This study investigated the utilization of early intervention services by 102 children (ages 2 to 72 months) and families seen for assessment at a diagnostic clinic in Portland, Maine. Surveys completed by subjects' case managers assessed whether recommended early intervention services were received and reasons why recommended services were not received. The study found that, overall, 70 percent of recommended services were received. Of the services not received, parent counseling was implemented significantly less often than other services. Sociodemographic factors did not discriminate service utilizers from non-utilizers overall, nor did the quantity of recommendations. Of services not obtained, family refusal was the most frequently reported barrier to utilization. Concerning the recommendation for parent counseling, families who received "strong" recommendations for counseling were more likely to receive services than families who received moderate or weak recommendations. Families with low incomes were more likely to access recommended counseling services. (Contains 10 references.) (Author/DB)
Factors Affecting Utilization of Early Intervention Services

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ABSTRACT

This study investigated the utilization of early intervention services by children and families seen for assessment at a diagnostic clinic in Portland, Maine. Subjects were 102 children ranging in age from 2 months to 72 months who had received comprehensive developmental evaluations between September 1994 and August 1995. Surveys were completed by subjects' case managers. The surveys were designed to assess 1) whether recommended early intervention services were received and 2) reasons why recommended services were not received. Results of the study showed that of all the recommended services, 70% were received. Of the 30% of services that were not received, parent counseling was implemented significantly less often than the other services. Sociodemographic factors did not discriminate service utilizers from non-utilizers overall, nor did the quantity of recommendations. Of the services that were not obtained, family refusal was the most frequently reported barrier to utilization. Examination of factors specifically related to the recommendation for parent counseling revealed that families who received "strong" recommendations for counseling were more likely to receive services than families who received "moderate" or "weak" recommendations. Families with low incomes were more likely to access recommended counseling services, although low income families did not tend to receive stronger recommendations for counseling than high income families. In conclusion, it appears that the families of children seen at the clinic are inclined to follow professional advice and are attentive to the nuances of the wording of recommendations. Future research should focus attention on income and resources, the manner of recommendation delivery, and the parent-professional relationship to determine their direct and interactive effects.
Factors Affecting Utilization of Early Intervention Services

As the theory and practice of early intervention continue to evolve, a variety of service delivery models have been implemented. In the traditional model, a clinic-based diagnostic team assesses the child and provides a diagnostic formulation along with a set of recommendations for services. A case manager is then identified to assist the family to access recommended services elsewhere in the community. This model has been challenged as being insufficiently attentive to the complex ecological factors that influence a child’s functioning, particularly with regard to the role of the family (Wyly, 1997). Nevertheless, the model continues in common use and therefore continues to merit study as to its efficacy.

One question with regard to the traditional model is the degree to which the early intervention services recommended by the diagnostic team are implemented. Research in the utilization of services for young children is sparse, and in most cases the research has been done by the treatment providers rather than by the diagnostic and referral agencies. This program-based approach misses those children who “fall through the crack” between the time of referral and the actual receipt of treatment. For example, Sontag and Schacht (1993) examined rates of service access without comparing these to what services were first recommended.

A related issue concerns the factors affecting the rate of implementation of recommended services. In general, the variables affecting utilization of early intervention services by families can be organized into three categories: family factors, professional factors, and parent-professional relationship factors.

Family Factors Affecting Service Utilization

Previous studies investigating utilization of early intervention services have found no significant direct association between service utilization rates and basic demographic variables such as maternal age, education, race, marital status, income, and household size (Barnard et al., 1988, Kochanek & Buka, 1996). However, Sontag and Schacht (1993) found differences in the types of early intervention services utilized based upon ethnicity, income, and the age of the child. In their study of patterns of early intervention service utilization, Sontag and Schacht also found that when services were not received, the most frequently cited reasons were that parents did not want the service or felt their child did not need the service. A utilization study by Huber, Holditch-Davis and Brandon (1993) found that more than half of the parents in their sample chose not to follow through on recommendations for early intervention services because they did not perceive a need for them. Both race and socioeconomic status appeared to be influential factors in whether the children in this study received services.
Poverty has been identified as increasing the risk for failure to receive recommended early intervention services (Sontag & Schacht, 1993). However, DeGangi, Wietlisbach, Poisson and Stein (1994) looked at the impact of culture and SES on parent-professional collaboration and found that families with low SES tended to defer to professional judgment when making decisions about early intervention services. Here, parental deference to professional opinion apparently resulted in increased utilization of early intervention services for children, although possibly at the expense of authentic communication and genuine collaboration between parents and professionals. Kochanek and Buka (1996) also found that mothers who strongly believed that professionals should make decisions regarding provision of service had higher utilization rates than mothers who wanted to make those decisions themselves.

