

Linking Low-Income Families to Children's Mental Health Services: An Outcome Study

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An intervention designed to address barriers that interfere with access to children's mental health services for low-income families was implemented in three Oregon counties; four other counties were included. as a comparison condition. The intervention involved the use of paraprofessionals called Family Associates who provided families with information, emotional support, and tangible assistance to reduce barriers to services. Families in the intervention group (n = 96) were, significantly more likely to initiate children's mental health services than were those in the comparison group (n = 143); however, the groups did not differ in their rates of appointment attendance or discontinuing services prematurely. A modest but significant difference between the groups was found for family and service system empowerment, with the intervention families reporting higher levels of empowerment at posttest. The barriers to children's mental health services experienced by the intervention families and the barriers for which Family Associate services were provided are described.

Although significant progress has been made in developing mental health services for children with emotional disabilities, these improvements become pointless when children and their families cannot gain access to such services. Families may be discouraged from accessing services for a variety of reasons, including service system complexities related to referrals and admission criteria, pragmatic constraints in such areas as transportation and child care, and limitations in knowledge about how best to use available resources. A less appreciated impediment to accessibility is the daunting experience of encountering the mental health system for the first time. Families who have had little to no experience with the system may be discouraged from following through with appointments because of a fear of being stigmatized, feelings of isolation, and a general sense of being overwhelmed. The combined effect of various impediments may contribute to not initiating services or dropping out of them early in the treatment process; consequently, children and families whose needs may be particularly complex and acute do not get the help they need.

The evaluation of an intervention designed to address barriers that impede access to children's mental health services for low-income families is described in this article. The approach involved the use of paraprofessionals called Family Associates who served as system guides, providing families with information, emotional support, and help with specific barriers such as lack of transportation and lack of child care for other children. The Family Associates were themselves parents who had negotiated service systems on behalf of their own children and who had received special training. In the following sections, research on why families discontinue mental health services and the areas of empowerment and paraprofessionals as related to the Family Associate intervention are reviewed.

Service Continuance

Although a lot of research has been devoted to the issue of service continuance in mental health services, there is great variation in reported rates. Estimates of noncontinuance (i.e., dropout) vary widely, depending on the definition of dropout used and the phases of the intake and treatment process considered. For children in mental health settings, estimates of dropout rates range between 25% and 93% (Mannarino, Michelson, Beck, & Figueroa, 1982; Sirles, 1990; Wierzbicki & Pekarik, 1993).

Just as the dropout rates for mental health treatment vary widely from study to study, so too do the explanations offered. Much of the focus has been on the role of demographic variables. For example, in a review of 86 articles, Garfield (1986) reported that dropout rates for adults and children were related to such demographic variables as lower socioeconomic status, low level of education, and minority racial status. Similarly, a recent

meta-analysis of 125 studies (Wierzbicki & Pekarik, 1993) identified these variables as important predictors of dropout for child and adult clients. Although the preponderance of these studies suggests a link between demographic characteristics and tendency to drop out of service, other researchers have noted that demographic characteristics, especially income, are not consistently related to continuance (Day & Reznikoff, 1980; Sirles, 1990; Sledge, Moras, Hartley, & Levine, 1990) or are not as important as service delivery system issues (Goldin, 1990; Good, 1990; Sirles, 1990; Wise & Rinn, 1983).

In children's mental health services, the severity of problems appears to influence service continuance. Sirles (1990) reported that children with less severe problems were more likely to drop out of service, especially if the assessment process was prolonged. Lochman and Brown (1980) found that parents who dropped out of a parent education program initially were happier with their family and their own child management skills than parents who completed the program. This is in contrast to some studies of adult populations, where increased severity of symptoms has been related to dropping out (Chesney, Brown, Poe, & Gary, 1983; Swett & Noones, 1989). Additionally, there is evidence that the mental health problems of parents and other parental characteristics may interfere with the process of seeking help (McMahon, Forehand, Griest, & Wells, 1981; Pekarik & Stephenson, 1988).

