Family management: a time management program.

Laura J. Hall

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FAMILY MANAGEMENT: A TIME MANAGEMENT PROGRAM

A Thesis Presented
By
Laura Jeanne Hall

Submitted to the Graduate School of the University of Massachusetts in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

February, 1986

Psychology Department
FAMILY MANAGEMENT: A TIME MANAGEMENT PROGRAM

A Thesis Presented
By
Laura Jeanne Hall

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ACKNOWLEDGEMENT

I am grateful to the families who participated in this study for allowing me to enter their homes and share some of the difficult and successful moments that occur in their daily lives. The following study would not have been possible without the expertise, encouragement, and editing from Beth Sulzer-Azaroff, my committee chair, and the support and critical suggestions from committee members Robert S. Feldman and Marian McDonald.

I also would like to thank the Reach staff, especially Evie Boykan, for their initial support and continued advocacy for my project. This study was accomplished with: research assistance from Stephanie Magid; emotional support from my mother, Phyllis Hall; and technical assistance and encouragement from my fellow graduate students.
ABSTRACT

The following study pilots a program which addresses the need of parents of handicapped children to arrange their time 1) to implement individualized child program, and 2) for employment or leisure activities. This time management program conducted in the homes of six volunteer families living in Western Massachusetts consisted of: the identification and continuous collection of data on a specific skill of the handicapped child; analysis and problem solving of each family's time management problems; and parental selection of self-rewarding events to include in their weekly schedules.

Results from the five families who completed the program indicate that parental perception of the amount of time spent alone, with spouse, in out-of-home activities, with children, with self-improvement activities and planning daily activities increased significantly from the initial to the last visit (Parent Attitude Questionnaire). All parents scored as having a more internal locus of control on the Rotter I-E Scale, except one who stayed the same. Four out of five families collected data throughout the program, denoting child progress in all cases and each parent stated that he or she would recommend or highly recommend the program to others (Parent Satisfaction Questionnaire).

Although results need to be interpreted with caution since no comparison group was used and there were no controls for time alone; there are several indications that support future research
in this area, such as parent attendance and satisfaction, child progress, and the program's cost effectiveness ($63.40 per visit, including staff time, mileage, and materials). Future analysis will evaluate the time management components and the child management components in order to determine which aspects are most effective in improving child and parent skills as well as parental perception of positive changes in their day-to-day lives.
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CHAPTER I

Introduction

There has been an increased effort by professionals working for children with special needs to involve parents and siblings in the implementation of their education and treatment programs. Family members can provide support and consistency, and programs or interventions for children can be enhanced or deterred by interactions occurring in the home. Parent training is an activity designed to provide parents with the skills necessary to develop and maintain child behavior change programs.

Methods for parent training began developing in the 1950's and early 1960's when behavioral research moved from restricted environments such as schools and homes (Dangel & Polster, 1984). Since then, a variety of methods for parent training have been developed. Manuals have been written to teach parents, how to help their children with toilet training, social skills, academic skills, how to utilize basic behavioral principles (Bernal & North, 1978), and how to work with special handicaps (Lovaas, 1981). Home-school notes with home reward systems enable information about children to travel across settings and, in some cases, parent involvement has had a positive effect on child behavior in the classroom (Blechman, 1981; Pinkston, 1984).

Parent training has been accomplished through group meetings where parents are supported by others parents. In some models of
parent training, behaviorally skilled professionals role play situations with parents and then parents practice at home what they have learned in the group (e.g. Harris, 1983). Other models use parent trainers to provide families with information, support and encouragement, in addition to developing child management skills. In one particular parent training program for families of children with autistic behaviors, the parent trainer demonstrates or models skills, first at school or in a group home while the parent is visiting, and then, again, in the family home (McClannahan, Krantz & McGee, 1982). Role playing of social skills, and contingency contracting have also been utilized in parent training programs (Alexander & Parsons, 1973).

Although parent training models such as these have been successful in providing parents of special needs children with the skills necessary to develop or implement child behavior change programs in the home, trained skills frequently tend not to maintain (O'Brien, Riner & Budd, 1983; Moreland, Swebel, Beck & Well, 1982). A key question, then, is not how to train parents but how to help them arrange their environment so that these new skills can continue to be used.

Powerful contingencies and rewards have been used with parents to promote their involvement with programs and practice of new skills. These include: partial fee refunds, telephone time with professionals (Eyberg, 1974), pot luck dinners, respite care weekends for children (McClannahan et. al., 1982) contract games used to increase communications (Blechman, 1981; Bizer,
1978) and the volunteer service of researchers and clinicians. Initial participation or practice alone frequently does not maintain parent behavior once these contingencies are removed.

By arranging contingencies for parents, professionals are creating an environment that is dissimilar to the typical. The rewards are, in a sense, artificial. In order to determine how parents can best incorporate new skills into the routines of their day-to-day lives and re-arrange their own events in order to create contingencies that maintain these new skills, an analysis of the family's home environment is necessary.

Ideally this analysis would include multiple measures on both child and parent behaviors. Such a complete analysis was lacking in two-thirds of the forty-three examples of parent training programs reviewed by Moreland et. al (1982). Specific behaviors to address would be both parent-child and parent-parent interactions. If there is a stressed marriage exacerbated by the special needs of a handicapped child, then there is a good chance that a parent training program needing parental co-operation would not be effective in this environment. In addition to communication within a family, an analysis of support systems outside the nuclear family can be helpful when designing a program. If, for example, parents can utilize respite or child care or extended family members then they may be more able to take on the additional demand that the implementation of a child skill development program may include.

Burgess and Richardson, (1984) who work with child
maltreatment, found it necessary to address the multiple environmental stressors that affected the family as a component of their parent training program. These stressors were addressed by 1) relationship establishment 2) counseling in life management skills 3) referrals to community agencies for family support services 4) advocacy 5) offering to provide transportation or nutritional and financial advice. Certainly parents who have severe financial or nutritional problems may not place a child skill building program as a family priority, and a parent training program that only addresses child behavior change may have limited success.

The high rate at which handicapped children develop personality problems, or are battered (Trout, 1983) further indicates the need for clinicians and researchers to take into account the family interactions in order to design behavior change programs that are workable and successful. The role of siblings of handicapped children is another area in which there has been relatively little methodologically sound research (Lobato, 1983). Siblings are also family members who are affected by changes in child and parent behaviors and by the implementation of home programs.

People Involved

Given the multiplicity of factors impinging on long term parental effectiveness with their handicapped children, it may often be necessary to include both parents and siblings in programs addressing the needs of a handicapped child. Although
parent training programs purportedly have included both parents (Atkinson & Forehand, 1979; Harris, 1982; McClannahan et al., 1982 and Rosenberg, Reppucci & Linney, 1983), "in the great majority of reported cases training has involved only one parent in the family- the mother" (Adubato, Adams & Budd, 1981).

Measurement

If the family organization and its' interactions are to be assessed effectively, measurement needs to be precise, objective and valid. In order to choose methods for analyzing a family environment, an evaluation of types of measurement that have been used in parent training programs may be helpful. These include: behavioral observations by trained observers with reliability estimated via interobserver agreement scores; permanent product data demonstrating that data were collected by parents (Eyberg, 1974; McClannahan et al., 1983); and responses to questionnaires measuring change of parental perceptions to corroborate data from observers (Campbell, O'Brien, Bickett & Lutzker, 1983).

