[Reprinted from MENTAL RETARDATION, Vol. 16, No. 1, February, 1978]

A unique training program designed to improve the knowledge, sensitivity, and skills of pediatricians involved with young handicapped children and their families is described. The development and implementation of the curriculum as well as an analysis of initial results are presented. The results revealed that the pediatric residents perceived the program's objectives as being important and that, overall, activities were effective in accomplishing those objectives. In addition, self-ratings by pediatricians indicated that both their competence and confidence in relation to each objective increased as a result of the training program.

Training Pediatricians for Effective Involvement with Handicapped Preschool Children and Their Families[1]

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Individuals concerned with the welfare of handicapped preschool children, especially parents, frequently point out that the training, awareness, sensitivity, and skills of pediatricians are often not adequate to meet effectively the critical and unique needs of handicapped children and their families. This is not surprising, of course, when we note that, following medical school, the majority of the three-year pediatric residency is directed to the care of hospitalized patients. Moreover, even the time allotted to ambulatory care is mostly concerned with the management of a single acute illness in a busy clinic or emergency room.

Although numerous professional groups have become more closely involved with the development of handicapped preschool children over the last decade, we must also recognize that the role of the pediatrician with regard to young children, including those who are handicapped, has dramatically changed as well. It is anticipated that the majority of pediatric residents currently in training will be expected to function as members of a team of professionals jointly overseeing all the health and developmental needs of children, particularly those under the age of 5. As such, they will function not only as consultants and counselors to individual children and their families, but will also participate in coordinating the effective delivery of services through a variety of community facilities.

Despite efforts to provide more adequate training, recent reports indicate that significant progress remains to be achieved (Pearson, 1976). For example, there has been an introduction of Continuity Clinic care to provide the opportunity for residents to follow children with chronic conditions within the past several years, but even this fails to provide the residents with a perspective of what children are like and what their developmental needs are outside of the hospital or clinic setting. Similarly, there have been several efforts to expose medical students to community services for children and a few physicians are involved in such activities during fellowship training after pediatric residency, but training opportunities at both levels are generally insufficient (de la Cruz, 1976). Moreover, no report of a specific curriculum for general pediatric residents was discovered in a recent search of the literature.

In an initial effort to alter this state of affairs, a cooperative program between Children's Hospital National Medical Center (Washington, D.C.) and the Experimental Preschool Model Demonstration Program of the National Children's Center (Washington, D.C.) was recently developed. The purpose of this article is to describe this program, its objectives, curriculum, and activities, and to report on a preliminary evaluation of its effectiveness.

[1] The work reported herein was supported by Grant OEG-0–74–0546, from the United States Office of Education, Bureau of Education for the Handicapped. A version of this paper was presented at the annual conference of the *Association for Children with Learning Disabilities*, Seattle, 1976.

The Pediatric Residency Training Program

Background and setting

Children's Hospital provides training for 48 pediatric residents and has a commitment to include in the curriculum, particularly at the second and third year level, exposure to developmental and behavioral pediatrics. The residents spend a month on a Child Psychiatry rotation where they are exposed to the management of a wide variety of behavioral problems, as well as a month involved in Physical Medicine and Rehabilitation where they are exposed to infants and young children with major motor handicaps. In addition, they have the opportunity to spend one-half day a week in a Continuity Clinic throughout their three years of residency, but little of this time is spent in following children specifically because of developmental problems.

The Experimental Preschool is part of what is referred to as the First Chance Network and provides a model demonstration early intervention program for handicapped children and their families. Most relevant for this article is the fact that the program consists of 3- to 6-year-old children, two-thirds of whom are considered handicapped, with the other one-third developing normally (see Guralnick, 1978). Approximately half of the handicapped children have relatively mild problems and were referred by various agencies and clinics as a result of hyperactive behaviors, emotional instability and immaturity, and language/cognitive delays. The remaining handicapped children manifest more severe delays, many of whom have little or no language or socially appropriate behaviors. Accordingly, our setting permits observations of similar age children who display a wide range of developmental levels.

