moderate ($r=.23$).

Whereas the rate for the older group is disproportionately high when compared to normative samples, the percentage of children in

the 8-12 year-old group identified as evidencing significant depressive symptomatology is comparable to percentages found in normative samples (Reynolds, 1987; Reynolds, 1989).

The lack of a significant relationship between depressive symptomatology and gender for both age groups was surprising [$\chi^2(1, N=100)=1.09, p = ns$] in light of prior research documenting that girls tend to be more depressed than boys (Reynolds, 1987; Reynolds, 1989).

Based on PPVT-R-L results, 53% of children in the 8-12 year-old group and 64% of children in the 13-19 year-old group showed evidence of severe receptive language difficulties (see Figure 6). These figures are considerably higher than the 10% found in normative samples (Dunn & Dunn, 1981). No significant relationship was found between age group and scores on the PPVT [$t(196)=.18, p= ns$].

Both age groups demonstrated visual-motor integration skills that were closer to age

Table 1
Method/Assessment Instruments

Age	Assessment Instruments	Domains Assessed	Assessment Criteria
2 months-5 years*	DFDST II	Developmental skills	Normal vs. suspect for delay
8-12 years	PPVT-R-L VMI	Receptive language skills Visual-motor integration	Normal vs. suspect for delay/ delay/
	RCDS	Depressive symptoms	Likely to be depressed
13-19 years	PPVT-R-L VMI RADS	Receptive language skills Visual-motor integration Depressive symptoms	Normal vs. suspect for delay/ Likely to be depressed

* 6 and 7 year olds were excluded since they are too young to receive the RCDS.

DDSTII	Denver Developmental Screening Test-Version II
PPVT-R-L	Peabody Picture Vocabulary Test Revised, Form L
VMI	Developmental Test of Visual-Motor Integration
RCDS	Reynolds Child Depression Scale
RADS	Reynolds Adolescent Depression Scale

expectation than were their receptive language skills (see Figure 6). However, children aged 13-19 still evidenced disproportionately high deficit rates, with 37% scoring below a standard score of 80 on the VMI—as opposed to 10% in normative samples (Beery, 1989). For children aged 8-12, 13% of the foster care sample scored below 80—as opposed to 10% in normative samples (Beery, 1989). Children aged 13-19 scored obtained significantly lower standard scores ($M=84$) than children aged 8-12 ($M=91.3$)— $[t(196)=4.20, p=.001]$.

