1978

STIMULUS AND RESPONSE GENERALIZATION EFFECTS OF THE DIRECTIVE PARENTAL COUNSELING PROGRAM.

JANET MARIE. FULGENZI
University of Windsor

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STIMULUS AND RESPONSE GENERALIZATION EFFECTS OF THE DIRECTIVE PARENTAL COUNSELING PROGRAM

by

Janet Marie Fulgenzi

A Dissertation Submitted to the Faculty of Graduate Studies through the Department of Psychology in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy at the University of Windsor.

Windsor, Ontario, Canada

1978
Abstract

The purpose of the present investigation was to determine the generalization effects of Directive Parental Counseling. More specifically, the study was designed to explore stimulus and response generalization effects. Nine counselors from local community service agencies were trained in DPC principles by a consultant-trainer. The counselors then used the DPC program with fifteen treatment families who had been referred or contacted their agencies because they had a child with active behavior problems in the home. Fifteen waiting-list control families also participated in this study. The families were assigned to treatment or control groups by the counselor on the basis of consecutive referrals to his or her agency. It was predicted that there would be a significant decrease in the target problem behaviors of the experimental subjects as compared to controls as a function of the Directive Parental Counseling program. It was further predicted that response generalization effects would occur as a result of DPC training. That is, other behaviors of the children as perceived by their parents would improve in addition to the target behavior. Therefore, it was predicted that parents would change their perceptions of their children in the desired direction. The third prediction concerned stimulus generalization effects. It was predicted that the behaviors of children in the treatment group would improve in the school setting and would be reflected in teachers' ratings. Therefore, it was predicted that teachers would change
their perceptions of the treatment children in the desired direction. The results indicated that there was a significant decrease in targeted behavior problems for the treatment group. There were significant changes in parents' perceptions of the children specifically in the areas of distractibility, immaturity, school adjustment, and in a score measuring total personality adjustment. Furthermore, there were significant changes in teachers' perceptions of the children in the areas of immaturity and overall personality adjustment. A four-month follow-up procedure showed that the improved behaviors were maintained over this period of time. The significant results obtained in this study and other studies indicate that the local agency members may serve as effective mediators in a parent-training program. The results further indicate that this particular parent-training program is effective in producing behavior changes in addition to the target behavior within a home setting and across settings to the school environment.
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I gratefully acknowledge Dr. C. J. Holland, Dr. R. M. Daly, Dr. R. Fehr, and Dr. Helen Lycaki for serving on my dissertation committee and for the contribution each has made to help me throughout this learning process. Each has also been very effective in my overall learning process by their continued challenge and kind and strong support. I am especially grateful to Dr. C. J. Holland, the director of this study, who helped me patiently and carefully throughout this long project; he was always there and he understands. Dr. R. M. Daly has advised me wisely and well through many learning endeavors; I thank him for his long and steady support. Dr. R. Fehr provides a strength and relaxation that enhances all learning experiences in a formal setting or elsewhere; I thank him. To Dr. Helen Lycaki I also wish to express my sincere appreciation for her persevering support and for her generosity in sharing her wide knowledge and herself.

In addition, I wish to thank the counselors who volunteered to participate in this project. It has been my sincere privilege to work with them. They are responsible, caring, and creative people; it is a joy to know they are in this field of work.

I gratefully acknowledge the patience of my family and friends. They continually provide me with love and care, those intangible and marvelous reinforcers.
# TABLE OF CONTENTS

**ABSTRACT**

**ACKNOWLEDGEMENTS**

**LIST OF TABLES**

**LIST OF FIGURES**

Chapter

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Behavior Therapy</td>
<td>2</td>
</tr>
<tr>
<td>Behavior Therapy With Children</td>
<td>5</td>
</tr>
<tr>
<td>Parents as Change Agents for Their Children</td>
<td>8</td>
</tr>
<tr>
<td>Issues of Experimental Design</td>
<td>16</td>
</tr>
<tr>
<td>The Directive Parental Counseling Program</td>
<td>19</td>
</tr>
<tr>
<td>DPC Research</td>
<td>25</td>
</tr>
<tr>
<td>Current Research Directions in Parental Training</td>
<td>28</td>
</tr>
<tr>
<td>Generalization Effects</td>
<td>29</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>35</td>
</tr>
<tr>
<td><strong>METHODOLOGY</strong></td>
<td>37</td>
</tr>
<tr>
<td>Subjects</td>
<td>37</td>
</tr>
<tr>
<td>Demographic Data</td>
<td>38</td>
</tr>
<tr>
<td>Procedure</td>
<td>38</td>
</tr>
<tr>
<td>Training Instruments</td>
<td>42</td>
</tr>
<tr>
<td>Measuring Instruments -- Home</td>
<td>43</td>
</tr>
<tr>
<td>Measuring Instruments -- School</td>
<td>46</td>
</tr>
<tr>
<td><strong>RESULTS</strong></td>
<td>49</td>
</tr>
<tr>
<td>Analysis of Behavior Change -- Target Behavior</td>
<td>50</td>
</tr>
<tr>
<td>Analysis of Response Generalization Effects</td>
<td>53</td>
</tr>
<tr>
<td>Analysis of Stimulus Generalization Effects</td>
<td>84</td>
</tr>
<tr>
<td>Generalization of Effects Over Time -- Response Maintenance</td>
<td>86</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS CONT'ED

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>DISCUSSION</td>
</tr>
<tr>
<td>V</td>
<td>SUMMARY AND CONCLUSIONS</td>
</tr>
<tr>
<td>Appendix</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>MEASURING INSTRUMENTS A</td>
</tr>
<tr>
<td>B</td>
<td>MEASURING INSTRUMENTS B</td>
</tr>
<tr>
<td>C</td>
<td>PROBABILITY RESULTS</td>
</tr>
<tr>
<td>D</td>
<td>PATTERSON IMPROVEMENT RATING SCALE</td>
</tr>
<tr>
<td>REFERENCES</td>
<td></td>
</tr>
<tr>
<td>VITA AUCTORIS</td>
<td></td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Behavior Frequency Scores for Selected Target Behaviors Experimental Group</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>Behavior Frequency Scores for Selected Target Behaviors Control Group</td>
<td>52</td>
</tr>
<tr>
<td>3</td>
<td>Exact Probability of Baseline vs. Post-Treatment Target Behavior Frequency Counts for the Experimental and Control Groups</td>
<td>81</td>
</tr>
<tr>
<td>4</td>
<td>Exact Probabilities of Pre-Post-Test Changes for Experimental and Control Groups in the Home</td>
<td>83</td>
</tr>
<tr>
<td>5</td>
<td>Exact Probabilities of Pre-Post-Test Changes for Experimental and Control Groups in the School</td>
<td>85</td>
</tr>
<tr>
<td>6</td>
<td>Summary of the Patterson Improvement Rating Scale at a Four Month Follow-up</td>
<td>87</td>
</tr>
<tr>
<td>7</td>
<td>Means for Walker Problem Behavior Identification Checklist for Experimental and Control Group Pre- and Post-Test In The Home</td>
<td>92</td>
</tr>
<tr>
<td>8</td>
<td>Means For The Cassel Behavior Rating Scale For Experimental And Control Group Pre- And Post-Test In The Home</td>
<td>95</td>
</tr>
<tr>
<td>9</td>
<td>Means For Walker Problem Behavior Identification Checklist For Experimental And Control Group Pre- And Post-Test In The School</td>
<td>97</td>
</tr>
<tr>
<td>10</td>
<td>Means For Cassel Behavior Rating Scale For Experimental And Control Group Pre- and Post-Test In The School</td>
<td>98</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

Figure | Page
-------|-----
1 Frequency Chart for Family 2 | 54
2 Frequency Chart for Family 3 | 55
3 Frequency Chart for Family 4 | 56
4 Frequency Chart for Family 5 | 57
5 Frequency Chart for Family 6 | 58
6 Frequency Chart for Family 7 | 59
7 Frequency Chart for Family 8 | 60
8 Frequency Chart for Family 10 | 61
9 Frequency Chart for Family 11 | 62
10 Frequency Chart for Family 12 | 63
11 Frequency Chart for Family 13 | 64
12 Frequency Chart for Family 14 | 65
13 Frequency Chart for Family 15 | 66
14 Frequency Chart for Family 16 | 67
15 Frequency Chart for Family 17 | 68
16 Frequency Chart for Family 19 | 69
17 Frequency Chart for Family 20 | 70
18 Frequency Chart for Family 21 | 71
19 Frequency Chart for Family 22 | 72
20 Frequency Chart for Family 23 | 73
21 Frequency Chart for Family 24 | 74
22 Frequency Chart for Family 25 | 75
<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>76</td>
</tr>
<tr>
<td>24</td>
<td>77</td>
</tr>
<tr>
<td>25</td>
<td>78</td>
</tr>
<tr>
<td>26</td>
<td>79</td>
</tr>
<tr>
<td>27</td>
<td>80</td>
</tr>
</tbody>
</table>

LIST OF FIGURES CONTINUED

23 Frequency Chart for Family 26
24 Frequency Chart for Family 27
25 Frequency Chart for Family 28
26 Frequency Chart for Family 29
27 Frequency Chart for Family 30
CHAPTER I

INTRODUCTION

Maladaptive behavior among children appears to be a major problem in our society and in recent years these children have become a focus of attention in the mental health field. According to a report issued by the National Institute of Mental Health (1970) approximately 500,000 American children have psychotic or borderline psychotic conditions. They estimate that another million children are afflicted with severe mental disorders. In addition 10 to 12 percent of the 50 million children attending elementary school appear to have moderate to severe emotional disturbances that require some kind of mental health care. In poverty areas the incidence of children having emotional difficulties that need attention rises to one out of three.

The Commission on Emotional and Learning Disorders in Children (1970) indicates that eight to twelve percent of the children in the school age population in Canada have problems in behavior, self-management or learning and these children need additional professional help both in the school and in the home. The emotional and/or learning disorders of the 840,000 to 1,260,000 children require attention, treatment and care. Professionals and parents are greatly concerned and are searching for new ways to help the children and families since existing services for these children are "woefully and critically inadequate in both quantity and
quality' (CELDIC Report, p. 9). As a society we should be able to provide adequate treatment facilities for disturbed children and mental health programs designed to prevent maladaptive behavior from occurring and to provide conditions that foster the optimal development of each child.

A wide range of treatment procedures has been available in helping children with problems. Within the past 20 years, however, there appears to be an increase in the use of behavior therapy as the treatment of choice and a decrease in the use of long term psychotherapy (Kazdin, 1975). In fact, there has been a dramatic increase during the past 20 years in the application of behavioral principles to the problems of psychopathology generally (Hersen, Eisler, and Miller, 1975).

Behavior Therapy

The behavior therapies or therapies based on learning theory had their origins as a result of the experiments and theoretical developments of Pavlov, Thorndike, Watson, Hull, Spence, Skinner, and Mowrer (Reyna, 1964). The general assumption in learning theory is that if the unadaptive behavior is learned, it can also be unlearned. Through the continued growth of this branch of empirical psychology, behavior therapy has received wide attention and has become increasingly successful in treating a wide range of clinical problems (Bandura, 1961, 1969; Reyna, 1964; Wolpe, 1958).

The term behavior therapy was coined by Skinner and Lindsley (1954). Wolpe (1973) defines the term: 'Behavior therapy, or
conditioning therapy is the use of experimentally established principles of learning for the purpose of changing unadaptive behavior" (p. xi). Similarly, Eysenck (1964) says: "Behavior therapy may be defined as the attempt to alter human behavior and emotion in a beneficial manner according to the laws of modern learning theory" (p. 1).

It is assumed in both explanations that behavior results from learned patterns of action and sometimes these patterns are unadaptive. Eysenck (1960) states that behavior therapy originated from the thorough experimental study of the laws of learning and conditioning in animals and in the normative population; these well established principles were then applied to people with unadaptive behavior patterns. Therefore, the specific aim of behavior therapy is to change a person's behavior directly through the systematic application of general learning principles.

In behavior therapy there are classical conditioning techniques, that is, respondent conditioning procedures from Pavlov. There are also instrumental conditioning techniques, that is, operant procedures from Thorndike and Skinner (Reyna, 1964). Both methods have something to add to behavior therapy whose prime objective is to relieve the suffering of a person through the reduction or elimination of overt behaviors and emotional states that are not conducive to healthy living (Kanfer and Phillips, 1970; Reyna, 1964). Although behavior therapy will borrow from both forms of conditioning, the methods used in this study are based largely on operant procedures.
When Skinner (1938) discussed operant conditioning, he indicated that the rate of a behavioral response could be controlled by its relation to the consequences of the response or the environmental events following the response. Therefore, if a behavioral response is followed by a reinforcing event, there is greater probability that the response will be increased in the future. On the other hand, if the same response were followed by a contingent and punishing environmental event, there is a greater probability that the response will be decreased in the future. The alternate relationships comprise "the empirical law of effect." The emphasis then falls on the free operant, that is, the person and in this study the child, who is free to respond or not respond under certain environmental conditions (Bachrach, 1965). The behavior itself then receives much attention as well as the consequences or reinforcers of the behavior in focus. Operant procedures include the shaping of desirable behaviors and the application of positive reconditioning techniques as well as other methods (Wolpe, 1958).