The program was arranged such that each pediatric resident spent 12 hours in programmatic involvement at the Experimental Preschool during the second or third year of residency. Certain readings and related study could be accomplished elsewhere. Curriculum activities were based on a series of 11 objectives, and an evaluation of the importance and effectiveness of each objective was carried out. It should be noted that the significance and positive outcomes of early intervention were concepts that were stressed throughout the program.

Objectives and activities

The following 11 objectives were selected: (1) Gain sensitivity to and comfort with individual handicapped children (*Children*); (2) Gain awareness of the behavioral characteristics of different handicapped children (*Behavior*); (3) Gain familiarity with labels and other terminology used to describe handicapped children (*Labels*); (4) Gain understanding of the limits of labeling (*Limits*); (5) Gain knowledge of the terminology of special education (*Special Education*); (6) Gain knowledge of tests used to evaluate handicapped children (*Tests*); (7) Gain knowledge of psychological terminology and the role of psychologists in the management of handicapped children (*Psychologist*); (8) Gain knowledge of social work terminology and the role of the social worker (*Social Worker*); (9) Gain ability to communicate effectively and plan with parents concerning the developmental and educational needs of a handicapped child (*Parents*); (10) Gain ability to communicate effectively with teachers about the developmental and educational needs of a handicapped child (*Teachers*); (11) Gain understanding of community resources available for handicapped children (*Community*).

A series of activities, each keyed to one or more of the curriculum objectives, was divided into brief modules and presented in four half-day segments. These activities include readings, such as chapters from Hobbs' (1975) book on the use and misuse of labels, as well as classic and current articles describing the system for characterizing and organizing services for handicapped children. The curriculum emphasizes active participation of the pediatricians, and considerable time is allotted for structured observations, including individual work with children selected to represent a wide range of handicapping conditions. Other modules include issues relating to the use of psychoactive drugs with a presentation of alternative management strategies, and an in-depth description of the nature and availability of community services as well as techniques for successfully obtaining those services for the families of handicapped children.

During the latter portions of the curriculum, the pediatrician's efforts are focused on one handicapped child. A standard physical examination is given and the pediatrician reviews the child's health record. In addition, time is provided for the study of various reports of the other child development professionals involved with this child, including teachers, speech therapist, and social worker. A review of these reports in a joint meeting with these child development specialists provides the occasion to discuss matters of interpretation, nomenclature, labeling issues, report format, and relationship to the child's developmental goals in the school, family, and social

context. In addition, it serves as a critical activity designed to prepare the pediatric resident for a counseling session with the designated child's parent.

The parent counseling session consists of a review of both the child's medical history and the educational and therapeutic programs. The pediatrician then discusses various points to assist in clarifying issues regarding the child's development and welfare. The ideal outcome of this process is a statement of an educational-therapeutic and health plan designed for about a six-month period.

The counseling session is videotaped through a one-way mirror and jointly analyzed by the pediatricians and other child development professionals. The purpose here is to provide feedback regarding the planning session, commenting on interpretations relevant to their specialty and its significance in the context of the child's total program, as well as interactions related to the general manner and communicative style in which the counseling session was conducted.

Results and Discussion

Although a definitive evaluation of the curriculum just outlined will consist of objective pre-post and multiple-baseline analyses of each objective, it is important to provide evidence documenting the appropriateness of the selected objectives as viewed by each participant, and to obtain the subjective appraisal of the progress of each pediatric resident in accomplishing each objective.

Accordingly, seven pediatric residents who had completed the program were asked to appraise each of the 11 objectives as to its importance, the effectiveness with which it was carried out, their competence and confidence in that area at the beginning and end of training, and the relative importance of the experience at the Experimental Preschool as compared to concurrent experiences in their residency program. It is important to note that only 10% of the residents' time during the month was spent at the Experimental Preschool.