A significant step in the study of service continuance has been the shift in focus from demographic characteristics of the service recipient to service system barriers and pragmatic day-to-day constraints. Researchers have increasingly focused on barriers related to affordability (Lorefice, Borus, & Keefe, 1982; Sharfstein & Taube, 1982; Takeuchi, Leaf, & Kuo, 1988); transportation and child care (Margolis & Meisels, 1987; Temkin-Greener, 1986); accessibility (Acosta, 1980; Cohen, 1972; Graziano & Fink, 1973; Stefl & Prospero, 1985); and system characteristics such as the availability of services (Leaf, Bruce, Tischler, & Holzer, 1987; Scott, Balch, & Flynn, 1984; Stefl & Prospero, 1985), hours of operation and configuration of services (Good, 1990; Margolis & Meisels, 1987; Sledge et al., 1990), and delays in scheduling appointments (Leigh, Ogborne, & Cleland, 1984; Sides, 1990).

Low-income families are particularly challenged by difficulties in meeting basic daily living needs, which can interfere with accessing and continuing in services for their children. In a study of children with developmental disabilities who had been screened through Early and Periodic Screening, Diagnosis, and Treatment (EPSDT), Margolis and Meisels (1987) identified three sets of barriers to services: (a) *content barriers* such as problems with the design and organization of the screening process, as well as sensitivity of the screening process to the needs of children with disabilities; (b) *facilities-personnel barriers* such as a lack of public awareness of EPSDT, lack of transportation, and lack of sensitivity and knowledge about developmental disabilities on the part of health-care professionals; and (c) *referral barriers* such as a lack of qualified providers and parents' inability to pay for additional services not reimbursed by Medicaid. Other research on barriers to services has suggested that efforts to address the problem of service discontinuance are best served by a pragmatic approach that applies solutions at a direct, functional level (Manela, Anderson, & Lauffer, 1977; Meisels & Margolis, 1988). Moreover, the multiplicity of potentially important barriers implies that intervention efforts must take a broad, flexible approach that addresses the particular circumstances of individual children and their families.

EMPOWERMENT

Although the concept of empowerment has been in use for some time, only recently have efforts been made to define and measure it as a construct that lends itself to outcome evaluation (Hefflinger, 1995; Koren, DeChillo, & Friesen, 1992; Singh et al., 1995). Empowerment may be generally defined as "the ongoing capacity of individuals or groups to act on their own behalf to achieve a greater measure of control over their lives and destinies" (Staples, 1990, p. 30): This general notion can be conceptualized in a number of different ways. For example, Koren et al. (1992) adapted the concept to children's mental health and suggested three major domains: the immediate family, the service system as it directly affects the child and family, and the community as it affects children and families in general. Family members may express empowerment in each of these separate areas. Empowerment within the family pertains to a sense of efficacy in handling difficulties at home; empowerment with respect to the service system can be manifested as taking action to obtain appropriate services for one's own child; and community empowerment can take the form of activities that improve services for families and children in general.

This view of empowerment has direct relevance to service utilization. To the extent that services are successful in helping families address difficulties with their children, parents' feelings of empowerment within their own families may be expected to grow. Also, the knowledge and understanding gained through experience with the service system may lead parents to experience a greater sense of empowerment as informed consumers and as

advocates for system improvements. In this study, the process of helping families overcome barriers to service utilization was viewed as possibly leading to an increased sense of empowerment.

PARAPROFESSIONALS

A long history of employing paraprofessionals to assist with service delivery has existed in the fields of health care (Dawson, Van Doorninck, & Robinson, 1989; Poland, Giblin, Walter, & Hankin, 1992; Sparer & Johnson, 1971), education (Frith & Lindsey, 1980; Jones & Bender, 1993), and mental health (Durlak, 1973; Gartner, 1981; Karlsruher, 1974). A number of researchers have examined the functions that paraprofessionals have served. Sobey (1970) studied 10,000 paraprofessionals and found that they performed three major functions: therapeutic, special skill training, and community adjustment. In addition, she cited five less frequent functions: case finding, orientation to services, screening, caretaking, and community improvement. She concluded that paraprofessionals were employed "not simply because professional manpower is unavailable, but rather to provide new services in innovative ways" (p. 133). Frith and Armstrong (1984) identified a number of reasons for expanding the use of paraprofessionals, including versatility in working within different settings, the ability to work with highly diverse groups, an established track record in efficacy studies, cost effectiveness, and greater availability compared to professional staff, particularly in rural areas. They emphasized the usefulness of the paraprofessional as an intermediary between service providers and the community.