Behavior theory also assumes that the development and maintenance of behavior is a function of stimulus dependencies present in the person's environment. Therefore, a child behaves as he or she does because of differential reinforcement available in the environment; the child learns both adaptive and maladaptive behaviors. The reinforcement may be in the form of activities or tangible rewards. Also, reinforcement can be provided by the social attention and approval of people especially those closest to the
child such as parents, siblings, teachers, and peers (Wahler & Erickson, 1969). It is through unfortunate connections between stimuli and behavior that maladaptive behavior can be developed and maintained (Wahler, Winkel, Peterson, & Morrison, 1965). Behavior therapy has gained prominence as a method of treatment for the behavior disorders of children that is, as a treatment for altering maladaptive behavior patterns (Ullman & Krasner, 1965). Recent reviews give unequivocal support to the fact that various principles of behavior modification are effective for changing a variety of child problem behaviors (O'Leary, 1976; Wahler, 1976).

**Behavior Therapy With Children**

In 1962, Rachman reviewed the field of behavior therapy with children. Since that time, articles pertaining to children and their families have proliferated. Some studies have dealt with changing a child's behavior in an in-patient or clinic setting. Baer (1962) was able to change thumbsucking behavior in a five-year-old boy by making withdrawal of a positive reinforcement contingent upon the thumbsucking response. This took place over a 24 day period. Similarly, Tate and Baroff (1966) successfully modified self-injurious behavior in a nine-year-old retarded boy by making withdrawal of physical contact which was a positive reinforcement, contingent upon self-injurious behavior. This took place over a 20 day time span. Neale (1963) in two to three months was able to help three boys, aged 8-10, to change their enopetetic habits through individually designed operant conditioning procedures. Wetzel (1966) through the use of
behavioral principles eliminated compulsive stealing in a 10-year-old boy who had had the difficulty for at least five years prior to treatment. The procedure took 3 1/2 months and was carried out by the staff in the home placement environment.

In addition to recognizing the applicability of behavioral techniques to clinic and hospital settings, it is now widely recognized that the behavioral approach may also be used very successfully in the child's natural environment such as his or her home and school surroundings (Hawkins, Peterson, Schweid, & Bijou, 1966).

In a classroom setting, Ayton, Layman, and Kandel (1975) describe an excellent behavioral approach in their study which involved three hyperactive boys. They employed a multiple baseline design across two academic subject matters in order to assess the behavioral intervention which consisted of reinforcement following correct answers in math and reading. The authors found that the children performed behaviorally and academically in an optimal manner without the use of medication. Contingency reinforcement techniques provide a definite alternative to stimulant medication in controlling hyperactivity in the classroom while simultaneously helping the children to produce more academically.

Wolf, Giles, and Hall (1968) applied a token reinforcement program in a classroom setting. Their aim was to develop and maintain the academic behavior of low achieving children in the community setting through a remedial program. The children did significantly increase their scores on achievement tests as compared to a control
group who did not receive remedial training. This study cannot be faulted in its behavioral approach but can be criticized in its academic approach to grades and achieving. Other studies in which the efficacy of behavior modification procedures have been documented in the classroom are reviewed by O'Leary and O'Leary (1972).

While it is believed that a child's behavior can be modified in various ways, Peine (1969) believes that the child's behavior can be most readily modified by the social agents, usually the parents, who live with the child. They are in fact the people who have the most opportunity to change the reinforcing events within the child's natural setting. It appears that using parents for change agents is indeed a worthwhile endeavor (Berkowitz & Graziano, 1972; Gelfand & Hartman, 1968; O'Dell, 1974; Ullman & Krasner, 1965). There are several advantages in using parents as change agents for their children (Gelfand & Hartman, 1968; O'Dell, 1974; Ullman & Krasner, 1965). Some of these advantages are: (a) behavioral techniques are easily adapted to the natural environment; (b) relatively unskilled people can learn behavior therapy techniques and apply them in treatment programs; (c) behavioral techniques are based on empirically derived principles from learning theory; (d) many people are able to learn the techniques in a short period of time; (e) many parents prefer a treatment program that does not diagnose and label inappropriate behavior as "sick"; (f) many problems of children consist of behaviors that can be described well in behavioral terms and are able to be changed to other specific behaviors.
In summary, many children have developed maladaptive behavior patterns and need help in adjusting to growing but are not always in a position to seek it for themselves. Many parents, furthermore, are concerned about how to deal with problems with their children; these parents often seek help themselves or are asked to go for help through school personnel. Traditionally, it is the parents who are responsible for guiding the behavioral development of the child. Also, it is within the realm of community mental health professionals to provide parents with information about child behavior development and change. Parents themselves can be trained to be therapists for their children; they can be guided in the application of operant principles in the parent-child relationship. A treatment approach such as this has advantages in saving people time and expense. Also, it provides a wide group of people including mental health professionals, paraprofessionals, parents, teachers, nurses, and others with skills that foster adaptive behavior development and can thereby prevent maladaptive patterns from occurring. For purposes of this study which will use parents as change agents for their children, a further review of the literature will focus in this area.

Parents as Change Agents for Their Children

One of the earliest studies reported using parental treatment in the home was Williams (1959). A 21-month-old child's bedtime tantrums were eliminated in two weeks by the parents who were told to ignore the tantrum behavior. At the same time White (1959) explained a treatment program whereby a 5 1/2-year-old girl began to
again eat for her mother after her mother had learned and applied operant principles.

Holland (1969) successfully trained parents to eliminate fire-setting behavior in their 7-year-old son by a threat of destruction of a valuable object in order to inhibit fire-setting while simultaneously rewarding the child when he brought unlit matches to the parents that had been intentionally misplaced by them. The formal reinforcement was gradually withdrawn and ostensibly the behavior came under more natural reinforcers. No further fire-setting behavior occurred.

Treatment was carried out in the home with the mother as therapist for a 4-year-old boy who was extremely difficult to manage and control (Hawkins et al., 1966). The mother received explicit instructions as to when and how she should relate with her child. The behaviors of both mother and child were observed and recorded. The observers first recorded a baseline period and then initiated an experimental phase in which the mother systematically worked with nine objectionable behaviors which decreased considerably during this phase. After six sessions, the mother was asked to return to her earlier manner of interacting with her child; the former behaviors also returned. During the second experimental period, the modification procedures were again introduced followed by a decrease in the child's objectionable behaviors which remained at the decreased level through a 24-day follow-up.

Gardner (1967) chose to use a behavioral approach to treat a
child manifesting seizure behavior of nonorganic origin. He saw the parents only in three weekly counseling sessions. During this time, the parents learned to change their reinforcement contingencies so that their ten-year-old daughter received their attention for appropriate behavior but was ignored for inappropriate behavior (seizure behavior). The seizures disappeared completely within two weeks and were still absent in a 26-week follow-up. As Gardner (1967) concludes: "The systematic alteration of parental behavior can be a potent and efficient force in altering the maladaptive behavior of the child" (p. 212).

Some cases take a longer time and prove to be more difficult (Engeln, Knutson, Laughy, & Garlington, 1968). A six-year-old boy, the second oldest of four children, was having severe behavior problems including violent temper tantrums, aggressive attacks and hyperactivity. The family traveled from a small rural town to the clinic where they were seen weekly for almost 11 months. One therapist worked with the child establishing reward contingencies for appropriate behavior while another therapist worked with the mother in an adjoining room with a one-way mirror while a third therapist visited the home to observe reinforcement contingencies operating there. The mother gradually established a program in the home so that the extremely aggressive behavior was markedly reduced. A four to six month follow-up revealed that behavior in the school was at a very acceptable level.

In a replication study, the unacceptable behaviors of a four-
year-old boy were successfully altered by his mother in the home situation (Zielberger, Sampen, & Sloane, 1968). The experimenter was present in the home for the training sessions during which behaviors of mother and child were observed. A treatment program was then planned. A reversal design was employed and the child's behavior changed accordingly. The authors gave 12 clear instructions to the parents and the child's aggressive and disobedient behaviors were clearly changed by altering the consequences of the maladaptive behaviors.

In a study working on oppositional behavior in two young boys, Wahler (1969) reports that in each case the parents were able to significantly alter their youngster's behavior following systematic training within the home setting. The parents were trained in the use of differential attention and time out procedures. A time out procedure usually means removing the child from sources of positive reinforcement, often social in nature, for a relatively short period of time. The training for these parents varied from four sessions (30 to 65 minutes) for one family to seven sessions (30 to 105 minutes) for the other family. Wahler concludes that the children acquired "dramatic" and stable changes in their oppositional behaviors while parental reinforcement value increased as a result of the treatment program.

Nolan and Pence (1970) report a one-year program in which a 10-year-old selectively mute girl acquired relatively normal speaking patterns through reinforcement from her foster parents. Different
strategies in treatment evolved over several months time and again indicate the creativity present within a systematic program. Both authors and parents cooperated and became very sensitive to the use of rewards in changing this child's behavior. Her verbal behavior was normal in a one-year follow-up after her return to her own family and regular school setting.

Tahmisian and McReynolds (1971) addressed the problem of a school-phobic girl. The child had been referred to a community mental health center by her family physician and had decided that she would never go to school again; she had missed 80 days from grade eight. The authors enlisted the aid of her parents and discussed with them a systematic program designed to get their daughter to return to school. The program consisted of 15 specific tasks centering around the school and based on a hierarchy from minimal to extended school contact covering each school day for three consecutive weeks. In a four-week follow-up, school attendance was full time and the young girl was scheduled to graduate with her class. Total therapist time for this case was two hours for parent training and 30 minutes in three follow-up phone calls.

Patterson (1966) in an early study looked at multiple problem behaviors in one child and attempted to show the effect of four conditioning programs for each set of maladaptive behaviors. The conditioning procedures were applied in the home and in the school setting for this 5-year-old boy; treatment agents included parents, teachers, peers, and the experimenters. The program took place over
a four-month period with a three-month follow-up report. The behaviors were "successfully" treated, that is, the child had by the end of treatment rearranged his social behaviors within an already existing hierarchy; the child changed his behavior emphasis toward more socially adaptive and endearing behaviors.

The above studies concentrated on single child or single family participants. Each case was treated separately by a person or persons trained in behavioral or operant procedures. The training took place in a clinic, home, and/or school setting and the parents learned how to reinforce the behaviors they wanted in their child. In Patterson's (1966) study, everyone within the child's environment was used as a change agent. A review of single family studies using parents as behavior modifiers is presented by Sloop (1975). Sloop believes that parents are the logical people to train to become agents for their own children. He concurs with Patterson, McNeal, Hawkins, and Phelps (1967) who assume that the child's maladaptive behavior was probably shaped by the social environment in the first place. Therefore, it is logical to start there to change the maladaptive behaviors to more adaptive ones. In Sloop's (1975) summary he noted that: (1) a wide range of target behaviors was worked with; (2) both parents and/or experimenters served as observers and recorders of varying behaviors; (3) observations were made in many environments including the home, school, and clinic settings; (4) the majority of reports present the treatment of only one or two children; and (5) many reports included follow-up data after the formal treatment
program was ended.

Some researchers have chosen to evaluate larger numbers of families using a parent-agent behavior modification approach (Cone & Sloop, 1974; Hyde, 1975; Mash & Terdal, 1973; O’Leary, Turkewitz & Taffel, 1973; Patterson, 1974; Rose, 1974). That is, two or more sets of parents are trained together in the behavioral approach. Different training strategies are used and different parameters within the program are being investigated. In one study, the investigators tried to evaluate behavior modification procedures in an out-patient child clinic implemented by graduate students in clinical psychology (O’Leary et al., 1973). They reported an 87 percent improvement rate in child behaviors as indicated by the therapist. The parents reported an overall 90 percent improvement rate. A total of 70 cases completed treatment over a period of a year. The presenting problems varied greatly and most cases involved the parents only although some included the child and the child’s teacher. The parents were usually encouraged to systematically change their attitude and behavior toward the child. The total range of treatment varied from three weeks to 11 months; parents were seen on an average for about 14 sessions per case.

Patterson who has worked extensively in this area began with treating individual cases in a behaviorally oriented approach (Patterson & Brodsky, 1966; Patterson, McNeal, Hawkins, & Phelps, 1967; Patterson & Reid, 1970) and moved to treating consecutive referrals to an agency (1974). In this 1974 study, 27 consecutive referrals
of boys with conduct problems were the targets for evaluation. Data was collected in the home prior to treatment, during treatment and following treatment. Criteria consisted of observed family interaction patterns and daily reports by parents on specific problem behaviors from their children. Classroom intervention was also used with 14 of the above families. The sample was gathered over a four year period and, at termination, the data showed significant reductions from baseline for both criteria in the family intervention.

In summary, the above studies cited indicate the many and varied ways in which individual parents can be trained to act as change agents for their children who have acquired maladaptive behavior patterns. A wide range of child behaviors has been treated and a wide range of intervention approaches has been taught to parents. Some behavioral programs are very specific in nature while others are less clearly defined. Parental involvement in the treatment program can range from minimal understanding and intervention to formally learning the skills required and then designing their own program. Some studies lack methodological sophistication while others are more carefully designed with explicit experimental procedures. The Directive Parental Counseling System is designed to help parents become very involved in the behavioral program as it is applied to their child.