The validity of measurement taken in the home may be suspect due to its potential for reactivity. Attempts to resolve this problem have included: clinical observations and permanent products only (Salzberg, 1983); multiple observations on child and parent behavior supported with interobserver agreement scores; and audio-visual equipment placed in the home (Christensen & Hazzard, 1983).

Christensen and Hazzard conducted a study using audio-tapes turned on and off mechanically without the family being aware of
the schedule. The experimenters used a bogus equipment failure to determine whether or not family interactions would change when the family members believed that they were not being taped. For the three families used in this study, no significant changes occurred when recordings were made during the bogus failure period. For ethical reasons no tapes were reviewed until after the conclusion of the study and after families had given consent.

**Target Behaviors**

In addition to methodological issues, the question of what to measure also remains somewhat unanswered. Schriebman and Britten (1984) state, "No matter how effective the training program might be, if the training has a negative impact on the family, the parents will not use it" (p. 303). Therefore, we need to measure a program's impact on the family including such factors as child progress, sibling interaction with both the handicapped child and siblings, parental perception and attitude toward the program as well as individual members' self-esteem and attitudes toward each other.

By attending to these measures, the importance or significance of programs for family members can be combined with an emphasis on behavior change, which in turn may influence the maintenance of new skills obtained by parents, siblings and handicapped children. "It seems that if we aspire to social importance, then we must develop systems that allow our consumers to provide us feedback about how our applications relate to their values; to their reinforcers" (Wolf, 1978, p. 213).
One means of developing such a system is to focus on developing or enhancing parents' abilities to manage their own, spouse's and childrens' behavior within the framework of their daily routines. Although researchers have reported parental success as contingency managers with children, relatively few researchers have evaluated parents' skills as household or family systems managers.

**Time Management**

Just as organizations have management personnel to assure an efficient system, parents serve as managers of their individual family systems. One of the major responsibilities of any manager is the organization of time and activities; that is time management. Time management programs have been used with many diverse populations: faculty members who, increased work efficiency by prioritizing tasks and recording activities in daily logs (Hall & Hursch, 1982); teachers who, increased instructional time by listing priorities and time wasting behaviors and participated in a program with lectures, role play, group discussions and performance feedback (Maher, 1983); and working parents who, increased the amount of time spent with their families by arranging individual flex-time schedules and maintaining daily logs of activities (Winett & Neal, 1981).

Although this author was unable to locate any reports of time management programs that evaluated the schedules or daily events of families, such programs have been successful with other paraprofessionals in human services. These have included the
staff of community mental health centers, who managed their schedules of work productivity and efficiency (Sajway, Schnelle, McNees & McConnell, 1983), and staff in institutions, who managed client activities (Quilitch, 1975). The success of these and other staff management programs has been attributed to reinforcement in the forms of written feedback (Sajway et al., 1983), verbal feedback (Ivancic, Reid, Iwata, Faw & Page, 1981), and publicly posted feedback (Greene, Willis, Levy & Bailey, 1978; Quilitch, 1975). Similar reinforcement procedures among families may also result in equal success.

Alan Lakein (1973) reports in his book, How to get Control of Your Time and Your Life that, "the homemaker's problem of finding time for leisure is particularly acute." He advocates for a balance of work and play and offers time management skills as a means of obtaining this balance. Jack Ferner (1980) emphasizes establishing goals and priorities through self-assessment as the focus of managing time. He writes, "Managing your time means managing yourself."

The self-management of any new skill may be more likely to maintain if rewards are used contingent upon behavior change. Parental self-reward with items or events such as cigarettes, coffee and covert statements, has been shown to be effective in promoting extinction of undesirable child behaviors in the home (Brown, Gamboa, Birkimer & Brown, 1976). Self-delivered parental reinforcement, in the form of exchangeable tokens used in conjunction with a child token system, decreased parental
commands and child inappropriate social behavior (Goocher & Grove, 1976). Both of these family management programs were conducted in the home with logs as written accounts of behaviors and self-selected rewards contingent upon parent behavior change.

"In order to assure generalization across settings, behaviors, or time the development of techniques to provide the environmental events supportive of generalization must be systematically programmed into current treatment programs" (Kelly, Embry & Baer, 1979). Therefore, an example of a complete parent training program might include: reinforcement of implementation of child behavior programs; written evaluative feedback from professionals in the forms of graphs and verbal statements; and family support by implementation of parental time management strategies and self-selected parental rewards. The purpose of this study was to design, implement and pilot test such a family management program as a possible model for parent training.
Method

Subjects and Setting

Recruitment and Families. All families utilizing services from the Reach agency received written information describing the time management program. Reach provides physical therapy, occupational therapy, education and evaluation, as needed, for children with handicaps. Reach staff work with the family in their home until the special needs child is age three. Each family also had access to respite care services of ten full days or twenty half days per six months. Seven interested parents then returned a form to the Program Coordinator, who contacted them by phone to further describe the family commitment and the amount of time necessary for participation. These families then received consent forms and a detailed, written description in the mail and were requested to return the signed forms in enclosed stamped envelopes.

The six families who returned consent forms were selected as subjects. All lived in rural sections of Western Massachusetts, between 4 and 32 miles away from the university. All families began the program stating that they had specific time management difficulties which included: problems scheduling the necessary home visits from physical therapists, nurses, and educators for
the handicapped child; lack of time to spend with family members other than the handicapped child; and finding time for out-of-home activities such as work.

The youngest child in each of the families was receiving services from the county early-intervention agency, Reach. The handicaps of those children included: a general developmental delay, Down's Syndrome, Bronchopulmonary Displasia (BPD) and hearing loss, and Cerebral Palsy (see Table 1 for additional details). The child with Down's Syndrome (#1) experienced a severe heart defect on the AVC canal and had surgery at age five months. He was underweight with very low muscle tone. At the time of the study he communicated with sign language rather than verbally. One of the children with Cerebral Palsy (#2) also was affected by colabomas of the iris and had cataracts. The child with B.P.D. used a respirator to receive oxygen 24 hours per day, had his heart monitored regularly and required nursing care for eight hours per day. One nurse who also fed this child participated in the program by collecting data on child skills.
# Table 1: Family Demographics