A nine-point scale was used to assess the impor-

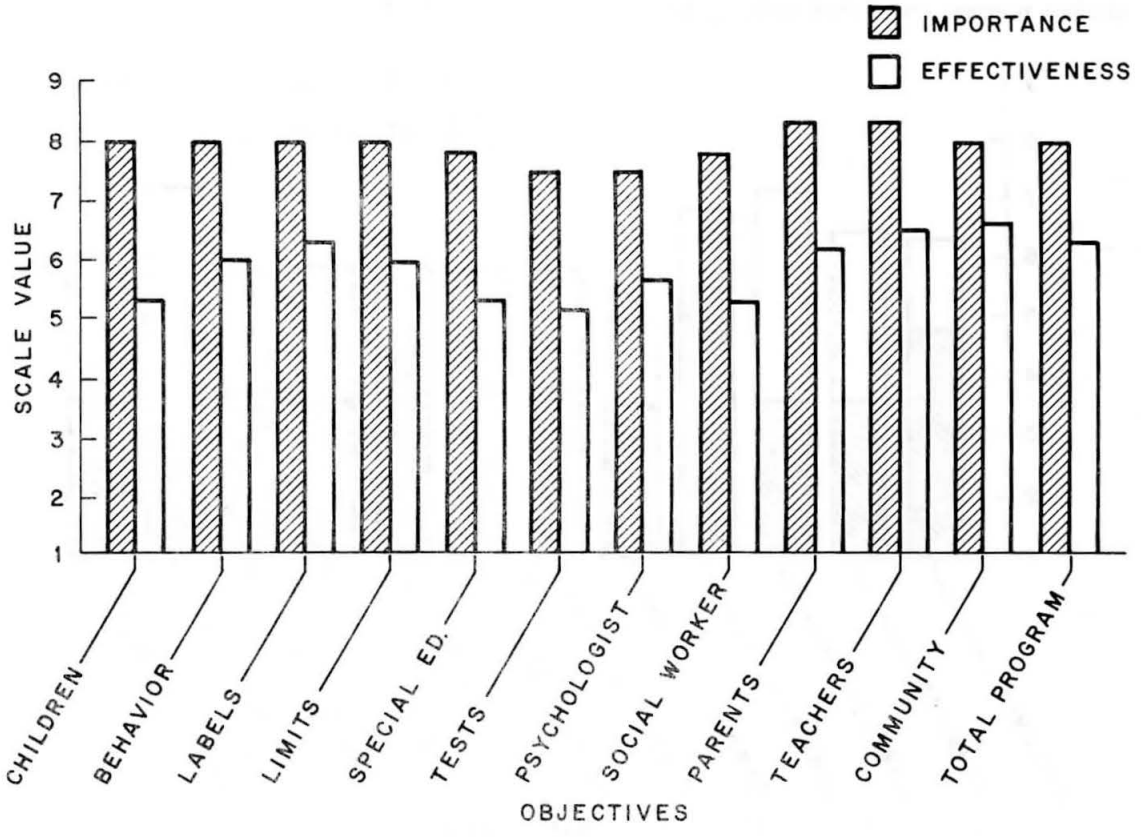

FIGURE 1. RATINGS BY PEDIATRICIANS OF THE IMPORTANCE AND EFFECTIVENESS FOR EACH OF THE PROGRAM'S OBJECTIVES. ESSENTIALLY THE SAME RESULTS WERE OBTAINED IN A SLIGHTLY MODIFIED VERSION OF THE PROGRAM THAT INCLUDED AN ADDITIONAL 18 PEDIATRIC RESIDENTS.

tance and effectiveness of the objectives. The midpoint of the scale was "possibly effective or important" (scale value 5), with a scale value of 9 representing "extremely important or effective." As can be seen in Figure 1, the residents perceived each of the objectives as important. Those viewed as most important were gaining an ability to communicate with parents and teachers about the developmental and educational needs of handicapped children. With regard to the effectiveness of the program, although all objectives were within the range of "effective," the communication with parent and teacher objectives, community resources, behavior, and labels and their limits fared best.

The subjective appraisal of progress over the course of the program was determined by the residents' weighting of their competence and confidence in the area of each objective at the beginning and end of the training. A scale point of 9 indicated total competence and confidence in the area and a scale point of 1 total lack of competence and confidence. As can be seen in Figure 2, the residents perceived progress in each area. Interestingly, the greatest progress (more than doubling the initial competence and confidence) was noted in "gaining understanding of community resources available for handicapped children." Other objectives with greater than 50% progress over the course of the month according to the residents' self-ratings were "gaining awareness of the behavioral characteristics of different handicapped children," "gaining the ability to communicate effectively and to plan with parents concerning the developmental and educational needs of a handicapped child," "gaining familiarity with labels and other terminology used to describe handicapped children," and "gaining the ability to communicate effectively with teachers about the developmental and educational needs of a handicapped child." Furthermore, it is reassuring, yet somewhat puzzling in the light of reports by parents and child development professionals (Gorham, Des Jardins, Page, Pettis, and Scheiber, 1975), to note that prior to training the pediatricians sampled in this program felt more competent and confident in understanding the limits of labeling than any other objective.