The extensive documentation of the use of parents as change agents can be seen from the following reviews of the past decade: Berkowitz & Graziano, 1972; Brown, 1971; Gelfand & Hartmann, 1968; Johnson & Katz, 1973; O'Dell, 1974; Patterson, 1971; Sloop, 1975;
Tavormina, 1974.

**Issues of Experimental Design**

Different experimental designs have been used in the parent training literature. The more carefully designed the program, the more confidence can be drawn about the effectiveness of the procedures used (Berkowitz & Graziano, 1972). Early studies provide descriptive reports of child behavior changes. The majority of the research has used the single person within-subject reversal design and has provided strong evidence of behavior control and effectiveness of the procedures involved.

The purpose of the reversal design which alternates the presentation and removal of the program over a set time is to demonstrate a functional relationship between the behavioral program and the target behavior (Kazdin, 1975). The functional relationship is said to be present when implementation of the experimental condition produces the desired change in behavior. The baseline rate of the target behavior is established first by counting the target behavior over a set period of time (Risley, 1970). The second step involves introducing the experimental phase; here the specific behavior modification procedure is implemented until the target behavior stabilizes at the desired rate. Following this desired rate, the behavior modification procedure is withdrawn and the so-called reversal phase occurs. The target behavior returns to near baseline conditions. Following this, the behavior modification procedure is reintroduced and the target behavior returns to the desired rate. The experimental
design is referred to as a reversal design because different phases are altered or reversed to demonstrate the effect of the specific behavioral program (Kazdin, 1975; MacDonough & McNamara, 1973).

Multiple baseline designs may also be used in this type of behavioral research. In this design, the effect of the behavioral program is demonstrated by showing that changes in behavior are associated with the implementation of the contingency program at different stages or at different points in time (Kazdin, 1975). Multiple baseline designs may be used in three ways: across behaviors, across individuals, or across situations. In other words, data are collected: across two or more behaviors of one individual or a group, across two or more individuals for a specific behavior, or across two or more situations for the behavior of a person or group. Another choice of designs is the control group design. This is another method used to demonstrate the effectiveness of a behavioral contingency program. Two groups are required for the basic design, namely, an experimental group and a control group. The rates of the target behavior in both groups are compared in order to demonstrate the effects of the experimental program.

There are relatively few reports found by this author on the use of control groups in the parent training literature (Hyde, 1975; Kent & O'Leary, 1976; Walter & Gilmore, 1973; Wiltz, 1969; and Wiltz & Patterson, 1974). These studies had from six to sixteen experimental and control families in their design. Kent & O'Leary (1976) believe that untreated control groups appear to be an essential aspect
of a sound experimental design in this area of research. Furthermore, Pawlicki (1970) claims that only four percent of the studies that he reviewed on behavior therapy with children met with Eysenck's three criteria: a control group, baseline, and follow-up. The control group criterion enables the researcher to infer that it is the treatment variables that account for therapeutic changes and not other alternative variables (MacDonough & McNamara, 1973).

Patterson (1974) recommends designing and carrying out studies using well-trained and supervised paraprofessionals. These mental health agents following training by a psychologist or a consultant-trainer (Walter, Cohen, & Dastan, 1967) would apply a behavioral treatment program to families. In this way, the mental health agents would serve as the direct service contact with the families with the psychologist serving as the consultant-trainer. For example, Patterson (1974) directed graduate students in the treatment of 27 children whose parents had requested services for home and school problem behaviors. Fo and O'Donnell (1974) trained adult nonprofessionals who then served as "buddy" change agents for young people ages 11-17 who were having behavioral and academic difficulties. Tharp & Wetzel (1969) trained eight paraprofessionals labeled behavior analysts who in turn trained parents and teachers to work with a wide range of problem behaviors of children in the home and school setting. O'Leary, Turkewitz & Taffel (1973) trained clinical psychology interns who treated 70 families for a median of 15 weeks.
The Directive Parental Counseling Program

As noted earlier, there have been systematic programs designed to train parents in behavior modification procedures (Ferber, Keeley & Shemberg, 1974; Patterson, 1971; Peine & Munro, 1973; Rinn, Vernon & Wise, 1975; Rose, 1974; Salzinger, Feldman & Portnoy, 1970). The systematic program used in this study is entitled Directive Parental Counseling (Holland, 1970, 1976, 1977). The DPC is a specific therapeutic technique designed to enable parents to influence consistently the maladaptive behaviors of their children. This approach evolved over a period of eight years and systematically applied specific learning principles to the problems of children in a relatively simple and orderly manner. Holland and Daly (1975) describe the program in detail. Many practitioners presently use similar programs in their practice, however, they rarely present specific descriptions of their programs or describe clearly how the programs are implemented with the parents and children.

The essence of the DPC system is presented in a Counselor's Guide (Holland, 1977). The program consists of 30 specific points and each point has prepared instructional materials, exercises and detailed explanations of various concepts and sub-points. The Counselor's Guide provides the complete description of the DPC technology and explains the purpose and use of each point as well as potential problems which may be encountered in applying each step with the family. The counselor's role, although it is clearly delineated, allows each counselor to rely on his or her own clinical style in order to
present and communicate the skills to the parents and to provide them with an atmosphere in which they can learn.

The parents also have a manual entitled Directive Parental Counseling: The Parents' Manual (Holland, 1975, 1976). They use the manual during the sessions and at home; it contains instructional materials specifically geared to them. The parents and the counselors use the manuals to learn and then integrate the program in an organized way. The manual also serves as a springboard for discussion concerning behavior, parenting, developmental processes, and other topics that arise in this type of a setting. Incorporated within the 30 step program are clinical strategies which are designed to enhance the delivery and application of the underlying behavioral principles. The 30 steps are viewed as clinical tools which help the counselor systematically work with the client in remediating the presented problem behavior.

Parents may be seen individually or in groups. The parents are presented with the 30 points in a rather didactic manner; the content and procedures are geared to help the parents focus their attention, modify or change their ways of viewing the child's behavior, and provide them with specific steps for changing the maladaptive behavior (Holland & Daly, 1975). Although the content of the individual points varies, they generally contain basic behavioral principles, methods for implementing the principles clinically, and they furthermore provide the necessary steps for data collection and assessment procedures.

Following is a general overview of the DPC program as outlined by Holland & Daly (1975). The authors acknowledge that this description
Is somewhat incomplete in that all of the operations which might occur in a DPC counseling situation are not covered nor can they be given the individuality of each counselor and family. Flexibility will always be required in a clinical situation.

<table>
<thead>
<tr>
<th>POINT</th>
<th>PURPOSE</th>
</tr>
</thead>
</table>
| 1. List the Problem | Assessment:  
A. Initiate the relationship with parents and/or significant others.  
B. Begin to teach them to define problems in behavioral terms.  
C. Obtain information to ascertain which problem to begin with.  
D. Gather information for assessment and decision-making purposes. |
| 2. Select One: Two Aspects #1 and #2 | Assessment:  
A. From this point of view, whatever problem is troubling the parents is always occurring too frequently. This is aspect #1 of the problem behavior.  
B. The other side of the coin is what the parents desire instead of #1, and which is occurring too infrequently. This is aspect #2 and when defined in behavioral terms it will become the goal behavior. |
| Points 10 through 18 are designed to decrease behavior which occurs too frequently - Aspect #1.  
Points 19 through 30 are designed to increase behavior which occurs too infrequently - Aspect #2. |
| 3. Estimate Strength | Assessment:  
A. Obtain objective, observational information concerning the frequency of occurrence of #1 and #2.  
B. Obtain subjective estimate of effect of #1 on parents. |
| 4. Set Reasonable Goals for Two Aspects | Assessment:  
A. Decide with parents what a decrease in #1 involves.  
B. Decide with parents what an increase in #2 involves. |
<table>
<thead>
<tr>
<th>POINT</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. A.B.C.</td>
<td>Training: A. The parents are instructed in the basic principles of learning which underlie the DPC system. Emphasis is placed on the A.B.C. paradigm incorporating the observations made by parents.</td>
</tr>
<tr>
<td>6. Know the Positives</td>
<td>Assessment: A. A thorough survey is made of the major reinforcing stimuli in the child's environment which can be used in changing A#1 and A#2.</td>
</tr>
<tr>
<td>7. Know the Negatives</td>
<td>Training: A. The major purpose of these two points is to train the parents to utilize the A.B.C. principles when interacting with their child.</td>
</tr>
<tr>
<td>8. Making Words Matter</td>
<td></td>
</tr>
<tr>
<td>9. Making Rules</td>
<td></td>
</tr>
</tbody>
</table>

It is noted here that Points 10 through 18 contain the major techniques for decreasing Aspect #1, that is, the problem behavior. The goal of the counselor is to guide the parents in selecting the specific procedure(s) for their particular case from the following points.

**ASPECT #1 - TOO FREQUENT**

<table>
<thead>
<tr>
<th>POINT</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Where or When of A#1</td>
<td>Intervention: A. Here the counselor defines the antecedent or those conditions which precede the signal of A#1 behavior. The where and when of A#1 is defined.</td>
</tr>
<tr>
<td>11. Explore for Solution to A#1</td>
<td>Intervention: A. The counselor begins to explore which of the three possibilities for decreasing A#1 are appropriate (loss, punishment, or withholding).</td>
</tr>
<tr>
<td>12. Decrease through Punishment, Loss or Withholding</td>
<td>Intervention: A. The three consequences are defined and the operations necessary for their implementation are carefully specified with the parents.</td>
</tr>
<tr>
<td>13. Punishment</td>
<td></td>
</tr>
</tbody>
</table>
### POINT | PURPOSE
--- | ---
14. Loss | B. The problems and potential effects of each consequence is carefully explained to the parents.
15. Withholding |  
16. Who Else Controls the Positives | Intervention:  
A. A survey is made based on points 6 and 7 of the particular reinforcing agents in addition to the parents who control the positive reinforcers. Those agents have to be considered if the parents are to achieve success.
17. Sometimes vs. Never | Intervention:  
A. The concept of intermittent reinforcement is presented in detail and its effects on punishment, withholding and loss are discussed.
18. Decreasing Strategy Rehearse A.B.C. | Intervention:  
A. The parents are thoroughly trained via role playing, rehearsal, etc. in carrying out the strategies for decreasing A#1. Points 8 and 9 are useful here.

It is noted here that points 19 through 30 are the major techniques for increasing Aspect #2, that is, the goal behavior. The counselor's object is to guide the parents in utilizing these methods to increase Aspect #2 while simultaneously decreasing Aspect #1.

### ASPECT #2 – TOO INFREQUENT

19. Where or When of A #2 | Intervention:  
A. The counselor defines the antecedent conditions (the where or when) which precede the occurrence of A#2. The parents will deliver consequences only under these conditions.
20. Explore for Solution to A#2 | Intervention:  
A. The counselor begins to explore which of the possibilities for increasing behavior is appropriate
for this case (reward or relief).

21. Increase through Reward or Relief

Intervention:
A. The two consequences are defined and the operations necessary for their implementation are carefully specified with the parents.
B. The problems and potential effects of each, reward and relief, are explained to the parents.

22. What is the Child Doing Right?

Intervention:
A. A survey is made to establish how much of A#1 is already occurring. This is the starting point or baseline for A#1 behavior.

23. Immediacy

Intervention:
A. Points 23 through 28 contain the specific procedures which enhance the effectiveness of positive reinforcement. They include immediacy of reward, shaping, chaining, prompt and fading techniques and intermittent reinforcement.

24. Step by Step

25. Bringing Behavior Out

26. Vary Type of Reward.

27. More or Less

28. Not All the Time

29. Deprive

Intervention:
A. Rarely the parents are required to place their child in a temporary state of deprivation in order to create circumstances where they can reward their child for A#2 behavior.

30. Increasing Strategy

Intervention:
A. The parents are thoroughly trained by way of role playing, rehearsal, etc. in carrying out the selected strategies for increasing A#2. Points 8 and 9 are helpful at this time.
B. Materials, such as charts, stars, tokens, are constructed and then used by the parents.
DPC Research

The Directive Parental Counseling program has been used successfully with a wide variety of problem target behaviors over a period of 7 years. Specific research programs have provided information concerning its effectiveness.

Brown (1975) attempted to define some of the extra-conditioning variables that were related to the DPC program. He described the extra-conditioning variables as those events influenced by it, which were not specific target behaviors. His main concern was to investigate additional effects produced by the DPC program other than specific target behavior changes. He worked with lower-middle class families who had children of pre-school and early elementary school age.

Changes did occur in the seven families completing treatment which were attributed to the effects of the DPC program. The two treatment groups met weekly for 90 minutes for a 12-week period. The groups were conducted by two sets of experienced co-therapists with a mean of 14.3 years of clinical experience.