<table>
<thead>
<tr>
<th>FAMILY#</th>
<th>PARTICIPANT</th>
<th>WORK WEEK (HIGHEST LEVEL)</th>
<th>EDUCATION</th>
<th>MEAN INC.</th>
<th>NO. OF CHILDREN IN HOME</th>
<th>CHILD DIAGNOSIS</th>
<th>MILES T/F U.</th>
<th>HOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mother</td>
<td>Part-time</td>
<td>B.A.</td>
<td>24,000</td>
<td>1</td>
<td>M.R. 30 months</td>
<td>4</td>
<td>Modern House</td>
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<tr>
<td>2</td>
<td>Mother</td>
<td>F-T day</td>
<td>2 yrs. College</td>
<td>25,000</td>
<td>2</td>
<td>C.P. 11 months</td>
<td>32</td>
<td>Old House</td>
</tr>
<tr>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Father</td>
<td>F-W evenings</td>
<td>H.S.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>Mother</td>
<td>--</td>
<td>H.S.</td>
<td>20,000</td>
<td>2</td>
<td>Downs' 32 months</td>
<td>27</td>
<td>Small House</td>
</tr>
<tr>
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</tr>
<tr>
<td>4</td>
<td>Mother</td>
<td>M-F 3-11p.m.</td>
<td>1 yr. College</td>
<td>13,000</td>
<td>2</td>
<td>C.P. 16 months</td>
<td>30</td>
<td>Apart.in House</td>
</tr>
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</tr>
<tr>
<td></td>
<td>Father</td>
<td>Laid Off</td>
<td>Assoc. Degree</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5</td>
<td>Mother</td>
<td>--</td>
<td>H.S.</td>
<td>27,500</td>
<td>3</td>
<td>Bronchopulman-ary Displasia (BPD)</td>
<td>19</td>
<td>House (Redoing)</td>
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<tr>
<td></td>
<td>Father</td>
<td>F-W 7-3</td>
<td>H.S.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Mother</td>
<td>--</td>
<td>1 yr. College</td>
<td>16,000</td>
<td>1</td>
<td>C.P. Visual Imp. 17 months</td>
<td>5</td>
<td>Apart.in House</td>
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</table>
The participating parents' levels of education, the number of parents participating, children per family and mean income per family are described on Table 1. Participating parents completed all assessment instruments and information sheets throughout the program. They attended meetings with the Program Coordinator regularly. If both parents in one family participated in the program, and one parent, on occasion, could not attend a meeting or needed to leave early, the meeting took place as scheduled regardless.

All family involvement was voluntary and no financial or material incentives were offered for participation. Signatures of informed consent, which included a brief description of the program methods and the right to withdraw, were obtained prior to the beginning of the program. In addition, the methods were approved by the university and Reach's human subjects committees.

The Program Coordinator was a doctoral student in the Developmental Disabilities Training Program at the University of Massachusetts who worked as a student intern with Reach prior to conducting this program. The research assistant was an undergraduate psychology student who worked nine hours per week with the program in exchange for supervision and research course credits.
Materials

Data collection packages were sent to all families each week. These included: written instructions describing how to complete the occurrence/nonoccurrence data sheets, five data sheets to be used to record ten daily trials of the child's target behavior (see Table 2 for sample) and a stamped, self-addressed envelope.

All other materials were handed to parents to complete during or between visits. These included: forms for completing daily logs to describe the events of a full day by the hour (Table 3); a Preferred Activity List which requested that parents itemize activities enjoyed alone, with children, with spouses and friends (Table 4); a contractual form stipulating when and how often each week parents would implement specified child skill programs and parent reward programs (see Table 5); and written outlines of time management discussion topics (Table 6). Table 7 briefly summarizes the schedule and topics for home visits.

Additional materials were used in addressing individual time management difficulties with specific families. These included a Temporal Analysis form to evaluate a difficult time of day (see Table 8), token charts to monitor rewards delivered contingent upon sibling behavior, (e.g., getting ready for bed without prompt or getting up for school on time) and alphabet cards, puzzles and books to use as instructional materials with siblings.
Table 2

The Time Management
Data Collection Form

<table>
<thead>
<tr>
<th>Recorder's Name</th>
<th>Date of Home Program Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child's First Name</td>
<td></td>
</tr>
<tr>
<td>Child Behavior Recorded</td>
<td></td>
</tr>
</tbody>
</table>

Percent out of 10 Trials (+ = correct/ - = incorrect)

1
2
3
4
5
6
7
8
9
10

_________________________ Total Percent Correct

Time or times when home programming was in progress

Comments:
<table>
<thead>
<tr>
<th>Table 3</th>
<th>DAILY LOG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Date</td>
</tr>
<tr>
<td><strong>7:00 a.m.</strong></td>
<td><strong>Date</strong></td>
</tr>
<tr>
<td><strong>8:00</strong></td>
<td><strong>Day of Week:</strong></td>
</tr>
<tr>
<td><strong>9:00</strong></td>
<td><strong>2:00</strong></td>
</tr>
<tr>
<td><strong>10:00</strong></td>
<td><strong>3:00</strong></td>
</tr>
<tr>
<td><strong>11:00</strong></td>
<td><strong>4:00</strong></td>
</tr>
<tr>
<td><strong>12:00</strong></td>
<td><strong>5:00</strong></td>
</tr>
<tr>
<td><strong>1:00 p.m.</strong></td>
<td><strong>6:00</strong></td>
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<td><strong>2:00</strong></td>
<td><strong>7:00</strong></td>
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<td><strong>3:00</strong></td>
<td><strong>8:00</strong></td>
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<td><strong>8:00</strong></td>
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</table>
### Table 4: Preferred Activity List

<table>
<thead>
<tr>
<th>Activities that I enjoy doing alone</th>
<th>Parent's Name</th>
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Activities that I enjoy doing with friends:

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Activities that I enjoy doing with my spouse:

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Activities that I enjoy doing with my children:

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</table>

My favorite time of day is ____________________________

My most difficult time of day is ____________________________
Table 5

Family Management Contract

We the undersigned agree to support the use of the following times for the designated events such as child teaching, child therapy or parent choice activities. We understand the importance of scheduling both child and parent activities consistently.

<table>
<thead>
<tr>
<th>Child Activity</th>
<th>Time</th>
</tr>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Parent Activity</th>
<th>Time</th>
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</tbody>
</table>

Parent Signature

Date

Other Adult Living in the Household

Date
DISCUSSION TOPICS

Time Management Program

Data Collection

* Data collection enables a close look at child behaviors; marking positive changes even when small.

* Data signals when programs need to be changed, for example, a child may have progressed beyond a program or may be stuck in one area.

* Children behave differently in different settings and at different times. The best times and places for home programs can be defined.

* Measures such as occurrence/non-occurrence are easy to take provided child behaviors or activities are well defined.

* Interobserver agreement between two people is necessary since people often view behavior differently.

* Accuracy is most important!

Home Education and Therapy

* Definition - Activities that promote social, emotional, physical or cognitive development.

* Children need pre-requisite skills such as the ability to attend to others or objects.

* The greater amount of time the child is engaged in educational or therapeutic activities, the greater the opportunity for progress. (Practice)

* Home programs enable children to practice skills in different settings and with various people so new skills can become part of their daily lives.

* The more education or therapy becomes a part of the family routine, the more likely teaching will occur and new skills will maintain.

Table 6
Table 6 (continued)

Time Management/Self Management

* "I don't have enough time." is not the issue. Time management is the process of managing the things we do in that block of time. (Jack Ferner - Successful Time Management)

* The homemaker's problem of finding leisure time is particularly acute. (Lakein)

* Programs have been successful.

* Goals and priorities need to be arranged.

* Begin by looking at how time is used through Daily Logs.

* Self-Reward is defined as an activity, object of interaction that is self-selected and used contingent upon some previously occurring event such as conducting a child program.

Maintenance

* Programs are effective for as long as they maintain.

* How is the program supported within the family?

* Has the program become a natural part of the family routine? If not, how can it?

* What do you usually do to maintain good habits?