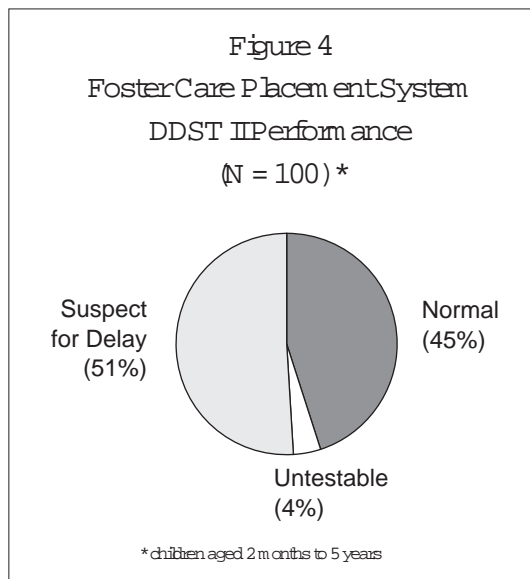
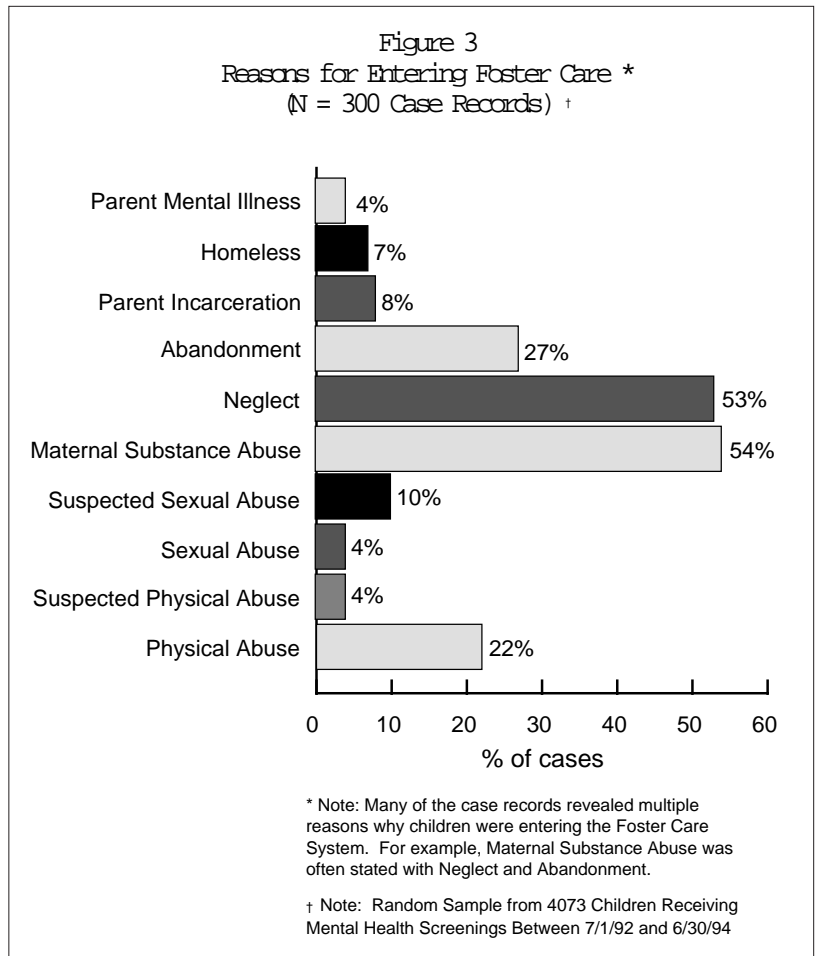
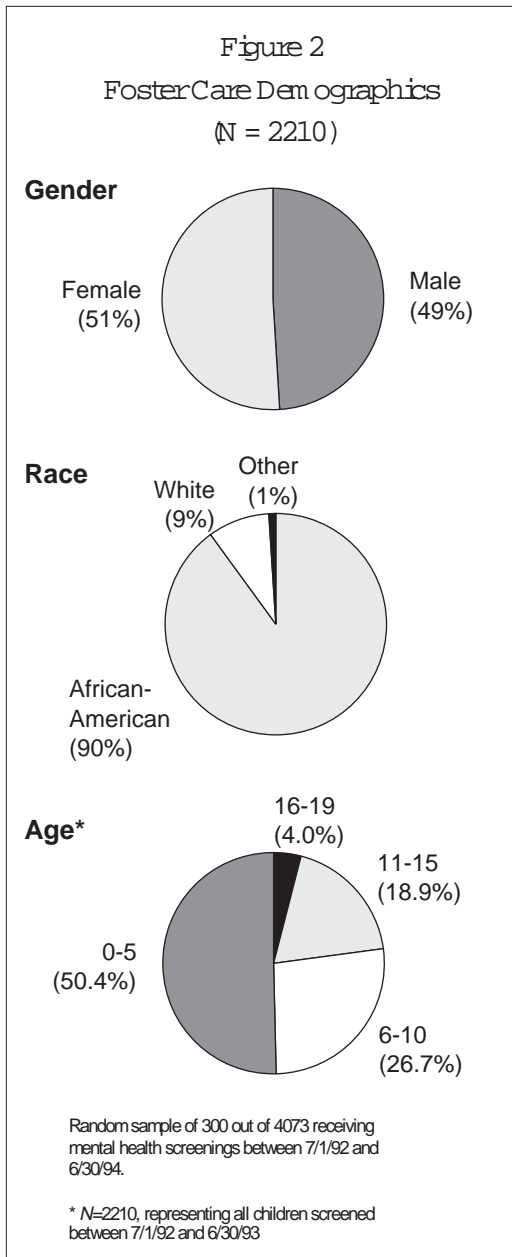
Conclusion/Policy Recommendations

The present study describes the innovative mental health screening program implemented by Dale and Fogelman Associates in Baltimore. Preliminary research findings document the high rates of cognitive and emotional difficulties found among many of the children entering out-of-home placement/foster care.

The following policy recommendations flow directly from the major policy innovations that the Health Clinic has implemented in Baltimore:

1. *Centralized Screening Programs* - In metropolitan areas, centralized clinics administered in conjunction with the local social service agency can ensure cost-efficient screenings. In suburban/rural areas, several identified medical practitioners may need to “share” one mental health practitioner who can perform screenings on-site for the purpose of generating consolidated health information for children entering foster care.
2. *Consultation Programs* - Mental health consultations should be conducted by clinic staff for social services workers. Such consultations can prove invaluable in clarifying recommendations and providing assistance in difficult cases.
3. *Computer Tracking* - Both centralized and non-centralized programs can benefit from a common computerized tracking system. This database should include the following critical information on each child: placement, current health status, major recommendations (including need for follow-up), guardians, and the particular social service unit to which the child’s case is being transferred. Such a database can also facilitate in-house record keeping regarding proficiency in foster care placement and follow-up.
4. *Provider Forums* - Mental health providers, in conjunction with their medical counterparts, should confer with community practitioners who typically service children once they enter foster care. The overriding need for “continuity of care” suggests that provider forums can (1) help clarify the policies of the screening clinic; (2) smooth transitions for children as they move in and out of the foster care system; (3) arrange for the pooling of data; and (4) “bond” clinicians in the common cause to serve at-risk children. In non-urban areas, bi-annual meetings may be preferred, especially if local practitioners know each other well. The importance of forums designed to oversee the delivery of services to children in foster care should not be underestimated.
5. *Program Linkages* - Mental health providers need to forge liaisons with Head Start, pediatric HIV programs, and other public and private child advocacy groups. Program linkages are especially important in removing bureaucratic barriers that impede service delivery to children.

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