Brown (1975) found that the DPC program was effective in changing parental attitudes toward their own children and toward themselves as parents in positive ways. Furthermore, positive changes occurred in parent-child interactions. As a result of treatment, the parents in his study reported that their children generally listened to them better. Also the parents found that they spent more time with their children and they praised their children more while punishing them less. A significant decrease in tension level was reported in the
home. Parents were able to increase their verbal control of their children's behaviors and the children cooperated more with parental requests. Parents changed their attitudes toward their children along various dimensions: protectiveness and rejection decreased following treatment while general acceptance increased.

Parents also felt better about themselves following treatment; they felt more effective as parents and better able to cope with parenting demands. A one-year follow-up indicated that the parents were still favorable toward the DPC principles. Also, positive changes were again supported regarding tension level in the home, parent-child interaction, parental feelings of effectiveness, and outside influences on child behavior. Brown (1975) interpreted these results to indicate that the effects of the DPC program endure over time.

Hyde (1975) investigated the effectiveness of the DPC program as a parent training system. She also investigated specific areas of effectiveness, such as child behavior change and parent perception and attitude change. Hyde used a sample of nine treatment families and ten waiting list control families who had a child with active behavior problems in the home and who had been referred to a child mental health agency. The treatment and control children had a mean age of 7.4 and 7.2 years respectively. The parent trainers used in her study worked as co-therapy teams; they were graduate students who had minimal clinical skills and were untrained in behavior modification procedures. Two supervising therapists served as consultant-trainers.
Significant decreases occurred in target problem behaviors in six out of ten treatment children. Furthermore, significant changes occurred generally in the parents' perceptions of child problem behaviors; more specifically, parents changed their perceptions of their children in the areas of acting-out and distractibility, that is, they found them less active and less distractible following treatment. Decreases in the target problem behaviors for all ten of the treatment children were maintained over a three-month follow-up.

Hyde (1975) reported that predicted changes were not supported in parent-child relationship attitudes and parent perception of behavior change and personality adjustment. She felt that the level of therapist training could be a significant factor determining outcome results.

Capanzano (1976) investigated the relative importance of a variety of counselor variables to the success of the DPC program. He also wanted to assess the effectiveness of relatively untrained DPC counselors.

The counselors were 24 third year nursing students who were trained in the DPC technique in 12 two-hour didactic sessions. The nurses were trained and then supervised by advanced graduate students who served as counselor-trainers. Each nurse implemented the program with a family who had a child with a behavior problem in the home. Twenty-two out of twenty-four families completed the treatment over a ten-week period.

Target problem behaviors decreased 60% or more in 13 out of 22
families. The average behavioral decrement for all families was 61.14%. Also, mothers changed their perceptions of child problem behaviors in the area of distractibility.

Counselor variables that were found to be successful predictors of behavior decrements included internal control, trust, and emotional stability. In fact, 17 out of 117 counselor variables were significantly correlated with decrements in target behaviors. Additional variables indicative of success included: affectionate behavior, affiliative behavior, ability to display unconditioned regard, controlling behavior, responsible behavior, ability to value a sense of accomplishment, a sense of true friendship, and wisdom.

In summary, it can be seen that the DPC program is effective in reducing target problem behaviors and in effecting other behavior changes within the family system regarding parental attitudes and perceptions. Furthermore, para-professionals can be effective in implementing the program successfully following instruction and supervision by consultant-trainers. Follow-up evidence on the DPC program indicates that the behavior change is durable over time.

Current Research Directions in Parental Training

Applied research looks at behaviors which are socially important rather than those that are the most convenient for study (Baer, Wolf, & Risley, 1968). This usually also implies that the behaviors are considered in their natural settings. Parent-child research falls into this category of applied research and often occurs in the natural setting. There are requests for further ex-
perimental investigations in this area (Berkowitz & Graziano, 1974; Gelfand & Hartmann, 1968; Patterson, 1974; O'Dell, 1974). Baer et al. (1968) suggest that this research should be applied, behavioral, analytic, technological in behavioral theory, conceptually systematic, effective, and it should display some kind of generality. This study attempts to address specifically two types of generalization effects, namely, response generalization and stimulus generalization.

Generalization Effects

In their review of research on training parents as behavior therapists for their own children, Berkowitz and Graziano (1972) indicate that refinements in this type of research are needed if behavior therapy is to mature. They suggest that: (1) current applied methods be validated and new methods continue to be generated, (2) large scale delivery methods of behavior modification services be generated, and (3) there should be greater focus on the child's natural environment, that is the home and school. This study: (1) continues to validate the effects of the DPC system, (2) attempts to meet the large scale delivery methods needed by training agency members who in turn train parents so that more people have access to the program, and (3) the parents implement the program in the home setting and a school measure is also taken. An important issue is added by Wulbert, Barach, Straughan, Sulzbacher, Stephen, Turner, and Wiltz (1974) when they suggest that the generalization effects of behavior changes to different behaviors and settings should be researched, in other words, response generalization and stimulus generalization effects should be
investigated.

In traditional forms of therapy it was generally assumed that if a change occurred in a person's behavior in a therapeutic setting, this change would also occur or generalize to his or her natural setting (Wulbert et al., 1974). Some researchers, however, are more skeptical of the natural transfer of behavior changes and so they move into the natural environment to effect the behavior change there; they believe that there will then be a greater chance for the promotion and maintenance of the change (Hawkins et al., 1966; Patterson, 1974). Other behavior therapists have assumed that this transfer of training would occur through their techniques, that is, they would produce a change in the person's behavior in the clinic and it would generalize to the environment in which the problem actually occurred (Wolpe, 1958).

Transfer of training is facilitated by learning a general principle or a class of behaviors (Deese & Hulse, 1966). Furthermore, it is assumed that if training takes place in the natural environment, in a variety of situations in which the child will be responding, then there will likely be a greater chance of transfer to other environments; in some way the behavior will generalize (Gruber, 1971).

A change in behavior may be said to have generality in three ways: (1) if it spreads to a variety of related behaviors, that is if it has response generalization effects, (2) if it appears in a variety of environments, that is if it has stimulus generalization effects, and (3) if it proves that it lasts over time, that is if it
is still present at follow-up interviews (Baer, Wolf, & Risley, 1968). Many researchers state that generality is an important and valuable characteristic of applied behavior analysis and it should be examined explicitly (Baer et al., 1968; Kazdin, 1972; Glogower & Sloop, 1976; Keeley, Shemberg & Carbonell, 1976; and Wahler, 1972). Furthermore, Johnson and Katz (1973) claim that the parent-training approach to child therapy facilitates the generalization of treatment effects.

Wahler (1972) acknowledges that generalization is of central importance in most behavior modification programs. Specific behaviors are dealt with directly as in target behavior programs. However, the hope is that generalizations in improved target behavior will occur across behaviors and across settings for each child if this is appropriate. It is often impractical if not impossible to arrange contingencies for all unadaptive behaviors in a child across all settings. Therefore, parents can be trained to modify specific behaviors for which they can systematically set contingencies. The DPC program is designed to do this. The child's other behaviors may improve due to many factors, such as, newly learned behaviors may effect his or her behavioral repertoire in general and the parents may alter their general way of attending to the child.

This research addresses two specific types of generalization effects: response generalization and stimulus generalization. Kazdin (1975) defines the two terms: "response generalization - reinforcement of one response increases the probability of other responses which are similar to and resemble the target responses" (p. 258), and "stimulus-
generalization - transfer of a trained response to situations or stimulus conditions other than those in which training has taken place. The behavior generalizes to other situations" (p. 259).

Keeley et al. (1976) also address the issue of response generalization and stimulus generalization. They review 146 projects from three major behavioral publication from 1972-1973 in the light of these two types of generalization effects as well as long term effects. To them, response generalization refers to pre and post measures or observations on non-targeted behaviors. Therefore, if a program is designed to change a target behavior that is a specific effect. The response generalization is said to occur if changes in non-targeted behaviors are found following treatment. Stimulus generalization refers to pre and post measures of behaviors in one setting where reinforcement program is in effect and relates those behaviors to pre and post measures in a setting where no reinforcement procedures have been in effect.

Of 13 short term operant studies reviewed by Keeley et al. (1976) that were analyzed with regard to response generalization, six were considered failures, five were qualified, marginal or mixed successes, and two were judged successes. All of these studies involved classroom behaviors with children; none involved parent as therapist programs. Of 15 operant short term studies that were analyzed in the same review, they found that seven were considered failures with regard to stimulus generalization, while four included marginal, qualified or mixed successes, and four were considered successes. All of
these studies involved school or institutional settings for children or adults. Again, none involved specific parent as therapist programs.

More recent studies have also looked at generalization effects. Bornstein and Quevillon (1976) found indications of stimulus generalization, that is, training effects were transferred from the experimental task to the classroom setting for three pre-school boys. Through a shaping procedure, they used a cognitive self-instructional program developed to help the children with their impulsive behavior. The dependent variable was on-task behavior. They found that generalization of behavior did transfer from the experimental setting to the classroom setting and was maintained over a period of 22 weeks.

Cooke and Apolloni (1976) trained four handicapped children in various social-emotional behaviors which included: smiling, sharing, using positive physical touching, and using verbal compliments. The children were taught to systematically increase the rates of these behaviors. The children did learn to generalize their performance levels of three behaviors to the classroom setting in the absence of the conditioning program which indicates stimulus generalization. Cooke and Apolloni (1976) mention that the children continued to use or to generalize within the classroom setting the smiling, sharing, and physical contact behaviors even when they were being differentially reinforced for one of the behaviors.

Glogower and Sloop (1976) conducted a study looking at response generalization. They found that parents generalized their attitudes
toward their children and furthermore generalized their knowledge of operant principles in different situations and to other children. A similar response generalization effect has been found previously in the Directive Parental Counseling program (Brown, 1975; Capanzano, 1976; and Hyde, 1975). Significant changes were found in the desired direction in parents' attitudes and perceptions of the children's behaviors and adjustments.

The critical assumptions that behavior will generalize to other behaviors and across settings need more thorough experimental exploration (Wulbert et al., 1974). One purpose of the present study is to explore these two degrees of generalization effects, namely, response generalization and stimulus generalization within the Directive Parental Counseling program. More specifically, will the children as measured by the perceptions of the parents change other behaviors in the home setting in addition to the target behavior and will the changed behaviors transfer from the home to the school setting as measured by teachers' perceptions. In addition, follow-up effects will be noted.

In considering the above studies, there is conflicting evidence available regarding response generalization and stimulus generalization effects. In some instances children can transfer learning across behaviors (Glogower & Sloop, 1976; Hyde, 1975; Brown, 1975; and Keeley et al., 1976) and across settings (Keeley et al., 1976; Kent & O'Leary, 1976; Bornstein & Quevillon, 1976; and Cooke & Apolloni, 1976). In other instances, children do not transfer learning across behaviors and/or settings (Keeley et al., 1976; Wahler,
Statement of the Problem

The aim of the present study is to examine the effectiveness of the Directive Parental Counseling System using community agency staff members to train parents to be therapists for their children. The staff members are trained by a consultant-trainer. This will provide the staff members with both preventive and treatment tools in their work on this project and in the future and thereby facilitate a larger scale delivery method for this behavioral program. This investigation of behavioral treatment for children was conducted under circumstances similar to those of a clinical setting or community mental health setting. Agency staff volunteered their time with the permission of their agency directors. No stipend was given to any of the participating families.

A second general purpose is to investigate the response generalization and stimulus generalization effects of the Directive Parental Counseling Program. It is expected following the program that not only target behaviors will change, but other behaviors of the children will also improve or become more adaptive in the home and the school settings.

Families having a child with active behavior problems in the home and who were referred to a local community agency for some kind of assistance comprised the sample for this study. The sample consisted of 15 treatment families and 15 control families. Behavioral and attitudinal measures were administered to all families pre- and post-
experimentally. The control families were helped to implement the DPC program following the collection of post-experimental measures.

The following hypotheses were examined:

1. Parent training in Directive Parental Counseling will enable treatment group parents to significantly decrease the specific target behavior problems in their children.

2. Parent training in Directive Parental Counseling should produce significant changes in the desired direction in parent's perceptions of their child's adjustment and behavior indicating response generalization.

3. Parent training in Directive Parental Counseling should produce significant changes in the child's target behavior and in other related behaviors as perceived by the parents. In addition, changes in the desired direction in these other behaviors should generalize to the school setting; these changes are measured by teachers' perceptions and indicate stimulus generalization effects.
CHAPTER II

METHODOLOGY

Nine counselors from three local agencies were trained in the Directive Parental Counseling (DPC) program. The role of these nine counselors was to return to their respective agencies and train parents in the DPC principles; the parents came to the local agencies for help with a child who had active behavior difficulties. The focus of the methodological procedures is to assess the results of the counselors' efforts.

Subjects

Thirty-six families having a child with active behavior problems in the home began participation in the study. The attrition rate for the study was six families: two because of transportation difficulties, two because they moved out of town, and two because they did not contribute the required data. The families involved in the study were referred to agencies in order to receive some help with their children. The counselors assigned two families to a treatment group and two families to a waiting control group. Assignment to the treatment or control group was made on the basis of consecutive contacts. Thus, at the beginning of the study there were 18 families in both the treatment and control groups; at the end of the study there were 15 families in each group.
Demographic Data

Of the 15 treatment families who completed the study the income level ranged from $4,000 to $34,000 with a mean of $14,300. The age range of the mothers was from 24 to 37 with a mean of 29.5 years. The age range of the fathers was from 27 to 38 with a mean of 32.9 years. The education of the mothers ranged from 8 to 17 years with a mean of 11.4 years. The education of the fathers ranged from 8 to 15 years with a mean of 11.3 years. The children in the treatment families consisted of seven girls and eight boys; they ranged in age from 4.4 to 11.10 with a mean of 6.9 years. There were five two-parent homes and ten single-parent homes in this group. The mother was the principle participant in 14 of the 15 treatment families.