In some studies, maternal psychosocial characteristics appear to be related to service utilization. For example, Barnard et al. (1988) identified a lack of "social competence" (defined by IQ, level of depression, education level, and development of social skills) in mothers who did not access services recommended for their children. Mothers with higher IQs in an information/resource group utilized early intervention services to a greater extent than mothers with low IQs who had comorbid decreased mood, low social and community support, and limited life and social skills. When these factors were addressed by a mental health group approach that promoted an interpersonal relationship between mother and service provider, service utilization increased. Similarly, Osofsky, Culp, and Ware (1988) found that "...just offering intervention does not necessarily mean that it is accepted and used beneficially" (p. 240). Osofsky, Culp, and Ware found that the adolescent mothers at highest risk were less likely to accept professional support. Evidence also supported a positive association between the mother's ability to relate to another person and her level of involvement in early intervention services.

Professional Factors Affecting Service Utilization

Professional factors are the services and styles that professionals use in early intervention treatments. Bailey, Buysse, Edmondson and Smith (1992) identified barriers to family involvement in early intervention, including knowledge, skill and attitudes on the part of professionals. Over the past decade, the approach to treatment favored by many professionals in the early intervention field has reflected a shift in emphasis from a child-centered approach that focused on the identified needs of the child to a family-centered approach focusing on the family's strengths and desires. The effect of this shift in emphasis on utilization of early intervention services was investigated in the previously cited study by Kochanek and Buka (1996). Findings of this study suggested that many mothers believed that early intervention services should be directed to the child and not to the family. Kochanek and Buka also found...
increased rates of recommended service utilization when professional characteristics of age and level of education were more closely matched to those of mothers.

Parent-Professional Relationship Factors Affecting Service Utilization

With regard to parent-professional relationship styles, Barnard et al. (1988) found that differential implementation of two styles of intervention, information/resource and relational, with parent groups, resulted in increased service utilization rates among parents of children in need of early intervention services. Less competent mothers were more responsive to a mental health/relationship-based approach while more competent mothers were more responsive to an information/resource-based approach.

In a review of the early intervention field, Guralnick (1993) noted the complexity inherent in reciprocal parent-professional relationships, most notable among factors related to parent participation, need for support and group process. Differing perspectives and frames for interpretation of these issues exist, and knowledge in this area is incomplete. Of course, even if a comprehensive understanding of these factors could be achieved, adjustments to improve the early intervention service system would remain subject to financial and personnel restrictions. According to Guralnick, in order to determine the most effective use of resources, research must “...identify children and families who are at greatest risk of not responding to ...early intervention services and supports....” (p.376).

The purposes of this study were to investigate 1) the extent to which early intervention services recommended as a result of evaluation were implemented for children and families and 2) reasons why recommended services were not received. Researchers were particularly interested in the extent to which family factors (demographics) and professional factors (the strength of written recommendations) predicted utilization of recommended services.

Method

Subjects

The subjects were young children seen at The Spurwink Clinic, a diagnostic clinic serving infants and young children in southern and western Maine. Children were seen in either the Infant Mental Health Clinic (IMH) or the Developmental Evaluation Clinic (DEC), depending on the reason for referral. When the referring agent identified mental health concerns as the primary reason for referral, the child was seen in the IMH. When developmental issues were identified as of primary concern, the child was seen in the DEC. Both clinics provided comprehensive, multidisciplinary, diagnostic evaluations to the child and family. The protocol
for each type of clinic evaluation was similar in that each included a full psychosocial family assessment and a developmental evaluation by a licensed psychological examiner. Evaluation protocols differed in that the DEC evaluations included a medical evaluation by a pediatrician, audiological screening, speech/language evaluation and occupational therapy evaluation, while the IMH evaluations included an evaluation of the child and family by a psychiatrist. A case manager from Child Development Services (CDS), the public agency responsible for gatekeeping early intervention services, was identified for every child at the time of evaluation.