The purpose of using paraprofessionals in this study was (a) to increase the number of families who, once referred for children's mental health services, actually initiated those services, and (b) to encourage service continuance. The Family Associate role was created to address the major problems associated with children's mental health service initiation and continuance, particularly those that low-income families might encounter. These barriers included the costs of travel and child care associated with frequent appointments, limited information about the service system, problems accessing community resources, unmet caregiver needs, and the challenges of daily living within poverty. The intervention was intended to ultimately increase the number of families who received mental health services for their children. This was accomplished by working with the families to reduce the barriers to service involvement. More specifically, the research focused on whether the Family Associate services increased (a) children's mental health service initiation, attendance, and continuance, and (b) empowerment of parents or other caregivers. Additionally, we were interested in describing the barriers to children's mental health services encountered by families and the extent to which the Family Associate intervention addressed them.

METHOD

Participants

Families with a child 4 to 18 years old who had been referred for mental health services through EPSDT were included if: (a) the referred child was not in an institutional placement (e.g., residential treatment, correctional facility), (b) a caregiver was involved in the management of the child's mental health services and was available for the research interviews, and (c) the referred child had participated in no more than three mental health services appointments associated with this referral. Some families who agreed to participate in this study were excluded because (a) no follow-up interview was completed ($n = 14$), (b) the respondents were foster parents whose resources and mental health service system experiences were different from those of the other families ($n = 16$), (c) the family was identified as ineligible after performing the initial interview ($n = 12$), or (d) no contact with the Family Associate occurred beyond the initial interview ($n = 15$). This resulted in a final sample of 239 families, 96 of whom received the intervention and 143 of whom served as comparison families.

The respondents in the intervention group were primarily birth parents (91%), single parents (74%), and educated at the high school level or higher (78%). Over half of the children in the intervention group who were referred for mental health services were boys (61%), with the majority being White (82%) and 4 to 12 years of age (88%). Over two thirds of the families had an annual household income of less than \$10,000 (71%) and an annual household income per person of less than \$3,000 (72%). Most of the families (74%) lived within 9 miles of the mental health center to which they were referred (see Table 1). The comparison group was not significantly different from the intervention group on any of these demographic characteristics.

Procedures

Design. This research employed a quasi-experimental design incorporating two conditions: (a) an intervention condition in three Oregon counties using Family Associates (one in each county) to augment the usual mental health services, and (b) a comparison condition in four other Oregon counties consisting of only the usual mental health services. No condition involved the withholding of services; instead the intervention condition supplemented the services families would have otherwise received under EPSDT. The assignment of counties to either the intervention or comparison groups was made randomly from three pairs of matched counties that were approximately equal in population density and proximity to metropolitan areas with extensive and specialized mental health services. Later in the project, a seventh county was added to the comparison condition to augment referrals.

Intervention. The Family Associates were employed by their respective county mental health programs and received referrals through the EPSDT process. In order to intervene early in the service initiation process when dropout was most likely (Baekeland & Lundwall, 1975; Larsen, Attkisson, Hargreaves, & Nguyen, 1979; Sirls, 1990) the Family Associates contacted the parents or other family members soon after the referral for mental health services was made. The most common Family Associate services were (a) providing families with information, (b) providing caregivers with social and emotional support, and (c) linking families to community resources and services. An innovative feature of this intervention was the availability of a flexible cash fund. The purpose of this fund was to help families obtain those services or items that were identified as instrumental in getting their children to mental health services or in easing their daily living burden.