Of the 15 control families who completed the study the income level ranged from $4,000 to $36,000 with a mean of $16,000. The age range of the mothers was from 26 to 42 with a mean of 31.3 years. The age range of the fathers was from 30 to 39 with a mean of 33.7 years. The education of the mothers ranged from 9 to 18 years with a mean of 13.3 years. The education of the fathers ranged from 8 to 22 years with a mean of 13.7 years. The children in the control families consisted of six girls and nine boys; they ranged in age from 4.1 to 10.0 with a mean of 6.8 years. There were ten two-parent homes and five single parent homes in the group. The mother was the principle participant in 14 out of 15 control families.

Procedure

A. Counselor Training. Nine staff members including six women
and three men from local community service agencies participated in the study. The clinical experience of the counselors ranged from two to eight years. The author served as the consultant-trainer in the program and the counselors functioned as the direct contact agent with each family.

Counselor training consisted of three phases: (1) didactic phase; (2) intervention phase; (3) supervision phase.

1. **Didactic phase.** Nine staff members from local agencies volunteered to participate in the study and received training in the Directive Parental Counseling System from the author. The training was generally didactic in nature and took place for 90 minutes per week over a 12-week period; the total time of training in this phase was 18 hours. The main reference used systematically throughout the didactic phase was *Directive Parental Counseling: The Counselor's Guide* (Holland, 1977). Each point in the 30 point DPC program was discussed and clinical examples, problems, and strategies were elaborated for all points. Role-playing procedures were used with examples of case studies. Typical conversational and communication difficulties encountered with parents using this behavioral program were also discussed.

2. **Intervention phase.** Following the completion of phase (1), nine agency members interviewed four families. All families had contacted the agencies or were referred to the agencies because a child in the family had active behavior problems in the home. The counselor then informed one family that they would receive treatment
immediately while another family was asked to wait approximately ten to fifteen weeks at which time they would receive treatment. The initial 36 families were assigned to treatment or control groups by each counselor on the basis of consecutive referrals. All families were informed by the counselors that evaluation procedures would be used to determine the effects of the program and therefore each family was asked to fill out behavior measures on the child before treatment and at the end of the ten to fifteen week period. The families were informed that they were participating in a study designed to measure the effects of the Directive Parental Counseling program. All agreed to participate.

The counselors during the first interview helped each family to fill out the demographic data sheet. They also helped each family to identify a target behavior problem, that is to identify specifically one behavior that they would like to see changed in their child. The families were then taught how to keep a record of this particular behavior. The counselors also asked the parents to fill out two additional forms: The Walker Problem Behavior Identification Checklist and The Cassel Behavior Rating Scale. These scales are discussed later.

During the intervention phase, the 15 treatment families were taught the DPC system by the trained agency counselors. They met with the families once a week for one to two hours for 10 to 15 weeks. Total treatment time was approximately 20 hours per family. The agency counselors bi-weekly contacted the control families by phone.
in order to see how each family was doing and to encourage them to keep the necessary data. The families were also assured that they would receive the program following the last data collection.

The counselors with the permission of the parents contacted the teacher of each child in the program in both the treatment and control groups. The counselors then during this intervention phase asked the teachers to fill out behavior measures prior to and at the end of a ten to fifteen week period. Each teacher was told that the family of each child was participating in a program designed to help the family. The teachers were not aware of treatment or control groups.

3. **Supervision phase.** Concurrent with the intervention phase, the counselors met bi-weekly for an hour and a half with the consultant-trainer for supervision purposes. Eight supervisory sessions were scheduled. Total supervision time was approximately 12 hours per counselor.

4. **Parent Training.** Each family learned data collection methods. That is, each family learned to identify a target behavior in their child and keep a record of it throughout the program. All parents received a frequency recording sheet in order to facilitate their target data collection. The counselor's taught the parents how to observe their child's behavior and then how to communicate that observation. All parents filled out measuring instruments.

In general, the program involved the following learning experiences for the 15 treatment families:
(1) The parents were required to learn observational skills as well as language concept skills. The skills were necessary so that the parents could plan and then implement a behavior change program in their home for their child. This process took two to three weeks per family.

(2) During the next three to six training sessions, the agency counselors discussed the 30 points of the DPC program with the parents in explicit detail. Examples were given and discussed for each point of the program.

(3) Then the counselor and the parents developed a specific program for each child designed to change his or her target behavior. The program then took four to six weeks to implement for each family.

(4) At the end of each program, the parents filled out the final set of data. The control families also filled out the final set of data at this time.

Training Instruments

The counselors received detailed information concerning the program and their part in the program in Directive Parental Counseling: The Counselor's Guide (Holland, 1977). This guide includes the Parents' Manual in its pages as well as more information concerning parents' responses, questions, doubts, fears, and expectations. Directive Parental Counseling: The Parents' Manual (Holland, 1975) was also used as a treatment instrument. Each parent had a copy of
this manual. The DPC program served as the independent variable in this study as it is operationally defined in the manual (Holland, 1975).

Measuring Instruments - Home

The parents filled out four measuring instruments. The first instrument was filled out once at the beginning of the study to gain general information. The second instrument was used throughout the study. The last two instruments were administered to all parents at the beginning of the training program and again at its conclusion. All instruments are in Appendix A. They are described below:

(A) Demographic Data Sheet. This instrument was designed by the author in order to gain general family information.

(B) Target Behavior Data Sheet. Frequency counts of the identified target problem behavior were recorded on this instrument. Changes in the problem behavior frequencies between experimental and control groups were used as an outcome variable.

(C) The Walker Problem Behavior Identification Checklist (WPBIC). This test was developed by Walker (1970, 1976) to identify children with behavior problems. It is composed of 50 operational statements or items which give information about a child's problem behavior on five dimensions or in five categories: (1) acting out; (2) withdrawal; (3) distractibility; (4) disturbed peer relations; (5) immaturity. A score is obtained for each of the five scales mentioned and also a total score or a composite score may be obtained. Walker designed the checklist so that it could be used to identify
children with behavior problems and when used again it could indicate improvement if the children had improved. It was first designed for teachers but can also be used by parents since they too have the opportunity to observe their child's behavior. The checklist helps to identify behaviors that interfere with successful academic performance as well as the behaviors that handicap a child's present adjustment level. Therefore, since this instrument could be applied to both home and school measurement of observed behavior it was chosen for this study.

The Acting Out Scale reflects disruptive, aggressive, and defiant behavior. The Withdrawal Scale reflects behavior that is restricted or behavior in which a child has to avoid situations and/or people. The Distractibility Scale indicates behavior in which a child has a poor attention span or is unable to attend to situations. The Disturbed Peer Relations Scale reflects inadequate social skills, unfavorable self-image, and compulsive behavior. The Immaturity Scale reflects dependent behavior. The Total Score represents a more general way of classifying the children as disturbed or not disturbed.

There are four types of validity measures for the WPBIC: contrasted groups, criterion, factorial, and item validity. In contrasted groups validity, the difference between the means for the total scores of the experimental and control subjects was significant beyond the .001 level. The item validity indices for many of the checklist items vary from .00 to .21. Therefore, many items are able to distinguish the disturbed segment of the school population.
from the rest of the children. The split-half reliability coefficient obtained on this scale is .98; it was obtained by separating odd and even numbered items.

Changes in scores on the WPBIC will indicate if response generalization effects have occurred. That is, a change in scores will indicate if parents have changed their perceptions of their child's behaviors in addition to the target behavior.

(0) The Child Behavior Rating Scale (CBRS). This test was developed by Cassel (1962) to assess the personality adjustment of primary grade school children. The scale is composed of 78 items which can be separated into five areas or categories: (1) self-adjustment; (2) home adjustment; (3) social adjustment; (4) school adjustment; (5) physical adjustment. The CBRS also yields a score for total personality adjustment as well as separate scores for the above categories. Each item on the CBRS can be rated on a six point scale which helps to indicate the degree or extent to which the child presents a specific behavior to the rater. The behavior can be indicated as not occurring at all to occurring very frequently. The total scores for each area of adjustment have weighted values. Also, the Personality Adjustment Total score has a weighted value derived from three scales: self-adjustment, home-adjustment, and school adjustment. The purpose of the five scales is to provide a clearer and more delineated picture of the child's behavior. The Self-Adjustment Scale reflects mainly what it says, that is, the child's individual adjustment. The Home Adjustment Scale reflects items
concerned with the child's relationship with his or her parents and
with the family and home life in general. The Social Adjustment
scale purports to measure ways in which the child adapts to his or
her social environment. The School Adjustment Scale reflects items
related to the child's perceptions of and activities in the school
setting.

The split-half reliability coefficient obtained from a sample of
800 typical school children was .873 ± .003; on a sample of 200 more
disturbed children, the split-half reliability coefficient was .589 ±
.042. The split-half reliability was obtained on odd - even CBRS
items and the coefficients represent a high degree of test consistency
in its scoring. The CBRS also has status validity or contrasted
groups validity. That is, the CBRS scores differentiate children that
are more adjusted from those who have less well adjusted behavior pat-
terns. Changes in scores on the CBRS will indicate if response gener-
alization effects have occurred.

**Measuring Instruments - School**

The following instruments were administered to each child's
teacher by the agency member at the beginning and end of the treatment
intervention phase. These instruments were used to assess outcome
measures. More specifically, they were used to assess if stimulus
generalization effects had occurred as a result of treatment.

The first two instruments are explained earlier and are found in
Appendix A. The third instrument, the Bristol Social Adjustment Guide
for the Child in the School may be found in Appendix B.
(A) The Walker Problem Behavior Identification Checklist. See page 43

(B) The Child Behavior Rating Scale. See page 45

(C) The Bristol Social Adjustment Guide for the Child in the School (BSAG-CS). This test was developed by D. H. Stott (1974) to assess school behavior in children. Stott wanted to develop a comprehensive classification for deviant behavior among school children. It is designed to measure categories or core syndromes which include: (1) unforthcomingness; (2) withdrawal; (3) depression; (4) inconsequence; (5) hostility. Scores are given for these as well as for three groupings resulting from the above categories, namely, under-reaction (Unract), peer-maladaptiveness, and over-reaction (Ovreact). The purpose of this test is to measure different forms of childhood maladjustment. Internal reliability of the test was assessed using Nunnally’s (1967) coefficient Alpha. This is an estimate of internal consistency based on the average correlation among the various items. The correlations are: Unract .82; Ovreact .90; Total BSAG .80. The test-retest reliability coefficients are: Unract .74; Ovreact .77; Total BSAG .80. The population for this study by Stott was comprised of over 2000 children from a relatively large city in Canada and from both city and rural regions in Ontario.

In summary, pre-treatment measures were obtained from 15 treatment families and 15 control families before training in the DPC system had begun for the experimental group. The measures obtained include: (1) Behavioral measures - frequency count of target behavior at baseline; and (2) Parent perception or Response Generalization
measures: (a) The WPBIC, and (b) the CBRs. Parents also filled out a demographic data sheet. Pre-experimental school measures were obtained for 15 experimental children and 15 control children. The measures obtained include: Teacher perception or Stimulus Generalization measures: (a) The WPBIC, (b) The CBRs, and (c) BSAG-CS.

Post-treatment measures were obtained from 15 treatment families and 15 control families following the ten to fifteen week program. The post-treatment measures are the same as those mentioned above except for the demographic data sheet which did not need to be repeated. In addition, complete frequency counts of target behaviors were kept by 13 experimental and 14 control families.
CHAPTER 111

RESULTS

The following hypotheses were tested:

1. It was predicted that there would be a significant decrease in the frequency of targeted problem behaviors between the experimental and control groups as a function of the Directive Parental Counseling parent training program. This was measured on an outcome basis. The first two weeks established the base rate for the target behavior frequencies; the last two weeks provided the criterion data. The prediction was tested by using the Fisher exact probability test (Siegel, 1956). The experimental and control groups were compared on the basis of changes in the desired direction in target behavior frequencies in base rate vs. criterion data.

2. It was further predicted that a response generalization effect would take place in the parents' perceptions of the behaviors of the children and their personality adjustment as measured by the Walker Problem Behavior Identification Checklist and the Child Behavior Rating Scale. This prediction was tested by using the Fisher exact probability test comparing experimental and control groups on the basis of changes in the desired direction on pre- and post-measures.

3. Following the DPC treatment program it was also predicted that stimulus generalization effects would occur, that is, the general behavioral improvement of the children would generalize across situations as measured by teacher perceptions. Therefore, it was hypothesized that significant changes would occur in the teachers' percep-
tions of the behaviors of the children as measured by the WPBIC, the CBRS, and the BSAG-CS.