* Program maintenance may be difficult some days. This is typical. The program is still workable—just start the program up again.
Table 6 (continued)

**Program Review/Reliability of Self-Reinforcement**

* Any problems with the Time Management Program?
* What positive changes have you observed as a result of the program?
* Self-reinforcement often stops without naturalistic contingencies.
* How do you practice self-reinforcement; do you praise yourself? Do you use contingencies?

**Research Feedback**

* Parent Satisfaction with the program
* Questionnaire and testing results: group and individual
* Changes in child behavior and parent behavior
* Parent preference for discussion topics or type of contact such as phone versus home visit.
* Program maintenance
Table 7

<table>
<thead>
<tr>
<th>SCHEDULE AND TOPICS FOR HOME VISITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit #1 Visit #2 Visit #3 Visit #4 Visit #5 Visit #6 Visit #7-9 Visit #10</td>
</tr>
<tr>
<td><strong>Assessment/Information</strong></td>
</tr>
<tr>
<td>Demographic Questionnaire</td>
</tr>
<tr>
<td>Parent Attitude Questionnaire Parent Attitude Questionnaire Parent Attitude Questionnaire</td>
</tr>
<tr>
<td>I-E Scale I-E Scale I-E Scale</td>
</tr>
<tr>
<td>Daily Logs 1 Log put in % of Activity 1 Log in % Same day of week as Visit 2</td>
</tr>
<tr>
<td><strong>Parent Activity List</strong></td>
</tr>
<tr>
<td>Program Distributed Review parent activities Temporal Analysis Family Management Program Satisfaction Questionnaire</td>
</tr>
<tr>
<td><strong>Discussion</strong></td>
</tr>
<tr>
<td>Data Collection Time Management/ Maintenance Reliability Research Feedback</td>
</tr>
<tr>
<td><strong>Topics</strong></td>
</tr>
<tr>
<td>Data Collection &amp; Self-Management Reliability of Self-Reward</td>
</tr>
<tr>
<td><strong>Home Educa.</strong></td>
</tr>
<tr>
<td><strong>Target Child Behavior</strong></td>
</tr>
<tr>
<td>Interobserver Review Child Progress Graphs of child</td>
</tr>
<tr>
<td><strong>Target Program for D.D.</strong></td>
</tr>
<tr>
<td>agreement on Revise programs when necessary. progress reviewed</td>
</tr>
<tr>
<td>child selected child target Review Child Graphs</td>
</tr>
</tbody>
</table>
Table 8
Temporal Analysis

1) Describe a difficult time of day such as: a time where there are multiple demands or unstructured time.

Time Period _____ Place _____ Who is interacting with you?

2) Have you evaluated typical days through daily logs or written accounts of events? If yes, please describe.

3) Describe a typical sequence of events during the problem time described in question #1: First: ___

Then: ___ Then: ___ Then: ___

4) What attempts have you made to make this time of day less difficult?

5) Would solving any one part of this problem make this time of day less difficult? Please describe:

6) Potential Solutions
   a. Personal modifications: List two ways you could change behavior that might resolve the problem.
   b. Environmental modifications: List two changes you could make at home that might resolve the problem.

7) Describe the results 2-3 weeks after trying the personal and/or environmental modifications (i.e. approximately how many times will still need to remind family members that you need time alone)
Dependent Variables

Assessment Instruments. Assessment instruments used in the program were the I-E Scales, administered to measure locus of control, a Parent Attitude Questionnaire which addressed parents' perceptions of time management problems and their attitude toward data collection, (Table 9) and a Program Satisfaction Questionnaire completed by parents during the last visit (see Table 14). The parent attitude and program satisfaction questionnaires were designed by the Program Coordinator in order to collect program specific information. The I-E Scales developed by Rotter (1966) is a forced-choice self-report inventory used to determine perception of control. Responses are scored as either internal or external. Internal control refers to the perception of an event as contingent upon one's own behavior, and external control as contingent upon chance, fate or luck. A sample choice is:

(a) Becoming a success is a matter of hard work;

luck has nothing to do with it.

(b) Getting a good job depends mainly on being in the right place at the right time.
<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have time to enjoy activities of my choice.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I am pleased with my daily routine.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I am interrupted by unexpected events.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I find data collection helpful.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I have enough time with my child(ren).</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I am able to spend enough time with self-maintenance activities such as exercise.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I am proud of my accomplishments.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I have enough time alone.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I believe my family understands the added responsibility of having a D.D. child.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I feel like the day has slipped me by.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I have enough time with my spouse.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I find behavior changes demonstrated through data collection rewarding.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I attend out-of-the-home activities as much as I would like to.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I plan which activities I will do during the day.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I feel happy about my life.</td>
<td>12345</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Target Behavior for Children. Each family agreed to work with its handicapped child on an individualized skill development program. Parents chose the skill or, "target behavior", according to the following criteria established by the Program Coordinator: the skill would be functional and important to the child and the parent (i.e., self-feeding, language development); the target behavior could be measured by recording occurrence (+) or nonoccurrence (-) for ten trials per day; and the behavior either occurred or could be prompted to occur, as part of the already established family routine such as during mealtimes. The target behavior was selected by parents in families #1, 3, 4, and 5 as a result of their own choice of skills for the child to develop and use of data forms during the baseline period. If data forms were not used and no target behaviors were selected by parents alone, (families #2, 4 and 6), the Program Coordinator asked these parents which child skills they would like to see develop or improve, and target skills were selected by both the Program Coordinator and the parents according to the previously described criteria.

Child progress on the specific target behavior was measured by data collected regularly by parents and periodically probed by the research assistant. Target behaviors for each child varied, (i.e., spoon feeding or labeling body parts), but the method of data collection was the same across families. Each trial on the data form (Table 2) was scored as either correct (+) or incorrect (-) and the percent correct for all ten trials combined was
calculated. Data forms were averaged weekly and the average percent correct for each child's target behavior was graphed by the Program Coordinator for review and analysis with parents.

**Interobserver Agreement**

To enable the research assistant to collect data for establishing reliability of recording, the Program Coordinator trained her to collect data in a pre-school setting. This training was accomplished over five sessions of approximately thirty minutes each. Together they scored several different child behaviors (such as taking bites of snack or verbal requests) for occurrence/nonoccurrence estimating interobserver agreement according to the formula: the number of agreements divided by the number of agreements plus disagreements. All agreement scores were calculated on a trial by trial basis across the ten trials on each data sheet. Training ended when agreement indices were consistently 80% or above for three sets of trials.