As they modeled new skills and collaborated with the caregivers, the Family Associates encouraged self-reliance and supported family strengths, concepts emerging in consumer and practice research (Koren et al., 1992). A more detailed description of the Family Associate role and the implementation of the intervention can be found in Koroloff, Elliott, Koren, and Friesen (1994).

Data Collection. Procedures for obtaining the EPSDT referral information were established separately with each of the participating counties. Referrals were usually collected at medical facilities, schools, mental health agencies, the county mental health and health programs, or a combination of these sites, depending upon the primary referral sources) for a given county.

Upon receipt of a referral, an introductory letter and flyer were mailed to the family, followed by a telephone call to further explain the research project. If the caregiver agreed to participate, an appointment for the initial research interview was made, with the option of the interview taking place at the caregiver's home for her or his convenience. After securing the caregiver's informed consent, the initial interview and associated questionnaires were completed (approximately 1/2 hours). The caregiver was paid \$25 for providing the information.

The Family Associates began their initial interviews by collecting research data; Family Associate services were discussed only after the research interview was completed. Initial interviews with comparison families, as well as all of the follow-up interviews, were conducted by research interviewers. Extensive instruction in data collection and research interviewing was incorporated by the research team into the project orientation and training meetings for the Family Associates; it was provided separately by the project manager for the research interviewers. Periodic meetings were held to monitor the integrity of the data collection process.

The Family Associates worked with the families until the referred child had participated in three mental health appointments, or for 3 months, whichever came first. Approximately 3 to 4 months after the first interview, caregivers were contacted to schedule the follow-up interview. This interval allowed enough time for Family Associate services to be completed and also offered an opportunity for mental health services to be initiated. At the follow-up interview, caregivers were asked about experiences in the intervening period and completed a second set of questionnaires. For doing this, each respondent received another \$25.

Measures

The data collection protocol included both widely used and newly developed measures. In order to meet the needs of the large Hispanic population in Oregon, all of the questionnaires were translated into Spanish, and Spanish-speaking interviewers were available to conduct the initial and follow-up interviews. Presented next are brief descriptions of each of the assessment tools used.

The initial interview gathered information about (a) child and family demographics; (b) previous mental health services received by the referred child and the respondent, as well as the respondent's satisfaction with those services; (c) barriers to mental health services previously experienced; (d) the respondent's experiences throughout the current referral process; and (e) barriers anticipated regarding involvement in the services for which the child

was referred. The follow-up interview measured (a) changes in child and family demographics; (b) the mental health services the child and/or the family had received, their satisfaction with those services, and barriers to the services experienced by the family; and (c) utilization and assessment of either the Family Associate services (intervention families) or assistance the family could have used to facilitate the process of initiating mental health services for their child (comparison families).

Based on the information gathered during the follow-up interview, families' involvement in mental health services was assessed. A family was defined as having initiated children's mental health services if at least one appointment was kept after the EPSDT referral was made. Continuance was defined as still receiving recommended treatment at the point of the follow-up interview. Conversely, dropout was defined as discontinuing treatment before the follow-up interview. Families were not considered dropouts if the therapist decided that treatment was completed or if the family decided to discontinue mental health services because the child had improved and no longer needed treatment.

The Family Empowerment Scale (FES; Koren et al., 1992) was used to measure the level of the respondent's sense of empowerment at both assessment points. This 34-item self-report scale presents the respondent with a 5-point Likert scale for each item (1 = *not true at all*, 5 = *very true*). Responses are grouped into three empowerment subscores: family (e.g., "I know what to do when problems arise in my family"), service system (e.g., "I know what services my child needs"), and community/ political (e.g., "I feel I can have a part in improving services for children in my community").

The Family Barriers Checklist was developed for this project in order to assess the barriers to children's mental health services experienced by the respondent. This measure uses a 4-point Likert scale (1 = *not important*, 4 = *very important*) and asks the respondent to rate the degree to which each of 13 areas (e.g., transportation to mental health services, child care for other children during mental health appointments, information about mental health services) poses a barrier to service involvement. Intervention families also were asked to identify "each area you worked on with your Family Associate" and to rate how much the Family Associate services, in general, were needed by their family (1 = *not at all*, 4 = *very much*).