Analysis of Behavior Change - Target Behavior

The frequency of targeted behavior problems for each child in the treatment group at baseline and at the conclusion of treatment is presented in Table 1. The frequency of targeted behavior problems for each child in the control group at baseline and at the conclusion of the treatment program for the children in the experimental group is presented in Table 2.

The pre-treatment baseline frequency is the total frequency count of the first two weeks of the problem behavior as observed and recorded by parents after the target behavior was identified. The post-intervention measure is the total frequency count of the target behavior during the last two weeks of the program for the experimental families or the last two weeks of the waiting time for the control families. The families participating in the program kept a target behavior count from 10 to 15 weeks.

A percentage of reduction of each target behavior was determined for each child. To measure this percentage of reduction for the treatment and control children, the post-treatment total frequency count was subtracted from the baseline rate; the difference was then divided by the baseline rate and multiplied by 100. The results indicate that in the treatment group the target behavior decreased 53% or more for 13 out of 15 families following participation in the Directive Parental Counseling program. The percentage of behavior decrement could not be
Table 1

Behavior Frequency Scores for Selected Target Behaviors

Experimental Group

<table>
<thead>
<tr>
<th>S</th>
<th>Age</th>
<th>Sex</th>
<th>Target Behavior</th>
<th>Frequency Weeks 1 &amp; 2</th>
<th>Frequency Last Two Weeks</th>
<th>Behavior Decrement %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.5</td>
<td>M</td>
<td>Changed during program</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>6.4</td>
<td>F</td>
<td>Non-compliance</td>
<td>11</td>
<td>4</td>
<td>64</td>
</tr>
<tr>
<td>3</td>
<td>8.11</td>
<td>M</td>
<td>Delaying behavior</td>
<td>7</td>
<td>1</td>
<td>86</td>
</tr>
<tr>
<td>4</td>
<td>5.6</td>
<td>F</td>
<td>Non-compliance</td>
<td>16</td>
<td>2</td>
<td>87</td>
</tr>
<tr>
<td>5</td>
<td>10.4</td>
<td>M</td>
<td>Non-compliance</td>
<td>94</td>
<td>3</td>
<td>97</td>
</tr>
<tr>
<td>6</td>
<td>5.6</td>
<td>M</td>
<td>Non-compliance</td>
<td>57</td>
<td>2</td>
<td>96</td>
</tr>
<tr>
<td>7</td>
<td>11.10</td>
<td>M</td>
<td>Talking Back</td>
<td>24</td>
<td>00</td>
<td>100</td>
</tr>
<tr>
<td>8</td>
<td>9.4</td>
<td>F</td>
<td>&quot;Whining&quot; Behavior</td>
<td>18</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>9</td>
<td>11.0</td>
<td>M</td>
<td>Incomplete Data</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>7.1</td>
<td>M</td>
<td>Not Eating Properly</td>
<td>21</td>
<td>5</td>
<td>76</td>
</tr>
<tr>
<td>11</td>
<td>4.10</td>
<td>F</td>
<td>Pesterling Behavior</td>
<td>10</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>12</td>
<td>4.4</td>
<td>F</td>
<td>Demanding Behavior</td>
<td>60</td>
<td>28</td>
<td>53</td>
</tr>
<tr>
<td>13</td>
<td>4.10</td>
<td>F</td>
<td>Non-compliance</td>
<td>23</td>
<td>4</td>
<td>83</td>
</tr>
<tr>
<td>14</td>
<td>4.8</td>
<td>M</td>
<td>Dinnertime Behavior</td>
<td>45</td>
<td>4</td>
<td>91</td>
</tr>
<tr>
<td>15</td>
<td>4.8</td>
<td>M</td>
<td>Non-compliance</td>
<td>45</td>
<td>10</td>
<td>77</td>
</tr>
</tbody>
</table>
Table 2

Behavior Frequency Scores for Selected Target Behaviors

Control Group

<table>
<thead>
<tr>
<th>S</th>
<th>Age</th>
<th>Sex</th>
<th>Target Behavior</th>
<th>Frequency Weeks 1 &amp; 2</th>
<th>Frequency Last Two Weeks</th>
<th>Behavior Decrement %</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>8.3</td>
<td>F</td>
<td>Screaming at brother</td>
<td>20</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>17</td>
<td>5.00</td>
<td>M</td>
<td>Bed Wetting</td>
<td>10</td>
<td>11</td>
<td>-10</td>
</tr>
<tr>
<td>18</td>
<td>8.11</td>
<td>M</td>
<td>Demanding Behavior</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>19</td>
<td>5.9</td>
<td>M</td>
<td>Non-compliance</td>
<td>12</td>
<td>13</td>
<td>-08</td>
</tr>
<tr>
<td>20</td>
<td>7.3</td>
<td>F</td>
<td>Non-compliance</td>
<td>13</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>21</td>
<td>8.11</td>
<td>M</td>
<td>Non-compliance</td>
<td>14</td>
<td>3</td>
<td>79</td>
</tr>
<tr>
<td>22</td>
<td>7.11</td>
<td>M</td>
<td>Non-compliance</td>
<td>22</td>
<td>26</td>
<td>-18</td>
</tr>
<tr>
<td>23</td>
<td>9.10</td>
<td>M</td>
<td>Bed Wetting</td>
<td>14</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>10.0</td>
<td>F</td>
<td>Non-compliance</td>
<td>15</td>
<td>19</td>
<td>-27</td>
</tr>
<tr>
<td>25</td>
<td>5.4</td>
<td>F</td>
<td>Non-compliance</td>
<td>32</td>
<td>35</td>
<td>-09</td>
</tr>
<tr>
<td>26</td>
<td>4.4</td>
<td>M</td>
<td>Whining</td>
<td>25</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>27</td>
<td>5.11</td>
<td>F</td>
<td>Interrupting Behavior</td>
<td>50</td>
<td>38</td>
<td>24</td>
</tr>
<tr>
<td>28</td>
<td>6.9</td>
<td>M</td>
<td>Not dressing himself</td>
<td>10</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>29</td>
<td>4.7</td>
<td>M</td>
<td>Fighting</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>4.1</td>
<td>F</td>
<td>Demanding Behavior</td>
<td>41</td>
<td>21</td>
<td>49</td>
</tr>
</tbody>
</table>
determined for two families in the treatment group because one family changed the target behavior after the program started and the other family did not complete the target behavior data.

The average percentage reduction in problem behaviors across the 13 treatment families was 85.4% with a range of 53% to 100%. The 100% indicates that the problem behavior was eliminated. Figures 1 to 13 present the frequency decrement in target behavior over the program period for the treatment families.

In the control group 14 out of 15 families completed the target behavior information. Of these 14 families, six decreased the target behavior frequency from 12% to 79%, three families stayed the same in behavior frequency, and five families increased in the target behavior frequency during the ten to twelve week waiting period. The average percentage reduction in problem behaviors across the 14 control families was 5.8% with a range of -2% to 79%. Figures 14 to 27 present the frequency count information in target behaviors over the waiting program period for the families in the control group.

A Fisher exact probability test was used to analyze the difference in the percentage of target behavior improvement for the experimental and control groups. The test showed that the two groups differed significantly ($p < .001$) in target behavior frequency of baseline vs. post-treatment counts. The results are found in Table 3.

**Analysis of Response Generalization Effects**

Those scales that were not significantly different between the experimental and control groups before treatment began were analyzed.
Figure 1

Frequency Chart for Family

Subject: #2E  Sex: Female  Age: 6.4 years

Target Problem: Not keeping her room clean
Figure 2

Frequency Chart For Family

Subject: 3E  Sex: Male  Age: 8.11 years

Target Problem: Delaying behavior
Figure 3
Frequency Chart for Family

Subject: 4E  Sex: Female  Age: 5.6 years

Target Problem: The child would not respond to requests from parents
Figure 4

Frequency Chart for Family 5

Subject: 5E  Sex: Male  Age: 10.4 years

Target Problem: The child would not come to dinner when asked to do so.
Figure 5
Frequency Chart for Family 6

Subject: 6E  Sex: Male  Age: 5.6 years

Target Problem: This child would not listen to his mother; he would not respond when asked to do something
Figure 6
Frequency Chart for Family 7
Subject: 7E   Sex: Male   Age: 11.10 years

Target Problem: This child would delay going to bed when told
Figure 7
Frequency Chart for Family 8

Subject: 8E  Sex: Female  Age: 9.4 years

Target Problem: Fussing behavior
Figure 8
Frequency Chart for Family 10
Subject: 10E  Sex: Male  Age: 7.1 years

Target Problem: Not eating properly at dinner
Subject: 11E  Sex: Female  Age: 4.10 years

Target Problem: Pesterling behavior after going to bed at night
Figure 10

Frequency Chart for Family 12

Subject: 12E  Sex: Female  Age: 44 years

Target Problem: Demanding behavior
Figure 11
Frequency Chart for Family 13
Subject: 13E  Sex: Female  Age: 4.10 years

Target Problem: Non-responding behavior
Figure 12
Frequency Chart for Family 14
Subject: 14E  Sex: Male  Age: 4.8 years

Target Problem: Inappropriate behavior at the dinner table
Figure 13

Frequency Chart for Family 15

Subject: 15E  Sex: Male  Age: 4.8 years

Target Behavior: Non-responding behavior to parental requests
Figure 14
Frequency Chart for Family 16

Subject: 16C  Sex: Female  Age: 8.3 years

Target Problem: Screaming at her brother
Figure 15

Frequency Chart for Family 17

Subject: 17C  Sex: Male  Age: 5.11 years

Target Problem: Bed wetting
Figure 16
Frequency Chart for Family 19

Subject: 19C   Sex: Male   Age: 5.9 years

Target Problem: Not sleeping in his own bed at night
Figure 17

Frequency Chart for Family 20

Subject: 20C  Sex: Female  Age: 7.3 years

Target Problem: Non-responding behavior
Figure 18
Frequency Chart for Family 21

Subject: 21C  Sex: Male  Age: 8.11 years

Target Problem: Non-responding behavior to parental requests
Figure 19
Frequency Chart for Family 22
Subject: 22C  Sex: Male  Age: 7.11 years

Target Problem: Non-responding behavior at bedtime
Figure 20

Frequency Chart for Family 23

Subject: 23C  Sex: Male  Age: 9.10 years

Target Problem: Bed wetting
Figure 21

Frequency Chart for Family 24

Subject: 24C    Sex: Female    Age: 10.0 years

Target Problem: Non-responding behavior to parental requests
Figure 22

Frequency Chart for Family 25

Subject: 25C  Sex: Female  Age: 5.4 years

Target Problem: Non-responding behavior to parental requests
Figure 23
Frequency Chart for Family 26
Subject: 26C  Sex: Male  Age: 4.4 years

Target Problem: Whining behavior
Figure 24
Frequency Chart for Family 27
Subject: 27C   Sex: Female   Age: 5.11 years

Target Problem: Interrupting behavior
Figure 25
Frequency Chart for Family 28

Subject: 28C  Sex: Male  Age: 6.9 years

Target Problem: Not dressing himself
Figure 26

Frequency Chart for Family 29

Subject: 29C Sex: Male Age: 4.7 years

Target Problem: Fighting with his sister
Figure 27

Frequency Chart for Family 30

Subject: 30C  Sex: Female  Age: 4.1 years

Number of Weeks

Target Problem: Demanding behavior
Table 3

Exact Probability of Baseline vs. Post-Treatment Target Behavior Frequency Counts for the Experimental and Control Groups

<table>
<thead>
<tr>
<th>Percentage of Change above Median</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>1</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>12</td>
</tr>
</tbody>
</table>

This resulted in seven scales for the home responses. The seven scales analyzed were: 1) withdrawal, 2) distractibility, 3) disturbed peer relations, 4) immaturity from the WPBIC, and 5) self-adjustment, 6) social adjustment, and 7) Personality total adjustment from the CBRS.

Each scale was analyzed separately using the Fisher exact probability test in order to determine if the two groups, treatment and control, differed significantly in the differences between the pre- and post-treatment measures. They were analyzed to see if parents had significantly changed their perceptions of their children's behaviors.

The parent perception changes are viewed as response generalizations, that is, the parents generalize their perceptions of the child's behavior from the target behavior to non-target behaviors. It is assumed that the child not only improves in the target behavior but in other related behaviors as well.

Of the seven scales, the treatment group showed significantly more changes than the control group comparing the difference in pre- and post-measures on four of the home scales. The results can be found in Table 4. The results indicate that there is a significant change in parents' perceptions in the treatment group of their children's problem behaviors in the area of distractibility (p = .028) and immaturity (p = .011) as measured by the Walker Problem Behavior Identification Checklist. Significant changes in parents' perceptions of the children's adjustment also occurred in school adjustment (p = .011) and personality total adjustment (p = .058) as measured by the The Child Behavior Rating Scale.
Table 4
Exact Probabilities of Pre-Post-Test Changes
for Experimental and Control Groups
in the Home

<table>
<thead>
<tr>
<th>Response Generalization</th>
<th>Home Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walker Problem Behavior Identification</td>
<td></td>
</tr>
<tr>
<td>Checklist</td>
<td>P</td>
</tr>
<tr>
<td>Distractibility</td>
<td>.028</td>
</tr>
<tr>
<td>Immaturity</td>
<td>.011</td>
</tr>
<tr>
<td>Child Behavior Rating Scale</td>
<td>P</td>
</tr>
<tr>
<td>School Adjustment</td>
<td>.011</td>
</tr>
<tr>
<td>Total Personality Adjustment</td>
<td>.058</td>
</tr>
</tbody>
</table>
Analysis of Stimulus Generalization Effects

The scales that were not significantly different between the experimental and control groups before treatment began were analyzed. This resulted in ten scales for the school responses on the WPBIC and the CBRS measures. The results of the Bristol Social Adjustment Guide for the Child in the School are discussed in the next chapter; no significant results were found for that measure.