Both types of clinic evaluation had a mental health component. Prior to the clinic visit, all parents were asked to complete a behavior rating scale and a questionnaire (the AIMS: Developmental Indicators of Emotional Health), which focuses on issues of attachment, interaction, mastery and support. During the psychosocial assessment portion of the evaluation, parents were provided the opportunity to identify and discuss any issues raised through the questionnaire that might be of concern to them. Parental attitudes toward and desires for supportive counseling were explored in this context. At the close of the evaluation, professionals discussed the findings and recommendations with the parents. Parents and casemanagers subsequently received a written report detailing the results of the evaluation.

The initial pool of subjects consisted of 106 children seen at the clinic between September 1994 and August 1995 for multidisciplinary infant mental health or developmental evaluations. Four subjects were dropped from the study because they had moved or were otherwise unavailable, resulting in a pool of 102 subjects ranging in age from 2 months to 72 months, with a mean age of 41 months (3 years, 5 months). Sixteen subjects (19%) received IMH evaluations, and 86 subjects (81%) received DEC evaluations.

All subjects were residents of Maine, and 97% were Caucasian, a proportion reflective of the general population of Maine. A majority of subjects (70%) were male. A majority (54%) of the families of these subjects resided in or near poverty levels (<$18,000 per year), and 85% had a household size between three and five members.

**Instruments**

Data regarding demographic variables, diagnostic categories and recommended treatments were wholly included in the clinic's standard diagnostic protocol. In order to gather data relative to evaluation outcomes, a follow-up survey was designed to assess 1) whether recommended treatments were received and 2) reasons why recommended treatments were not received. Survey respondents were provided with a list of the treatments recommended for each subject, and a separate survey form was completed for each treatment recommendation.

**Procedure**
Clinic evaluation records of the subjects were retroactively searched for demographic information and treatment recommendations. Surveys were then disseminated to the children’s case managers. In most cases, surveys were completed by subjects’ CDS case managers. For six subjects who had “aged out” of the CDS system, surveys were completed by telephone interviews with State Department of Human Services caseworkers or parents. Study data were coded numerically to protect the confidentiality of subject identity.

To test the hypothesis that the rate of service utilization was influenced by the way in which the recommendation was phrased in the report, the exact wordings of each of the recommendations for the treatment least received (parent counseling) were gleaned from the evaluation reports. The full recommendations were condensed to phrases and were then coded by three independent raters as strong (e.g., ...strongly advised to seek services....), moderate (e.g., ...services should be obtained....), or weak (e.g., ...may wish to consider obtaining services....) depending on how directive the recommendation seemed to the rater. Inter-rater reliability was established at 83%. Recommendations that were not coded similarly by two out of three raters were dropped from the analysis. The selected recommendations were then tested using chi-square analyses to determine whether the strength of the recommendation improved the likelihood that the recommendation would be implemented.

Results

Of all the recommended services, 70% were received. The four most frequently recommended services were speech therapy (n=73), preschool/educational program (n=83), occupational therapy (n=75), and parent counseling (n=74). Utilization rates were as follows: speech therapy, 86%; preschool/educational program, 83%; occupational therapy, 76%; parent counseling, 51%. Chi-square testing of the percentages receiving services revealed that parent counseling was implemented significantly less often than the other services, X² (1, N=200)=27.16, p<.001.

With regard to the study sample as a whole, chi-square analysis of sociodemographic factors (i.e., parent relationship [biological vs. foster], AFDC receipt, mother’s education level, child’s gender, Medicaid eligibility, race, family income, family size, presence of case manager, and county of residence) revealed no differences in familial characteristics between families that did and did not utilize services. The quantity of recommendations did not discriminate service utilizers from non-utilizers for the four most frequently recommended services.
Of the 30% of services that were not obtained, family refusal was the most frequently reported barrier to utilization, reported significantly more often than other barriers, $X^2(12, N=45)=26.22, p<.01$. Percentage distribution of all barriers to utilization is shown in Figure 1.

Because parent counseling was utilized less often than the norm, examination of factors specifically associated with this recommendation was performed. For those families who were recommended parent counseling, a chi-square test indicated that families with lower incomes were more likely to utilize the service than families with higher incomes, $X^2(2, N=45)=8.44, p<.05$ (see Table 1). Additionally, for these same families, the strength of recommendation positively predicted parent counseling service utilization. Service recommendations coded as "strong" were utilized significantly more often than recommendations coded "moderate" or "weak", $X^2(2, N=60)=6.95, p<.05$ (see Table 2), with 76% of families who received strong recommendations for parent counseling choosing to access these services. No statistically significant relationship was found between income and strength of recommendation. That is, low income families did not tend to receive stronger recommendations for counseling than high income families.