In regard to the relative importance of the expe-

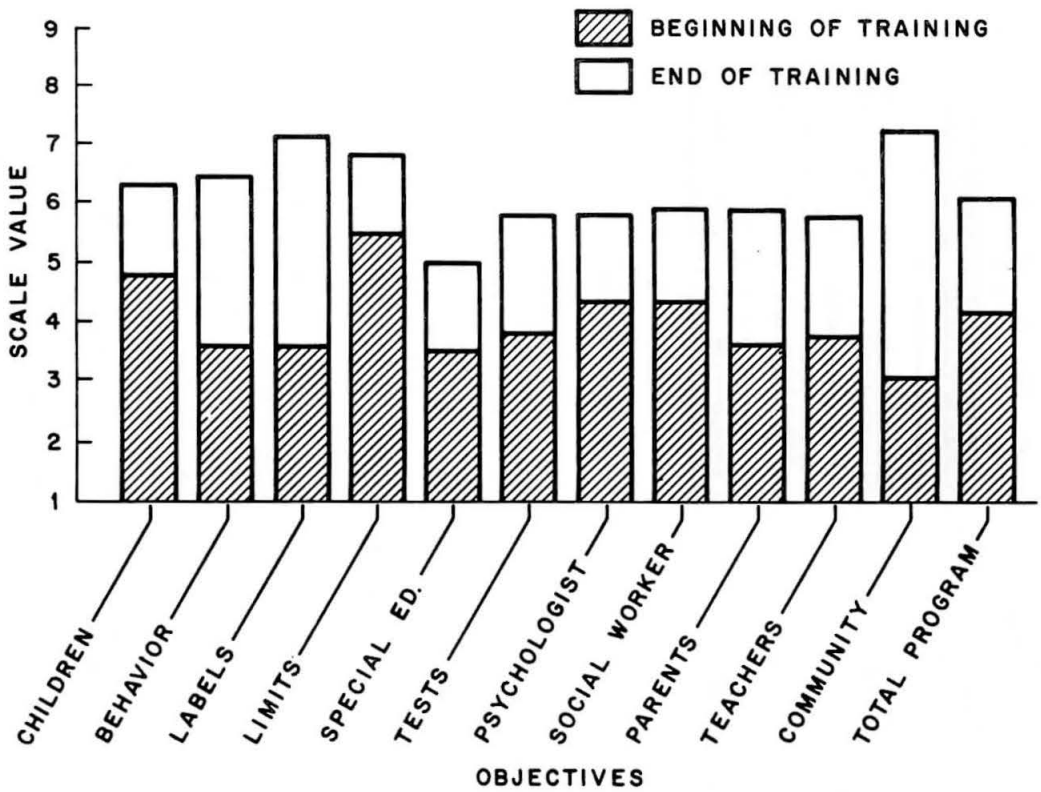

FIGURE 2. RATINGS BY PEDIATRICIANS OF THEIR COMPETENCE AND CONFIDENCE FOR EACH OF THE PROGRAM'S OBJECTIVES AT THE BEGINNING AND END OF TRAINING.

rience at the Experimental Preschool as compared to concurrent experiences in their residency program, 50% of the pediatricians' progress in psychological terminology, social work, and communicating with teachers and parents was attributed by the residents to our program, as well as at least one-third of their progress for each of the other objectives.

Conclusion

The increasing involvement of pediatricians in our society in relation to the developmental and health needs of all children, requires that additional training take place if they are to be more responsive to the needs of the children, their families, and the community. The program described in this article is an initial attempt to develop and evaluate both a curriculum and a training strategy focusing on various aspects of young handicapped children and their families. Although much remains to be accomplished, we believe that the need, feasibility, and value of such programs have been established here and that systematic refinements and additions will further contribute to improving services to handicapped preschool children.

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