Two additional instruments were included in the pretest to assess the comparability of the intervention and comparison groups. The Child Behavior Checklist/4-18 (CBCL; Achenbach, 1991) was used to measure the level of each child's behavior problems from the caregiver's perspective. The CBCL is a 118-item rating scale completed by an adult that assesses the emotional and behavioral adjustment of children. The scale provides a total problem score, two syndrome scores (externalizing and internalizing), and eight problem subscales. Of the CBCL scores available, those pertaining to total, internalizing, and externalizing behavior problems were included in this study. Family coping strategies were measured from the respondent's perspective with the Family Crisis Oriented Personal Evaluation Scales (F-COPES; McCubbin, Olson, & Larsen, 1991). The F-COPES is a 30-item rating scale that identifies problem-solving strategies used by families in difficult situations. It provides six subscores: acquiring social support, refraining, seeking spiritual support, mobilizing the family to acquire and accept help, passive appraisal, and support from neighbors.

RESULTS

Comparability of Groups

Group comparisons (*t* tests, chi-square analyses) revealed that the families included in the intervention ($n = 96$) and comparison ($n = 143$) groups were not significantly different on any of the family characteristics listed in Table 1. Additional group comparisons on the three CBCL scores, the six F-COPES scores, and the pretest FES service system and community/political empowerment scores also showed no significant differences (see Table 2). However, the initial means on the FES family subscale were significantly different for the two groups ($p < .05$), with the intervention group reporting a lower level of family empowerment than the comparison group.

TABLE 1
Sample Characteristics of Intervention and Comparison Groups

Characteristic	Intervention group ^a		Comparison group ^b	
	n	%	n	%
Respondent's relationship to child				
Birth parent	87	91	128	90
Other	9	9	15	10
Respondent's marital status				
Single parent ^c	71	74	93	56
Married	25	26	50	35
Respondent's educational level				
No high school diploma	21	22	30	21
High school diploma	36	37	42	29
Beyond high school	39	41	71	50
Child's gender				
Female	37	39	57	40
Male	59	61	86	60
Child's age				
4-7 years	42	44	71	50
8-12 years	42	44	54	38
13-18 years	12	12	18	12
Child's race				
White	79	82	114	80
Other	17	18	29	20
Annual household income				
<\$10,000	68	71	96	67
\$10,000-\$19,999	21	22	38	27
\$20,000+	7	7	9	6
Annual household income per person				
<\$2,000	26	27	33	23
\$2,000-\$2,999	43	45	69	48
\$3,000-\$4,999	19	20	30	21
\$5,000+	8	8	11	8
Distance to the mental health office				
≤ 1 mile	19	20	25	18
2-4 miles	29	30	36	26
5-9 miles	23	24	40	29
10-19 miles	13	13	20	15
20+ miles	12	13	16	12

^an = 96. ^bn = 143. ^cIncludes respondents who were divorced, separated, widowed, or never married.

Table 2
Group Comparisons on CBCL, F-COPES, and FES Scores Measured at Initial Interview

Score	Intervention group ^a		Comparison group ^b		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
CBCL					
Internalizing T	63.0	12.9	62.7	11.1	.24
Externalizing T	65.1	12.1	63.9	11.5	.76
Total T	65.5	11.7	65.5	10.1	.03
F-COPES					
Social support	24.4	6.6	25.4	5.9	1.29
Reframing	29.7	5.1	30.1	5.0	.59
Spiritual support	13.0	4.1	12.9	4.7	.06
Mobilization	12.4	2.5	13.0	1.8	1.79
Passive appraisal	15.1	3.2	15.4	2.9	.8
Support from neighbors	7.4	3.2	7.3	2.7	.15
FES					
Family	45.6	7.1	47.6	6.4	2.29*

Service system	49.6	5.8	49.4	6.0	.16
Community/political	27.8	7.3	28.9	7.7	1.08

Note. CBCL=Child Behavior Checklist/4-18; F-COPES=Family Crisis Oriented Personal Evaluation Form; FES=Family Empowerment Scale.