**Discussion**

This study documents the utilization of recommended services for children with mental health and developmental issues and their families. Although the pilot nature of the study and the sample size limits generalizability, the most limiting factor is that the information on service utilization by families was reported by case managers and was subject to their interpretation and knowledge of actual service receipt.

Nevertheless, several interesting findings emerged from the study. The overall utilization rate of recommended services (70%) is quite high and consistent with Kochanek and Buka’s finding of 69% in their 1996 study. This is a heartening statistic, however it is necessary to address potentially important issues with regard to the recommendations that were not implemented. The findings that parent counseling was the least utilized service and that family refusal of services was the most frequent explanation for non-utilization begs the question of “why?”, especially since practical obstacles such as transportation or child care needs were not indicated. The data indicate that family factors, professional factors and parent-professional relationship factors are implicated in the utilization of parent counseling services.

Although based on small sample size, the finding that when parent counseling was recommended, families with low incomes were more likely to receive it may be related to the larger context of parent-professional partnership. That is, low income may be a factor associated
with parental feelings of disempowerment with regard to recommendations made by professionals, with resulting increases in compliance.

However, the congruence found between the strength of professional recommendation and utilization of parent counseling services suggests that many families are attentive to the manner in which recommendations are delivered. A strong recommendation usually leads to implementation of services. In other cases, parents who do not feel a strong need for counseling services may be reinforced in this feeling by a moderate or weak recommendation in the written report. Concurrently, the professionals on the evaluation team may avoid making strong recommendations for counseling unless the parent expresses an interest in it. This finding has implications for diagnostic teams and other professionals who provide written reports of evaluations.

Other professional and interactive factors may also be implicated in the disparity between the rate of implementation of parent counseling recommendations versus other recommendations. For example, the recommendation for parent counseling differs from other recommendations because counseling requires the parent’s participation rather than the child’s. Parents may therefore feel more entitled to reject this recommendation. Another factor may be the disjunction between the evaluation, provided by one agency, the early intervention service, usually provided by a second agency, and the case manager who is an employee of a third agency. This system does not support a trusting and therapeutic relationship to be developed between the evaluation team professionals and the parent, possibly increasing the risk that recommended services would not be procured. Exploration of a procedure for regular follow-up on recommendation implementation and/or multi-agency team meetings might promote greater participation of parents in recommendations for parent counseling.

In conclusion, it appears that the families of children seen at the clinic are inclined to follow professional advice and are attuned to the nuances of the wording of recommendations. Further investigation into the issue of professional intention vs. parental interpretation of recommendations would provide valuable information about the nature of the clinic team’s partnership with parents. Future research should focus attention on income and resources, the manner of recommendation delivery, and the parent-professional relationship to determine their direct and interactive effects.

This study has illuminated the need to continue and expand this line of inquiry about children and families at The Spurwink Clinic. The early intervention field appears to have developed to the stage where studies about practical and interactive factors related to service utilization need to be investigated in greater depth. Such work will contribute to the promotion of
more productive parent-professional collaborations and, ultimately, to the optimization of growth and development for children at risk.
Figure 1
Barriers to Utilization of Early Intervention Services

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refused</td>
<td>42</td>
</tr>
<tr>
<td>Unnecessary</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
</tr>
<tr>
<td>Due to Start</td>
<td>14</td>
</tr>
<tr>
<td>Not Avail.</td>
<td>7</td>
</tr>
<tr>
<td>Pract. Obs.</td>
<td>5</td>
</tr>
</tbody>
</table>
Table 1

**Income Levels of Families with a Parent Counseling Recommendation:**

**by Service Utilization**

<table>
<thead>
<tr>
<th>Income</th>
<th>&lt;$12,895</th>
<th>$12,896-17,445</th>
<th>&gt;$17,445</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilization</td>
<td>Received</td>
<td>Not Received</td>
<td></td>
</tr>
<tr>
<td>Received</td>
<td>15</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Not Received</td>
<td>11</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 2
Strength of Recommendation for Parent Counseling by Service Utilization

<table>
<thead>
<tr>
<th>Utilization</th>
<th>Weak</th>
<th>Moderate</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received</td>
<td>2</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>Not Received</td>
<td>4</td>
<td>19</td>
<td>5</td>
</tr>
</tbody>
</table>
REFERENCES


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