Each scale on the WPBIC and the CBRS was analyzed separately using the Fisher exact probability test in order to determine if the treatment and control groups differed significantly in the difference between pre- and post-test measures. That is, the scales were analyzed to see if the teachers' perceptions of the children's behaviors had changed. The teacher perception changes are viewed as stimulus generalizations, that is, the teachers saw changes in general behavioral improvements in children in the experimental group following treatment. The children changed in the home and transferred some of these changes to the school setting where they were noted by the teachers.

The results of the statistical analyses indicate that there is a significant change in teachers' perceptions of the children in the treatment group in the area of immaturity (p = .047) and the total score (p = .053) as measured by the WPBIC. Significant changes of the adjustment of children also occurred in the personality total adjustment scale (p = .058) as measured by the CBRS. The results can be found in Table 5. The results of all the analyzed scales may be found in Appendix C.
Table 5

Exact Probabilities of Pre-Post-Test Changes for Experimental and Control Groups in the School

<table>
<thead>
<tr>
<th>Stimulus Generalization</th>
<th>School Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walker Problem Behavior Identification</td>
<td></td>
</tr>
<tr>
<td>Checklist</td>
<td>P</td>
</tr>
<tr>
<td>Immaturity</td>
<td>0.047</td>
</tr>
<tr>
<td>Total Score</td>
<td>0.053</td>
</tr>
<tr>
<td>Child Behavior Rating Scale</td>
<td></td>
</tr>
<tr>
<td>Total Personality Adjustment</td>
<td>P</td>
</tr>
<tr>
<td></td>
<td>0.058</td>
</tr>
</tbody>
</table>
Generalization of Effects Over Time - Response Maintenance

Persistence of behavior over time was also part of this study. A follow-up method used by Brown (1975) and patterned after Patterson (1973) was employed for purposes of assessing time generalization effects. The Patterson Improvement Rating Scale (PIRS, Brown, 1975) was administered by phone to ten treatment families at a four-month follow-up by the consultant-trainer. The scale is presented in Appendix D. The follow-up occurred during a summer month when vacations were in progress, hence, some families could not be reached.

Each question of Patterson's scale was asked in succession with each family; one father and nine mothers responded to the questions. The results may be found in Table 6 which show the means of the responses to the six PIRS items.

It can be seen by Table 6 that all parents had a positive reaction to treatment at the follow-up time. In response to the first question, all parents agreed to either slight or marked improvement as a result of treatment. In addition, all parents felt either slightly or much more positive toward their child. Regarding the family function on the whole, three parents believed their family was about the same whereas seven felt their family functioned better as a result of treatment. Treatment itself was believed to be slightly or very effective for all families. The effect of treatment was about what was expected for three families and better than expected for seven. Two families felt that their child was about the same at home whereas eight families believed that their child was more happy at home following the program. The results clearly support the persistence of treatment effects over time.
Table 6

Summary of The Patterson Improvement Rating Scale at a Four Month Follow-Up

<table>
<thead>
<tr>
<th>Items</th>
<th>Number of parents choosing alternative N = 10</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) As a result of treatment, your child has</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Become much worse</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(2) Become slightly worse</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(3) Not changed</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(4) Improved slightly</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>(5) Improved markedly</td>
<td>3</td>
<td>4.3</td>
</tr>
<tr>
<td>2) In regard to the effect of this treatment, you feel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Much more negatively toward him/her</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(2) Slightly more negative toward him/her</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(3) About the same toward him/her</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(4) Slightly more positive toward him/her</td>
<td>6</td>
<td>4.4</td>
</tr>
<tr>
<td>(5) Much more positive toward him/her</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3) As a result of treatment, my family has</td>
<td></td>
<td></td>
</tr>
<tr>
<td>on the whole, begun to function</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Better</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>(2) About the same</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(3) Worse</td>
<td>0</td>
<td>1.3</td>
</tr>
<tr>
<td>4) On the whole, I think treatment was</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Harmful</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(2) Useless</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(3) Slightly effective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(4) Very effective</td>
<td>7</td>
<td>3.7</td>
</tr>
<tr>
<td>5) The effect of treatment on my child was</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Better than I expected</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>(2) About what I expected</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(3) Worse than I expected</td>
<td>0</td>
<td>1.3</td>
</tr>
<tr>
<td>6) As a result of treatment, my child seems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Less happy at home</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(2) About the same</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>(3) More happy at home</td>
<td>8</td>
<td>2.8</td>
</tr>
</tbody>
</table>
The results of this research add support to other studies in the behavioral literature which demonstrate that parent training programs do have an effect on child behavior change. The specific parent training program used in this study is Directive Parental Counseling and it was found to be effective in decreasing problem behaviors for the children in this sample. Also, response generalization and stimulus generalization effects were found as a result of the DPC program. Furthermore, this study indicates that mental health agency staff members can be trained to be effective counselors for parents in a relatively short amount of time, that is, in 18 to 20 hours over a ten week period.

Successful treatment outcome was determined in three ways: (1) target behavior frequency was significantly reduced for the experimental group, (2) response generalization effects occurred, that is, parents changed their perceptions of a variety of child behaviors, and (3) stimulus generalization effects occurred, that is, teachers changed their perceptions of a variety of child behaviors in the school setting without direct intervention occurring in that setting.

Target behavior change was indicated as being successful in that the Fisher exact probability was $p < .001$ when comparing behavior change in the experimental vs. control group. Formerly an arbitrary criterion of a 60% decrement in behavior change was used by researchers in this area in order to assess target behavior change when a control
group was not used. For example, Patterson, Ray, and Shaw (1968) found a 62-75% reduction in target behaviors and Patterson and Reid (1973) reported a 61% average reduction in deviant behavior frequency counts. In some studies a less rigorous criterion of 30% reduction was used (Eyberg & Johnson, 1974; Patterson et al., 1972).

This study used many different target behaviors with boys and girls; the specific behavior to be worked on was chosen by the parents. This study also presented target behavior frequency counts for both the experimental and control groups of children. It was seen that 13 of the 15 experimental families completed the target data behavior charts; furthermore 12 of the 13 children in the treatment group showed a 60% or more decrease in their problem behavior. Fourteen families out of 15 in the control group completed their target data behavior count; one subject in this group reduced the target behavior by 60% or more. The change in target behaviors is consistent with other studies.

Response generalization effects were found on some scales in the Walker and Cassel measuring instruments. More specifically, parents significantly changed their perceptions of their children on four different scales: Walker distractibility \( p = .028 \) and immaturity \( p = .011 \) and Cassel school adjustment \( p = .011 \) and total personality adjustment \( p = .058 \). Walker designed his 50 item checklist so that it could be used to identify children with behavior problems and when used again it could indicate improvement if the children had changed their behavior.
The distractibility scale reflects behavior in which a child has a poor attention span or is unable to attend to situations. Items in this scale include: "Is overactive, restless, and/or continually shifting body positions." and "Does not complete tasks attempted." Parents reported a significant improvement in their children's behavior on this scale. Therefore, as a result of the DPC program parents appeared to generalize their perceptions toward attending behaviors in their children. They evidently see their children as better able to control themselves, less overactive, more able to complete tasks, and generally more able to concentrate.

The immaturity scale reflects dependent behavior. Items that illustrate immaturity include: "Is listless and continually tired," "Complains of nightmares, bad dreams," and "Weeps or cries without provocation." The parents significantly changed their perceptions of the experimental children in this area. Therefore, the DPC program is an effective instrument for facilitating a change in the perceptions of parents with regard to immature or dependent behavior in the children in this sample.

The Walker scales for withdrawal, disturbed peer relations, and the total score did not reach significance with this sample of subjects. The acting out scale reached significance but was dropped from the results because the experimental and control children differed significantly on their pre-test scores and therefore reasons for the improvement cannot be attributed to the independent variable alone.

Brown (1975) found significance on four of the Walker scales (acting-out, withdrawal, immaturity, and distractibility) and on the
total score for his subjects. Capanzano (1976) found significance in
the distractibility scale for his sample. These two studies varied
from 7 to 22 in the number of subjects and also did not contain control
groups. Hyde (1975) who did have a control group found significance
on the acting-out, distractibility and total score scales for the
subjects in her study. Also, all three studies indicated trends toward
improved perceptions of the children's behaviors as perceived by parents
even though the other scales did not reach significance. Similar trends
were found in this study and are presented in Table 7 which shows the
mean scores for the WPBIC for experimental and control groups pre- and
post-test in the home.

The analysis of results on the WPBIC indicates that the subjects in
the above studies decreased their mean total scores in varying degrees:
Brown (1975) showed a decrease of 16.99 points; Hyde (1975) showed a
decrease of 11.28 points; and Capanzano (1976) showed a decrease of
3.80 points. The experimental subjects in this study decreased their
mean score by 13.46 points in the home. Brown (1975) used counselors
in his study that were highly experienced in clinical skills and they
had also used the DPC program with other families. The counselors in
Hyde's study (1975) had some clinical experience, but less than the
people in Brown's study; furthermore they used the DPC program for the
first time with subjects in her study. The student nurses in Capanzano's
(1976) study had minimal clinical experience and were unfamiliar with
the DPC procedures prior to their participation in his program. The
counselors in this study had varying degrees of clinical experience as
noted earlier and three had used the DPC program in their work prior to
Table 7

Means for Walker Problem Behavior Identification Checklist for Experimental And Control Group Pre- and Post-Test In The Home

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-Post</th>
<th>Acting Out</th>
<th>Withdrawal</th>
<th>Distractibility</th>
<th>Disturbed Peer Relations</th>
<th>Immaturity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>1. Pre</td>
<td>75.46</td>
<td>49.66</td>
<td>60.46</td>
<td>71.93</td>
<td>62.00</td>
<td>67.06</td>
</tr>
<tr>
<td></td>
<td>2. Post</td>
<td>61.66</td>
<td>48.40</td>
<td>54.66</td>
<td>57.33</td>
<td>53.33</td>
<td>53.60</td>
</tr>
<tr>
<td>Control</td>
<td>1. Pre</td>
<td>65.73</td>
<td>47.13</td>
<td>58.00</td>
<td>67.00</td>
<td>57.53</td>
<td>59.53</td>
</tr>
<tr>
<td></td>
<td>2. Post</td>
<td>57.60</td>
<td>47.20</td>
<td>55.93</td>
<td>55.93</td>
<td>57.80</td>
<td>53.33</td>
</tr>
</tbody>
</table>
using it in this study.

It is reasonable to assume given the above information that some clinical experience and some familiarity with the DPC program does enhance its more generalizable results, that is, with more counselor experience more perception changes in parents are likely to occur.

The Child Behavior Rating Scale by Cassel also measures observed behaviors and was used to measure response generalization effects. As noted earlier, it provides measures of adjustment in five areas as well as in a Total personality adjustment score.

The school adjustment scale reflects behaviors a child would show in school or at home regarding school. Items included are: "Often expresses a strong dislike for school." and "Often has difficulty doing school work." The parents indicated a significant change in the children's school adjustment, and therefore, the children must have reported more favorable attitudes toward school at home as perceived by the parents. Perhaps the children did more school work at home that was noticed by the parents. This change in school adjustment was not noted by the teachers; perhaps the home item changes were more affected than the school item changes.

Cassel states that the personality total adjustment score (PTAS) is the most significant score on the rating scale. This single score represents the overall adjustment of each child. Parents saw a significant change in the children's total personality adjustment. The total score is derived from three areas of adjustment which are weighted and then combined, namely, self-adjustment, home adjustment,
and school adjustment. Therefore, although significant results were not found in two of these specific areas in the home, the overall adjustment according to parent perceptions of the children did improve significantly as a result of the DPC treatment program.

There are noticeable trends for the mean scores pre- and post-test on the Child Behavior Rating Scale for the home as presented in Table 8. All of the treatment subjects improved their behaviors, that is, their mean scores increased in the desired direction in the post-test results for the scales that were analyzed. The control subjects, however, decreased their scores on two scales rated by the parents, namely, home adjustment and school adjustment.

Brown (1975) found that all scales on the Cassel were significant whereas Hyde (1975) found no significance. The significance in this study may again relate to counselor experience as far as generalizable effects are concerned, that is, to the degree of response generalization. Perhaps with greater counseling experience more generalization effects would occur in parental responses.