^an=96, ^bn=143.

* $p < .05$.

Table 3
Impact of Family Associate Services on Mental Health Service Participation

Variable	Intervention group ^a		Comparison group ^b	
	<i>n</i>	%	<i>n</i>	%
Initiated services	89	93	115	80**
Missed any appointments (ie: attendance)	59	66	70	61
Discontinued services	24	27	31	27

^an=96, ^bn=143.

** $p < .01$.

Table 4
Barriers Experienced and Barriers Addressed by Family Associate (FA) Services

Percentage of intervention families

Barrier	Experienced barrier ^a		Received FA services	
	<i>n</i>	%	<i>n</i>	%
Respite care	53	55	10	10
Transportation problems	49	51	40	42
Recreational opportunities	46	48	29	30
Emotional support ^b	45	48	36	38
Paying for utilities	39	41	8	8
Child care ^b	37	39	10	11
Daily living tasks ^b	35	37	4	4
Information about EBD	33	34	13	14
Information about MHS	33	34	37	39
Clothing	31	32	10	10
Food	25	26	1	1
Contact with other parents ^{b, c}	24	25	2	2
Obtaining benefits	17	18	3	3

Note. n=96 (except where noted differently). Data are based on Family Barriers Checklist ratings provided by the caregivers. Barriers have been abbreviated to fit into the table and should be interpreted as difficulty with the areas listed (e.g., *lack of* respite care). EBD=Emotional and Behavioral Disorders; MHS=Mental Health Services.

^abased on combining the ratings of *slightly important*, *moderately important*, and *very important*. ^bn=95

^cContact with other parents who have children in mental health services.

Intervention Outcomes

Service Participation. Data regarding the impact of the Family Associate intervention on mental health service participation were examined using chi-square analyses (see Table 3). Appointment attendance was treated as a dichotomous variable (missed no appointments was scored as 0, missed any appointments was scored as 1) because the time period was short and a variable based on proportion of appointments would be misleading (e.g., 50% attendance could reflect missing 5 of 10 scheduled appointments or 1 of 2 scheduled appointments). The intervention group was significantly more likely to initiate children's mental health services, $X^2(1, N = 239) = 6.94$, $p < .01$. The associated Yule's Q statistic was .51, suggesting a moderately strong relationship between the intervention and initiation of services (Bohnstedt & Knoke, 1994). The groups did not, however, differ in attendance $X^2(1, N = 204) = .63$, $p = .43$, with roughly one third of both groups missing no appointments, nor did they differ in

discontinuing mental health services prematurely $X^2(1, N = 203) = .002, p = .96$, with less than one quarter of both groups dropping out of services.

To investigate the possibility that initial sample characteristics might have accounted for the significant difference in service initiation rather than the intervention, a hierarchical logistic regression was performed. Six variables representing sample characteristics were entered into the equation first, followed by a dichotomous variable representing the intervention/comparison distinction. The variables were

1. Respondent's years of education;
2. Child's race (White or Other);
3. Annual household income;
4. Miles to mental health services;
5. CBCL total problem behavior score;
and
6. FES family empowerment score.

These six variables were chosen on the basis of their importance in previous studies or, in one instance (FES family empowerment score), on a significant difference between the intervention and comparison groups at the initial interview. Although the model chi-square for the combination of family characteristics was significant, $X^2(6, N = 239) = 12.74, p < .05$, the addition of the intervention/comparison variable significantly improved the model, $X^2(1, N = 239) = 6.28, p < .05$. The *R* statistic associated with this variable was .14 ($p < .05$), whereas only one other *R* statistic—that for respondent education—was significant ($R = .13, p < .05$). This pattern of findings suggested that receiving Family Associate services was significantly associated with services initiation after the effects of various sample characteristics had been taken into account and that a higher level of respondent education was also associated with service initiation.