Following training, the researcher collected data on the childrens' target behaviors in the home approximately twice per family. After reviewing scoring criteria with the parents, both independently scored ten trials of occurrence/nonoccurrence data for the child's target behavior. Those data were then compared and an index of agreement was calculated as above. A high percent of agreement between parent and R.A. indicated that the child behaviors were observed and recorded consistently and that parents were capable of collecting reliable data. Interobserver agreement indices appear on Table 10. Data from family #2 are
not included as almost no data on child behavior were collected by these parents.
Table 10

Interobserver Agreement

<table>
<thead>
<tr>
<th>FAMILY NO.</th>
<th>DATE</th>
<th>BETWEEN</th>
<th>PERCENT AGREEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12/14/84</td>
<td>Mother &amp; R.A.</td>
<td>70%</td>
</tr>
<tr>
<td>1</td>
<td>3/11/85</td>
<td>Mother &amp; R.A.</td>
<td>100%</td>
</tr>
<tr>
<td>3</td>
<td>4/17/85</td>
<td>Mother &amp; R.A.</td>
<td>90%</td>
</tr>
<tr>
<td>3</td>
<td>5/09/85</td>
<td>Mother &amp; R.A.</td>
<td>100%</td>
</tr>
<tr>
<td>4</td>
<td>1/24/85</td>
<td>Mother &amp; R.A.</td>
<td>100%</td>
</tr>
<tr>
<td>4</td>
<td>5/06/85</td>
<td>Prog. Co. &amp; R.A.</td>
<td>100%</td>
</tr>
<tr>
<td>4</td>
<td>5/06/85</td>
<td>Mother &amp; R.A.</td>
<td>80%(50%)</td>
</tr>
<tr>
<td>5</td>
<td>2/19/85</td>
<td>Nurse &amp; R.A.</td>
<td>100%</td>
</tr>
<tr>
<td>5</td>
<td>4/17/85</td>
<td>Mother &amp; Nurse</td>
<td>100%</td>
</tr>
</tbody>
</table>

aOn May 6, the Program Coordinator also collected data on the child behavior as a check on the accuracy of the research assistant's data. Although interobserver agreement between the mother and R.A./Program Coordinator was low because the mother neglected to record one trial, thereby, effecting the scoring on each successive trial. The agreement score on Table 10 (80%) adjusts for this error. The true score, 50% appears in parenthesis.
Experimental Design

This initial investigation was designed to pilot test the viability of the time management parent training program among six different families and did not include untreated or delayed treatment controls. Consequently it is not possible to screen out such potentially confounding variables as passage of time, placebo effects, subject selection and so on. It was anticipated that if the program appeared to be practically disseminable, to assist parents to teach their handicapped children new skills and to be satisfactory to parents, it subsequently could be empirically tested to assess its differential value as a parent training strategy.

To assess each of the potential advantages, continuing measures (e.g., attendance, child progress), pre-post measures (locus of control), and post measures (Parent Satisfaction Questionnaire) were collected. Additionally the number of data sheets returned and training trials reported to have been conducted were also recorded for three to five weeks prior to the beginning of time management program as well as while the program was in effect.
Procedures

Following recruitment, letters, packets of data sheets and stamped return address envelopes were sent to parents. Parents were also asked to complete the data sheets for five out of seven days each week and return them in a packet. No personal contact was made between the Program Coordinator and the family members until after that baseline period. After three to five weeks, the training program was instituted, continuing over a seven month span. The program consisted of ten, one-hour visits in the family home at a time jointly selected by the parents and the Program Coordinator. Table 7 outlines the schedule of assessments, parent and child activities and topics for discussion on a visit by visit basis. Visits two through six were held every three to four weeks.

Discussions and visits generally were individualized depending on parental needs, concerns and skills. For example, although all parents were trained in the use of data collection and reinforcement of correct responses during visit two, in some cases, repeated instruction was necessary during subsequent visits to assure accuracy and maintenance of parent skills. In other cases, when baseline data had been collected and skill acquisition was quickly obtained, data collection skills were only reviewed periodically throughout the program.

Difficulties with implementation of the program components also were addressed during each visit. Some of these difficulties took the form of parent's inability to collect data
difficulties took the form of parent's inability to collect data due to their own illness or sibling's behavior. In two instances, with families 3 and 4, the Program Coordinator helped parents design a special token program for siblings. One set of parents separated during the later part of the program. In this case, the final two visits took place with only the father present. The mother completed the program by phone and through the mail.

Visit One. During the first visit, baseline data forms were reviewed and a child target behavior was selected (see section on Target Behaviors for Children for criteria). The following purposes for measuring child progress as a component of the Time Management Program were discussed: 1) to evaluate ways in which time could be used to incorporate child education or therapy in the family's daily routine and 2) to observe the effect of the inclusion of parent rewarding activities or sibling programs on the progress of the handicapped child.

Assessments were administered (I-E Scale & Parent Attitude Questionnaire) and parents were asked to begin evaluating their time management issues by completing three daily logs. During this first visit and thereafter the Program Coordinator avoided using negative consequences when parents failed to cooperate with program components. For example, she did not make statements like the following, "If you complete the data form, I can continue visiting" or "I will need the daily logs completed by next week in order to proceed with the program." Alternatively,
can have a better understanding about how you use time each day", and praised and gave positive feedback for completion of forms, (e.g., "Oh, good you completed the daily logs. You do seem to be spending lots of time in child care activities.") If any forms were not completed, parents were reminded to try to complete their forms before the next visit.

**Visit Two.** During the second visit, parents were asked to choose the one daily log of the three that represented their most typical days. This log was categorized according to type of activity (i.e., child care, employment, independent time) by ten minute intervals. The Program Coordinator emphasized importance of incorporating child educational activities into the daily routine.

**Visits Two and Three.** After the target behavior was chosen for the child and parents demonstrated skill in collecting data, the importance of the parent's own activities became the focus of the program. Events or activities that were rewarding for parents were chosen by reviewing the Preferred Activity Lists and the daily logs. The following rationale explained to parents for identifying their rewards included: 1) providing a balance in the daily routine between child care and self-care activities; 2) serving as a means of renewing parental energy so that they can have the necessary energy to enable them to work with their children; and 3) preventing future burn-out on child management or educational activities.

**Visits Four and Five.** Once two or three promising parental
rewards were chosen for each parent, a Temporal Analysis (Table 8) was completed. The analysis focussed on the sequence of events that occur during a difficult time of day for each specific family. The possibility that these events contributed to parents' inability to incorporate rewarding activities into their routines was explored. Potential solutions were discussed between participating parents and the Program Coordinator.

For example, one mother (#4) who worked a 3-11 shift was getting up early each morning for scheduled appointments. Staying up late to watch t.v. or play video games was rewarding for her, so the Program Coordinator suggested that she keep Tuesday and Friday mornings free from appointments and use these times as reward periods. This parent was able to change her schedule and include these rewarding activities. In another case, (#1) the participating mother arranged to work part-time hours when her husband was home to attend to their child. For two sets of parents, #2 and #5, rewarding times focussed on spouse communication and time out-of-home as a couple. The arrangements for parental time together were discussed during several visits with the Program Coordinator.

Visit Six. On the sixth visit both parents signed a Family Management Contract (see Table 5 for sample). If only one parent in a family was participating, his or her spouse was requested to attend a visit in order to sign and review the rationale for the contract. This request was made in order to solicit spouse support with rewarding activities. It also helped parents to
structure their day by identifying possible times for both child activities and parent rewards.

**Visits Seven through Ten.** As maintenance of program activities was the primary focus after the sixth visit, these visits were scheduled more infrequently - three to four weeks apart. Each visit included a discussion of 1) child progress with the target behavior 2) parental concerns with time management and 3) their including of rewarding events in their schedules (see Table 7).