Levels of Empowerment. To examine levels of empowerment at follow up, analyses of covariance (ANCOVA) were conducted on each of the three empowerment scores, with pretest scores serving as covariates. The sample in these analyses was limited to those families who initiated services. Tests for heterogeneous regression slopes were nonsignificant, suggesting that the use of common slopes here was appropriate. Because ANCOVA procedures applied to quasi-experimental data potentially yield biased results due to covariate measurement error (Huitema, 1980; Pedhazur, 1982; Pedhazur & Schmelkin, 1991), parallel analyses were also performed with true-score corrected covariates (Huitema, 1980). Separate analyses were based on covariates corrected with alpha coefficients and with pooled within-group test-retest coefficients. The results from these analyses indicated modest but significant differences in both family and service system empowerment between the intervention and comparison groups. For family empowerment, adjusted posttest means based on the standard ANCOVA were 47.6 and 46.4, $F(1, 200) = 7.99, p < .01, \eta^2 = .03$, for intervention and comparison groups, respectively. For service system empowerment, adjusted posttest means based on the standard ANCOVA were 50.9 and 49.3, $F(1, 200) = 4.43, p < .05, \eta^2 = .02$, for the intervention and comparison groups, respectively. No significant differences were found with respect to community/political empowerment.

Barriers to Children's Mental Health Services

One of the goals of this research was to describe the barriers experienced by the intervention families and those addressed by the Family Associate services. As illustrated in Table 4, the barriers most commonly experienced by the intervention families were (a) lack of respite care (55%), (b) transportation problems (51%), (c) lack of recreational opportunities (48%), (d) lack of emotional support (48%), and (e) difficulty paying for utilities (41%). Of all these barriers, the Family Associates most frequently addressed the lack of information about mental health services, transportation problems, the lack of emotional support, and the lack of recreational opportunities. Notably, Family Associate services were able to meet the needs of client families in only one area—lack of information about mental health services.

DISCUSSION

The aim of this study was to test the effectiveness of using paraprofessionals who provide outreach, information, and support to families initiating children's mental health services following an EPSDT referral. The intervention provided by the Family Associates was effective in helping families initiate mental health services.

Families were more likely to make and keep a first appointment at the mental health clinic if they had received supportive services from the Family Associate. The effect of the intervention was moderate, as would be expected with an intervention of relatively low intensity and short duration. When considered with other variables, the effect of the intervention was similar in size to the effect of caregiver education on service initiation. This finding regarding caregiver education is consistent with other studies (Garfield, 1986; Wierzbicki & Pekarik, 1993). The finding that the intervention predicted service initiation, while controlling for demographic characteristics, provides support for the general effectiveness of the intervention.

The Family Associate intervention did not increase the likelihood that families would maintain uninterrupted attendance at clinic appointments. Both intervention and comparison families missed some appointments, and there was minimal difference between the two groups with regard to the pattern or frequency with which appointments were missed. About 33% of both groups missed no appointments; about 20% missed more than two clinic appointments. These families clearly faced barriers to regular attendance that the Family Associate was unable to address. Because the Family Associate intervention was intentionally constructed to cover a short time at the beginning of treatment, a longer period of intervention may be necessary to address the needs of families who continue to have difficulty attending appointments on a regular basis.

The Family Associate intervention did not increase the likelihood that families would continue in treatment until it was completed. The dropout rate for families in this study fell between 20% (comparison families) and 24% (intervention families). This rate is at the low end of the range of dropout rates cited in the literature. For example, Wierzbicki and Pekarik (1993) reported a mean dropout rate of 46.81% over 16 studies, and dropout rates between 25% and 35% are regularly reported in the literature (Day & Reznikoff, 1980; Forehand, Middlebrook, Rogers, & Steffe, 1983; Mannarino et al., 1982). However, the dropout rate reported in the present study is even more impressive when considering the generally low income level of these families, a characteristic frequently associated with higher rates of dropping out of treatment (Baekeland & Lundwall, 1975; Garfield, 1986; Wierzbicki & Pekarik, 1993).

Many explanations can be offered for the low dropout rate in this study. For example, the definition of dropout used in this study excluded families that never initiated children's mental health services after a referral was made. Including these families may account for higher rates reported in previous studies. In addition, the families identified as continuing in treatment might have dropped out after the follow-up interview was conducted. Previous research has established that dropout usually occurs in the early stages of treatment, commonly within the first 6 to 12 sessions (Baekeland & Lundwall, 1975; Pekarik, 1991). In the present study, approximately two thirds of the families attended six or more appointments. Taken together, these points suggest that the 3- to 4-month time span used in this study allowed plenty of time for dropout to occur for those families that initiated treatment near the initial interview, but might have less accurately represented the discontinuance patterns of those who waited several weeks before beginning services.

One of the important contributions of this study is the clear explication of the barriers families face while initiating and continuing mental health services. Some of the barriers identified were due to the family's situation; others were related to the organization of the mental health service delivery system. Intervention families most often reported facing barriers with respect to finding respite care, transportation to services, appropriate recreational opportunities, and emotional support, which is similar to findings of previous research on barriers to service participation (Manela et al., 1977; Meisels & Margolis, 1988). The Family Associates were most successful at providing help with transportation, information about emotional and behavioral disabilities, and emotional support. They were less successful in meeting needs for respite care and child care, often because resources were not readily available in the community for these services. In addition, families reported difficulties with circumstances that usually are not associated with access to mental health services but can impede the family's ability to concentrate on supporting their child's treatment. These included difficulty paying for utilities, problems with daily living, and lack of sufficient clothing and food. Approximately one third of the intervention families identified these problems as barriers to their involvement in mental health treatment, yet these were not circumstances that the Family Associates were consistently able to alter. In the future, researchers need to address these areas of difficulty for low-income families and evaluate strategies to reduce their impact on involvement in mental health services.

In addition to helping families get started in mental health services, some conclusions can be drawn about the Family Associate's ability to help families improve their sense of empowerment at both the family and service system levels. Families in the intervention group scored significantly higher than families in the comparison group on both family and service system subscales of the FES, although the differences were modest. These findings suggest that paraprofessional outreach may do more than just get families into services: it may also have a positive impact on families' sense of mastery and their ability to cope with difficult situations.

Given that significant findings emerged with an intervention of relatively narrow focus, there is considerable promise for expanded efforts in this regard. Additional outreach efforts to families, especially when coupled with modifications to the service system, may substantially improve families' chances of accessing mental health services. Most other investigators have examined accessibility from a perspective limited to family demographics and service system issues. This research affirms the importance of adopting a broader view of families' lives when addressing the problems of service accessibility.

As with any research carried out in a rapidly changing service environment, a number of limitations within this study need to be considered. The Family Associate intervention took place in three counties with different systems of referral, different access issues, and different treatment services. Even though the counties were matched, as far as possible, on variables related to population density and service configuration, the differences among the demonstration sites may have introduced an unknown bias into the results. A second limitation was the need to use measures that were developed specifically for this study. For example, the concepts of dropout, attendance, and continuance can be defined in different ways, making it difficult to compare these findings with other studies. A third limitation concerned the small number of individuals implementing the intervention—one person in each of the three counties. Individual Family Associates and counties were completely confounded; therefore, it was not possible to disentangle their separate effects. A more definitive test of the intervention would involve a greater number of Family Associates within each demonstration site.

Future research on access to and dropout from mental health services should explore the importance of barriers related to limited money and the stresses of daily living. In addition, more work needs to be done on the impact of interventions such as the use of Family Associates, but with an expanded focus and over a longer period of time. Our experience with implementing this intervention suggests that it would be even more effective if the Family Associates were free to work with families throughout the process of mental health treatment. On a broader level, there is an ongoing need for research on innovative interventions that approach longstanding accessibility problems in novel and efficient ways. The Family Associate intervention represents a promising effort in this direction.

Authors' Note

This study was supported with funding from the Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Grant No. MH49072-02.

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Appeared in *Journal of Emotional and Behavioral Disorders* 4(1), 2-11.

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