The last four visits were also used to evaluate child progress and make any necessary changes in the target behavior chosen, such as identifying a more advanced skill if criteria for acquisition of the original target behavior were met. The frequency with which parents used self-reward was discussed, parent programs were adjusted as necessary and continued use of self-reward was encouraged. The I-E Scale, Parent Attitude Questionnaire and the Program Satisfaction Questionnaire were administered during the tenth session.

Six weeks after the completion of the Time Management Program, the Program Coordinator visited families to discuss: the results of assessments; the graphs on child progress; the general satisfaction with the program of all participating families; and plans for maintenance of program components.
CHAPTER III

Results

Completion of Program

Of the six families who began the program, one, family #6 dropped out after the fourth visit and the remaining five completed the program. Family #6 stated that it was experiencing no time management problems. Rather employment for the participating mother was the main concern. She did obtain a job shortly after terminating the program.

Attendance

All families kept scheduled appointments with the Program Coordinator except family #1, (who postponed twice; once by one day to visit a pre-school and again, by three days due to illness) and family #3 (who postponed once by a week due to illness among three members.) Figure 1 depicts attendance data in cumulative format. For each maintained appointment, the symbol--a solid circle--is raised one level. Each postponed appointment is symbolized by a diamond which remains at the previous level.

Completion of Data Sheets

Each family was to complete five data sheets per week. No consistent relation appeared to exist between the content
Figure 1
A Cumulative Record of Family Attendance.
For each maintained appointment the symbol—a solid circle—is raised one level. Each postponed appointment is symbolized by a diamond which remains at the previous level. The diagonal lines (Family #6) indicate withdrawal from the program.
covered during any particular visit and the number of forms returned. Figure 2 displays in cumulative fashion, the number of data forms returned (solid circle) and the number that could potentially be returned (open circles). All families, with the exception of #2 who consistently failed to complete forms, and #6 who dropped from the program, collected data during baseline or prior to visit #1.

The percentages of data forms received from each family were: #1-77%, #2-5%, #3-87%, #4-44% and #5-89%. In some cases the completion of forms stopped temporarily due to specific family problems such as the father's hospitalization from December 12 through 24th (#4), or family members suffering from the Flu from January 18 through 25th (#3).
Figure 2
A Cumulative Record of Data Forms Returned. The number of data forms returned to the Program Coordinator is displayed in cumulative fashion by a solid circle. The number that could potentially be returned is represented by an open circle. Included are the five families who completed the program.
Child Progress

Weekly means of child performance were graphed for each of four families who collected data throughout the program. The dates of interobserver agreement previously described (Table 10) are indicated on the graphs of child target behaviors (Figures 3 & 4) by an arrow. The scores obtained on single observational sessions by the reliability observer are also plotted in the graph by the circles.

The target behavior for child #1 was imitation of vocal sounds. At baseline the child would only repeat "ma-ma", occasionally. During the program, imitation of "ma-ma" reached the criterion of 80% or above. The subsequent target, correct discrimination of "ma-ma" and "da-da" reached approximately 50% when the program ended (see Figure 3).

The target behavior for child #3 was self-feeding. Although this behavior varied considerably for the initial four months, self-feeding was consistently above 80% for the final six weeks of the program. It reached 100% for the first time during the last week of data collection (see Figure 3).
Figure 3

Child Progress on Target Behaviors. Weekly means of child performance are represented by a solid circle. Arrows indicate the dates when interobserver agreement was taken as well as the scores obtained by the research assistant. The diamonds indicate the dates of home visits.
Figure 4

A Cumulative Record of Disruptive Behaviors During Feeding. The solid circle represents the occurrence of the behavior during the meal. The solid line remains flat when there is no occurrence and is raised for each occurrence. The vertical line indicates when data collection for each target behavior was terminated.
Child 5. Cumulative Record of Occurrence During Recorded Meals

Gagging

Vomiting

Pushing others away with hands

Pull own hair

Shutting own eyes

MEALS
Child #4 worked with two skill development programs. For the first two months, labeling body parts was targeted and this skill increased from 43% to 75%. The mother chose to change the program to object identification for the remainder of the program. Although there appears to be an improvement in object identification, the skill remained too variable to make any conclusive statement (see Figure 3).

The target behavior for child #5 was eye contact during feedings. Eye contact improved from an initial 63% to 90% over the course of the five months of participation (see figure 3). Data were also collected on behaviors that interfered with feedings such as gagging, vomiting, pushing other away with hands, shutting eyes and hair pulling. Gagging was revealed to be the most frequent interfering behavior and intervention strategies for gagging were discussed during the last month of the program. Data from that behavior are displayed (Figure 4).

During home visits, marked on figures 3 and 4 by a diamond, graphs of child progress had been shown to participating parents and changes in programs were discussed. Except for these planned changes, such as moving from imitation of "ma-ma" to "da-da", child progress did not seem to be affected by the occurrence of content of any particular home visits.
Questionnaires and I-E Scales

Table 11 shows the mean scores per family for each Parent Attitude Questionnaire completed. A mean was used so that all the families' scores would be weighted equally. Table 11 shows the mean scores for all families for each question. The asterisks denote significant increases from the first to the tenth visit calculated by a one-tailed t-test. Significant increases were found for time spent with children, engaged in self-maintenance activities, such as exercise or haircuts, alone, with their spouse, in out-of-home activities and planning daily activities (see Table 9 for questions). The individual scores from the Parent Attitude Questionnaire for all eight participating parents are found on Table 12. This table reveals: that there are no general differences in the responses of fathers versus mothers; the consistency of the mother from family #3; and the effects of separation on the Visit 10 responses of Family #2.
### Table 11

**RESPONSES TO PARENT ATTITUDE QUESTIONNAIRE**  
Means per Family

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Visit #1</th>
<th>Visit #6</th>
<th>Visit #10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td><strong>Choice Activity</strong></td>
<td>3  3  2  2.5  3</td>
<td>2.7  3  3.5  2  3.75  2.5</td>
<td>2.95  4  2.5  2  3.5  3.5</td>
</tr>
<tr>
<td><strong>Pleased w/ rout</strong></td>
<td>3  4  3  3  2.5</td>
<td>3.1  4  4  3  3.25  2</td>
<td>3.25  -  3  3  4  4</td>
</tr>
<tr>
<td><strong>Interrupted</strong></td>
<td>2  4  4  4  4</td>
<td>3.6  3  3.5  4  3.25  4.5</td>
<td>3.65  3  3  4  3.5  4</td>
</tr>
<tr>
<td><strong>Data helpful</strong></td>
<td>2  2  3  4  3</td>
<td>2.8  3  3  3  3.5  3.5</td>
<td>3.2  3  3  3  4  3.5</td>
</tr>
<tr>
<td><strong>Time w/child</strong></td>
<td>3  2  4  2.5  3.5</td>
<td>3  4  3.5  4  3.5  3.5</td>
<td>3.7  4  3  3  4  3.5</td>
</tr>
<tr>
<td><strong>Time self-care</strong></td>
<td>2  2  2  2.5  2</td>
<td>2.1  2  3  3  3  2</td>
<td>2.6  4  3  2  3.5  2.5</td>
</tr>
<tr>
<td><strong>Proud accompl.</strong></td>
<td>3  4.5  4  4  4</td>
<td>3.9  4  4  4  3.75  4.5</td>
<td>4.05  4  4  4  3.5  5</td>
</tr>
<tr>
<td><strong>Time alone</strong></td>
<td>2  2  1  2  1.5</td>
<td>1.7  3  2  2  3.5  3</td>
<td>2.7  3  2.25  2  3.5  2.5</td>
</tr>
<tr>
<td><strong>Family unders.</strong></td>
<td>3  4  4  4.5  4</td>
<td>3.9  4  3.5  4  4.5  4</td>
<td>4  4  3  4  4  3.5</td>
</tr>
<tr>
<td><strong>Day slips by</strong></td>
<td>4  3.5  5  4  3.5</td>
<td>4  3  3  5  3.25  3.5</td>
<td>3.55  2  2.5  5  4  3</td>
</tr>
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<td><strong>Time w/souse</strong></td>
<td>2  1.5  2  3  2</td>
<td>2.1  3  3  2  4  3</td>
<td>3  2  1.75  3  4  3</td>
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<tr>
<td><strong>Data rewarding</strong></td>
<td>2  -  3  5  4.5</td>
<td>3.6  3  3  4  4  3.5</td>
<td>3.5  3  3  4  4  4</td>
</tr>
<tr>
<td><strong>Out-of-home</strong></td>
<td>4  2  2  2  2</td>
<td>2.4  4  3  3  3.5  2.5</td>
<td>3.2  4  3  3  3.5  2.5</td>
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<tr>
<td><strong>Plan activit.</strong></td>
<td>4  4  3  2.5  2.5</td>
<td>3  4  4  3  3.5  3</td>
<td>3.5  5  4  4  3.5  3</td>
</tr>
<tr>
<td><strong>Feel happy</strong></td>
<td>5  4  4  3.5  3</td>
<td>3.9  4  4.5  4  4  3.5</td>
<td>4  4  3.5  4  3.5  4</td>
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</table>

*Significant at .05 - one-tailed T-Test*
<table>
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<tr>
<th></th>
<th>Family #1</th>
<th>Family #2</th>
<th>Family #3</th>
<th>Family #4</th>
<th>Family #5</th>
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<tbody>
<tr>
<td></td>
<td>Mother</td>
<td>Father</td>
<td>Mother</td>
<td>Father</td>
<td>Mother</td>
</tr>
<tr>
<td></td>
<td>Visit 1</td>
<td>Visit 1*</td>
<td>Visit 1</td>
<td>Visit 1</td>
<td>Visit 1</td>
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<tr>
<td></td>
<td>1 6 10</td>
<td>1 6 10*</td>
<td>1 6 10</td>
<td>1 6 10</td>
<td>1 6 10</td>
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<tr>
<td>Choice activities 1</td>
<td>3 3 4</td>
<td>3 4 3</td>
<td>3 3 2</td>
<td>2 2 2</td>
<td>2 3 5 4</td>
</tr>
<tr>
<td>Pleased w/routine 2</td>
<td>3 4 -</td>
<td>4 4 3</td>
<td>4 4 3</td>
<td>3 3 3</td>
<td>3 3 5 4</td>
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<td>Interrupted</td>
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<td>4 4 4</td>
<td>4 3 2</td>
<td>4 4 4</td>
<td>4 3 5 3</td>
</tr>
<tr>
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<td>1 2 2</td>
<td>3 4 4</td>
<td>3 3 3</td>
<td>4 4 4</td>
</tr>
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<td>2 4 4</td>
<td>4 4 4</td>
<td>3 4 4</td>
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<td>2 3 2</td>
<td>2 4 4</td>
<td>2 3 2</td>
<td>3 4 4</td>
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<td>Proud accomplish.7</td>
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<td>4 4 4</td>
<td>5 4 4</td>
<td>4 4 4</td>
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<td>2 4 3</td>
<td>2 2 1.5</td>
<td>1 2 2</td>
<td>2 4 4</td>
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<td>Family understand,9</td>
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<td>4 2 2</td>
<td>4 4 4</td>
<td>4 4 4</td>
<td>4 4 4</td>
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<tr>
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<td>10 4 3 2</td>
<td>3 3 2</td>
<td>4 3 3</td>
<td>5 5 5</td>
<td>4 3 5 3</td>
</tr>
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<td>2 3 2</td>
<td>1 3 1.5</td>
<td>2 2 3</td>
<td>3 4 4</td>
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<td>Data rewarding</td>
<td>12 2 3 3</td>
<td>- 3 2</td>
<td>- 4 4</td>
<td>3 4 4</td>
<td>5 4 4</td>
</tr>
<tr>
<td>Out-of-home activity</td>
<td>13 4 4 4</td>
<td>2 2 4</td>
<td>2.5 2 2</td>
<td>2 3 3</td>
<td>2 4 4</td>
</tr>
<tr>
<td>I plan activities</td>
<td>14 4 4 5</td>
<td>4 4 4</td>
<td>4 4 4</td>
<td>3 3 4</td>
<td>2 3 3</td>
</tr>
<tr>
<td>Feel happy</td>
<td>15 5 4 4</td>
<td>4 4 4</td>
<td>4 5 3</td>
<td>4 4 4</td>
<td>4 4 4</td>
</tr>
</tbody>
</table>

* Couple Separated – Visit 10
Table 13 displays the changes in the Rotter I-E Scale scores from the pre to post test. Seven of eight parents scored lower or more internal, and the eighth parent's score remained the same (see Figure 5). In two cases, mother #2 and mother #4, the changes in the scores reflect a major difference in these parents' perception of their locus of control. These two parents also described increases in self-esteem or increased control of family problems in a narrative form on the Program Satisfaction Questionnaire corroborating the changes in the scores.
<table>
<thead>
<tr>
<th>Family #1</th>
<th>Mother</th>
<th>Pre-Score</th>
<th>Post-Score</th>
</tr>
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<td>Family #2</td>
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<td>8</td>
</tr>
<tr>
<td>Family #3</td>
<td>Mother</td>
<td>15</td>
<td>14</td>
</tr>
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<td>Family #4</td>
<td>Mother</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Family #4</td>
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<tr>
<td>Family #4</td>
<td>Mother</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Family #5</td>
<td>Mother</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>
Figure 5
I-E Scale: Differences of Post Minus Pre Program Scores. The solid bars indicate differences for the eight participating parents. The arrows are pointed in the direction of these differences. All but one score, #5M, decreased on the post program assessment.
I-E SCALE

Differences of Post-Pre Program Scores

M: mother
F: father

Differences - # of Points

Family
#1M
#2M
#2F
#3M
#3M
#4M
#4F
#5M
#5M
#5F

0
1
2
3
4
5
6
7
8
9
10
11
12
Each parent completed a Program Satisfaction Questionnaire during the last visit and rated satisfaction with the program components. Those data are summarized on Table 14 by the mean response per question. All answers were weighted according to the following scale: not=1 point; somewhat=2 points; important/satisfied/pleased/recommend=3 points; and very=4 points. The mean was calculated by dividing the weighted number by 8, the number of parents who participated. The factors endorsed as most important were: discussion with the Program Coordinator; meeting in the home; the personality of the Program Coordinator; including parent activities in the week; identification of child educational programs; and discussion of the importance of parent activities. All parents said that they would recommend or highly recommend this program to other families.

The results of the daily logs are not included because two sets of logs taken as part of the program did not yield enough information about change in parent activity to draw any conclusions.
Table 14

Mean Responses to Parent Satisfaction Questionnaire

1) Prior to the Time Management Program had you ever taken data on child behavior? Yes No

Question          Parent Response (Weighted Mean)*
---               ---------------------
2) Pleased with child progress?        3.25
3) Closely expectations met?           2.75
4) Satisfaction with R.A.              3.25

Please rate importance of the following program components.

a) Child educational program            3.25
b) Data collection re: child            2.625
c) Discussion topic outlines           2.875
d) Discussion w/ Program Coordinator    3.875
e) Daily logs                           2.625
f) Activity Lists                       2.75
g) Discussion re: parent activities     3.125
h) Including parent reward              3.375
i) Signing Family Management Contract   2.625
j) Meeting regularly w/ Program Coord.  2.875
k) Meeting in your home                 3.625
l) Sibling programs                     3.167
m) Viewing child progress graph         2.875
n) Personality of Program Coordinator   3.75

Recommend program to others            3.375

*not=1; somewhat=2; pleased/closely/satisfied/important=3; very=4
Parent Comments

Most helpful component:

Family 1) Child program
2) Visits and discussion (Father)
   Talking with program co-ordinator (Mother)
3) Child program (M)
4) Finding time for things other than D.D. child (M)
5) Graphing child progress (F)
   Data collection - discussing specific child prob. (M)

Least helpful component:

Family 1) Unanswered
2) Data sheets (F)       Data sheets (M)
3) Can't manage time or do not have control of it (M)
4) Unanswered (M & F)
5) Activity list (F)     Unanswered (M)

Component most likely to maintain:

Family 1) Child program - found part of day to put it in (M)
2) Evaluating weekly situation (F)
   Keeping activity lists and scheduling time (M)
3) Behavior changes in kids & change in attitude re:
   importance of time for self (M)
4) Unanswered (F)        Child progress data (M)
5) Family Management Contract (F)
   Awareness of time spent with spouse- data collect (M)

Comments:

Family 1) Program was a confidence builder.
2) Increased awareness of time spent unwisely - appreciate now more than ever time needed for individual growth (F)
Program made me think about schedule & daily routine & put things in perspective for self, child, & family (M)

3) I had unreal expectations from the program.

4) I schedule time to be alone; with the kids & spouse. I find that the situation wasn't so pressing as it seemed. (F)

5) Program helped put into perspective many parts of our daily routines that, otherwise, would have become frustrating, i.e., time spent together and time alone. The program has been a great help to us! (M)
CHAPTER IV

Discussion

In order to evaluate the usefulness of the Family Management Program, the following aspects need to be addressed: parent cooperation, child progress, parent satisfaction, program feasibility including cost effectiveness and the possibilities for replication.

The good attendance record of all participating families and percentage of data forms returned demonstrate that parents did indeed cooperate with the program. The data forms may have served to prompt implementation of child programs, as stated by some parents on the Program Satisfaction Questionnaire. In addition, the record of child progress from four of five families indicate that parents worked effectively on the identified target behavior.

Four of the seven parents responding to a question on the Program Satisfaction Questionnaire, stated that the child program was the most helpful component. This response may be a direct result of the fact that in all cases recorded, child skill increased substantially during the course of the program. Child progress was substantiated by interobserver agreement scores from the research assistant and by review and observation from the Program Coordinator. Although it cannot be stated that this Family Management Program was the only cause for the progress of
these children, the handicapped children did make progress on the target skill chosen during the time when parents were re-evaluating their use of time, and scheduling self-rewarding events in their days. It is also speculated that it is because parents were participating in the re-evaluation of their daily routine that they were able to find time to work with their child, resulting in skill development by their children.

At least one parent in each of four of the five families, chose the child program as the most likely component to maintain. The initial premise of this program was to investigate ways to support family members so they could continue to help develop skills of their handicapped child at home. One of the main goals of the program was parents reporting that they would maintain child programs after the Family Management Program ended or without artificial contingencies.

Two parents stated that their initial expectations for the time management component of the program were too high and, although they found program components helpful such as targeting a child skill to develop, they still experienced time management difficulties. In general, parents expressed satisfaction with the program and indicated on the Satisfaction Questionnaire that they would either recommend or highly recommend this program to others. Their general satisfaction represents satisfaction with both child progress and parental ability to manage their daily routine.

Assessment results indicated that after the program, parents
perceived themselves to be more in control of the contingencies in their lives (I-E Scale) and as having more time alone, with children, in choice activities and in out-of-home activities in particular (Parent Attitude Questionnaire). This, too, was a goal of the Family Management Program.

Since parents stated that either home visits were very important, or important, and the general purpose of the program was to work on time management in the home, it is probably essential that a major portion of this program be implemented in that setting. The approximate costs of residential programs for children, have ranged from 30 to 100 thousand dollars per year in 1985, assuming this program helped to avoid residential placement for the children, on balance the costs were relatively inexpensive.
Table 15

Family Management Program
Cost Analysis

Program Coordinator Hours (200)
(estimated salary-$20,000) $1,923.00

Research Assistant Hours (60)
(estimated salary-$13,000) 375.00

Mileage Reimbursement @ .20 a mile
Program Coordinator-2508 miles 501.60
Research Assistant-456 miles 91.20

Envelopes and Postage 75.00

Clipboards/Charts/Books 25.00

Xeroxing - 850 sheets @ .10 85.00

Total $3,075.20
An estimate of the cost of the Family Management Program, including salaries, materials and mileage reimbursement to staff in serving the five families who completed the program, was approximately a total of $3,075 or $615 per family. Dividing this amount by visit yields $61.50. This is comparable to the amount psychologists or family therapists receive for an office visit (see Table 15). Considering that this cost analysis includes families who lived up to 32 miles away from the Program Coordinator, this Family Management Program is quite cost efficient.

In addition to being cost effective, the Family Management Program was implemented easily, due to the predesigned materials and the visit by visit agenda outlined by the author. These materials make program replication possible and serve as a structure that can incorporate alterations and additions. The program also is easily individualized to meet the specific needs of participating families.

Experimentally analyzing programmatic effectiveness with clients is an area for future research. By using parents' child management skills, assessments and parent perception questionnaires as dependent measures administered throughout distinct phases of a program, an analysis of the effect of an intervention is possible.

These phases could be 1) training parents to practice child management skills and 2) to use time management to include self-reward in the daily routine.
Studying the effects of home programs such as the Family Management Program on future residential placement of developmentally disabled children is a more complicated, yet relevant area for further investigation. Working with families who did not volunteer for such a program may present a set of challenges for the Program Coordinator that were not encountered by working with the families who participated in the present study. In addition, an analysis of information of changes in parental attitudes and needs as developmentally disabled children mature would have great impact on the content and format of services for these families.

The Family Management Program is a model for parent training which addresses the question of program maintenance, an aspect often lacking in other parent training programs. This model provides support to family members which may have long-term effects on both child progress and parental attitude toward working with their child. That, in turn may delay the need for or prevent out-of-home residential placement for developmentally disabled children. The effect of this support component should be evaluated as a potential supplement to enhance other parent training programs.
References