In summary, response generalization effects were found on four different scales in this study; pre and post observations or measurements were significant on non-targeted behaviors. Therefore, changes in non-targeted behaviors are found following treatment with an experimental and control group. No control data was available in the Keeley et al., (1976) review of response generalization studies, so this study with control data adds to the research literature. It is concluded that the changes in behavior are attributable to the DPC
Table 8
Means For The Cassel Behavior
Rating Scale For Experimental And
Control Group Pre-And Post-Test
In The Home

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-Post</th>
<th>Self Adjustment</th>
<th>Home Adjustment</th>
<th>Social Adjustment</th>
<th>School Adjustment</th>
<th>Physical Adjustment</th>
<th>Personality Total Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>Pre</td>
<td>34.06</td>
<td>44.66</td>
<td>37.53</td>
<td>48.26</td>
<td>66.60</td>
<td>40.06</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>43.93</td>
<td>49.73</td>
<td>46.26</td>
<td>59.26</td>
<td>64.80</td>
<td>47.86</td>
</tr>
<tr>
<td>Control</td>
<td>Pre</td>
<td>40.33</td>
<td>53.33</td>
<td>49.40</td>
<td>51.33</td>
<td>64.40</td>
<td>46.33</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>43.20</td>
<td>51.86</td>
<td>51.13</td>
<td>46.33</td>
<td>59.66</td>
<td>47.06</td>
</tr>
</tbody>
</table>
intervention. Response generalization demonstrates that a behavior modification program can lead to a variety of changes in other behaviors, that is, beyond the specific behaviors changed from reinforcement, punishment, and/or extinction procedures (Kazdin, 1975).

Wahler (1972) explains that it is often impractical to set up a behavioral program for each maladaptive behavior for each child; the clinician indeed depends on generalization to aid the treatment procedure. Therefore, the parents can set up one contingency program and other childhood behaviors may improve for two reasons: (1) the child has learned new behaviors, and (2) the parents have altered their methods for giving the child attention. Wahler (1972) expects that response generalization is likely to occur within a behavioral program and it appears to be a fairly reliable outcome of a behavior modification program (Patterson, et al., 1970). Changes in parental behavior do effect response generalization (Brown, 1975; Capanzano, 1976; Hyde, 1975; Patterson, et al., 1970). This study adds support to the above conclusions.

Stimulus generalization effects were found on some scales in the Walker and Cassel measuring instruments. More specifically, teachers significantly changed their perceptions of the behaviors of children on three different scales: Walker immaturity and total score, and on the Cassel total personality adjustment.

The immaturity scale was significantly changed in the home and school setting. The total score, however, reached significance in the school but not in the home. The total score represents a more
global way of classifying the children as disturbed or not disturbed. It is assumed that the teachers recognized or acknowledged an overall improvement in the children's behaviors in school although the only specific group of behaviors that seemed to stand out reflected improvement in immature and dependent activities. On this scale, the control group adds interest to the results in a particular way. A teacher may just generally see his or her students grow in maturity throughout a school year; this would not seem unusual. The control group adds support to the treatment effects since the control children did not improve as much as the treatment children.

The general trends toward behavior improvement for the experimental and control groups on the Walker scales can be found in Table 9. All scores indicate improved perceptions in the desired directions for the treatment group. The teacher perceptions of the control group also changed in the improved direction on all scales except the total score which indicated a slight decrement. It may be that teachers generally see improved behaviors in children as the school year progresses although it is noted again that changes in their perceptions for the treatment group were larger and two scales reached significance.

Again on the Cassel scale, the total personality adjustment score reached significance. Teachers therefore, it is assumed saw a significant change in the overall adjustment of children in the treatment group as a result of the DPC program. The means for the Cassel scales for the experimental and control groups may be found in Table 10. All subjects improved their behaviors perhaps again supporting the fact
### Table 9

Means For Walker Problem Behavior
Identification Checklist For Experimental
And Control Group Pre- And Post-Test
In The School

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-Post</th>
<th>Acting Out</th>
<th>Withdrawal</th>
<th>Distractibility</th>
<th>Disturbed Peer Relations</th>
<th>Immaturity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>1. Pre</td>
<td>60.06</td>
<td>50.60</td>
<td>57.80</td>
<td>52.40</td>
<td>57.40</td>
<td>55.26</td>
</tr>
<tr>
<td></td>
<td>2. Post</td>
<td>51.73</td>
<td>45.73</td>
<td>53.66</td>
<td>51.53</td>
<td>51.06</td>
<td>47.46</td>
</tr>
<tr>
<td>Control</td>
<td>1. Pre</td>
<td>54.33</td>
<td>49.13</td>
<td>52.66</td>
<td>50.40</td>
<td>50.66</td>
<td>48.46</td>
</tr>
<tr>
<td></td>
<td>2. Post</td>
<td>54.20</td>
<td>46.40</td>
<td>52.26</td>
<td>49.66</td>
<td>49.46</td>
<td>48.60</td>
</tr>
<tr>
<td>Groups</td>
<td>Pre-Post</td>
<td>Self Adjustment</td>
<td>Home Adjustment</td>
<td>Social Adjustment</td>
<td>School Adjustment</td>
<td>Physical Adjustment</td>
<td>Personality Total Adjustment</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>-------------------</td>
<td>---------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Treatment</td>
<td>Pre</td>
<td>44.60</td>
<td>44.93</td>
<td>42.40</td>
<td>39.40</td>
<td>.52.26</td>
<td>43.33</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>46.46</td>
<td>48.60</td>
<td>46.26</td>
<td>47.80</td>
<td>54.13</td>
<td>47.53</td>
</tr>
<tr>
<td>Control</td>
<td>Pre</td>
<td>43.13</td>
<td>49.66</td>
<td>42.93</td>
<td>39.46</td>
<td>60.26</td>
<td>45.40</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>48.26</td>
<td>53.13</td>
<td>49.20</td>
<td>43.20</td>
<td>59.80</td>
<td>48.66</td>
</tr>
</tbody>
</table>
that teachers may generally view children as improving in behavior as the school year progresses.

An interesting difference between parents and teachers on the Cassel scales is in the area of school adjustment. The parents indicated a significant change on this scale whereas the teachers did not. The children may have talked more about their school behaviors at home or the parents in changing their attending behaviors toward their children may simply have heard more of what the children were saying. It is also possible that the children became more enthusiastic toward school and home activities as a result of the DPC program or as a result of the side effects or the extra-conditioning variables as Brown (1975) calls them.

In summary, the Walker and Cassel scales indicate that stimulus generalization effects did occur for this group of children as a result of the Directive Parental Counseling program.

The Bristol scale did not yield significant results due to several zero scores and many qualifying comments by teachers. Stott (1970) developed the scale to measure the social adjustment of children and more specifically he designed it to assess behavior disturbances in children within a school setting. Unlike the Walker and Cassel scales, however, there is no weighing for severity on the items in any category on the Bristol scales although some behaviors are clearly more deviant than others. For example, "Too timid to stand up for himself/herself or even to get involved in an argument." and "Attacks other children viciously." are both weighted with a score of one. There-
fore, an important difference between the Walker and Cassel scales and
the Bristol scale is that on the Walker and Cassel, the items are
weighted whereas on the Bristol they are not. That is, a teacher may
clearly see the weight of the behavior she or he is checking for a
child on the Walker or Cassel. On the Bristol, however, the choice
is all or none. There were moreover, many zero scores for many children in the treatment and control groups for the scales on the Bristol.
Therefore, the results could not be analyzed. It appears that for the
Bristol to be an effective measuring instrument, either a much larger
group would need to participate in the study or perhaps a more severely
disturbed group.

The responses from the Walker and Cassel scales indicate both
response generalization and stimulus generalization effects in this
study. Parents and teachers did have some overlap in their perceptions of the children; both saw significant improvement in immature
behavior and both indicated improvement in general personality adjust-
ment.

The stimulus generalization effect is in itself something of a
phenomenon. Wahler (1972) takes a pessimistic view of stimulus
generalization and considers it an unlikely possibility. He reasons
that a child's behavior is situation specific because it is an impor-
tant function of environmental contingencies. Therefore, parents and
siblings set contingencies in the home whereas teachers and peers set
contingencies in the school. Wahler therefore expects generalization
in the home but not in the school for a home based program. He has
evidence to support his viewpoint (Brodsky, 1969; Wahler, 1969).

Some authors (Mash & Terdal, 1976) believe that if behavioral intervention takes place in one environment, the transfer of that behavior change to other settings cannot be assumed unless there is some kind of comparability across settings. However, the concept of comparability becomes a very complex issue according to Mash, Hammerlynck and Handy (1976).

Some failure to generalize or even some "contrast effects" have been found by Johnson et al., (1976). This data suggests that improvements in the home coincide with decrements in school behavior. No such "contrast effects" were found in this study.

Kazdin and Bootzin (1972) believe that stimulus generalization does not occur in most behavior modification programs. They are of the opinion that behavior changes are usually restricted to the specific setting in which the program took place. They do admit, however, that generalization of behaviors across settings has been reported (Bennet & Maley, 1973; Walker & Buckley, 1972). This study can be added to those in which transfer of training does occur across settings.

Conway and Bucher (1976) believe that the concepts of response generalization and stimulus generalization are important issues for any change agent. To them questions of transfer of behavior change include the covariations among target and non-target behaviors as well as the behavior change across settings. This study verified unprogrammed generalization change across settings. The changes are not all significant, but some are and the others tend toward improvement
in comparison with a control group.

The power of the DPC program may lend to transfer of effects within and across settings. Also Mash, Hammerlynck and Handy (1976) theorize that a self-controlling strategy may develop within the individual child whereby he or she transfers the strategy across many settings and/or behaviors. This is a cognitive-mediational approach that may be taught or programmed or may just be learned by some children quite naturally. In this sense, the person changes and in turn alters the environment following the internal changes. These are certainly areas open for further investigation. The child somehow becomes the source of individual control rather than an external agent in a specific situation (Kazdin, 1975).

Generalization over time or response maintenance effects were found in this study according to The Patterson Improvement Rating Scale (Brown, 1975). Response maintenance demonstrates that the DPC program in addition to changing target and other behaviors can also in some way help to maintain these behaviors over time. There is speculation as to why behaviors remain changed over time. It is believed that additional reinforcers which result directly from the child's behavior may themselves maintain the behavior, again, the self-controlling theory. Many behaviors may themselves become self-reinforcing because of the added positive attention, accomplishment, activity, and/or interaction that occurs for the child (Kazdin, 1975). Also, original agents such as the parents who administered the rewards in the program have somehow changed their behaviors and attitudes
following the program and act in ways to maintain the desired behaviors in the children (Patterson, Cobb, and Ray, 1973).

In this study new behaviors in the children may have become reinforcing for the children although that is a speculation. Furthermore, additional reinforcers may have become associated with the tangible reinforcers built into the DPC program. It has been demonstrated that the change agents in this study, that is, the parents, did change some of their perceptions regarding the behaviors of the children; hopefully, they will continue to reinforce in some way the desired behaviors.
CHAPTER V
SUMMARY AND CONCLUSIONS

The present research was designed to investigate the generalization effects of the Directive Parental Counseling program. A survey of the empirical and theoretical literature related to change agents and generalization effects in behavior therapy led to the formulation of the following hypotheses:

1. It was predicted that there would be a significant decrease in the frequency of targeted behavior problems between the experimental and control groups as a function of the DPC parent-training program.

2. It was further predicted that a significant response generalization effect would occur in the parents' perceptions of the behaviors of the children and their personality adjustment as measured by the Walker Problem Behavior Identification Checklist and the Child Behavior Rating Scale.

3. As a function of the DPC treatment program it was also predicted that stimulus generalization effects would occur, that is, the general behavioral improvement of the children would generalize across situations as measured by teacher perceptions. Therefore, it was predicted that significant changes would occur in the teachers' perceptions of the behaviors of the children as measured by the WPBIC, the CBRS, and the BSAG-CS.
Nine staff members from local service agencies acted as the parent-trainers in this study. The counselors were most cooperative throughout the program and remarked many times that the training procedures helped them to work with people more effectively in a variety of ways in addition to the specific DPC program. The counselors were very conscientious, reliable, and creative people. They were trained in the DPC principles over a four-month period by a consultant-trainer. Total training time was approximately 18 hours. The counselors in turn presented the DPC program to families over a ten to fifteen week period. Total time for family training was approximately 20 hours. This method of intervention is a model that helps to save time and expense in the area of mental health services. One highly trained consultant helps staff agency members to learn a specific behavioral program involving many learning principles. The staff agency members in turn share this program with many families. This service delivery method helps to meet the mental health needs of the time (Salzinger, Feldman, and Portnoy, 1970; Sloop, 1975). This study is also generalizable to applied clinic settings because of the above noted procedures.

The results of the study indicate that something happened in the home and school setting by virtue of the fact that parents went through the Directive Parental Counseling program.

1. Target behaviors of the experimental children were significantly reduced.

2. Response generalization effects occurred. Parents signif-
icantly changed their perceptions of some of the behaviors of their children in addition to the target behaviors.

3. Stimulus generalization effects occurred. Teachers significantly changed their perceptions of some of the behaviors of the children in the experimental group in the desired direction. It is assumed that the treatment children behaved in ways that indicated being more adjusted as perceived by their teachers as a result of the parent training program.

Wahler (1972) acknowledges that generalization is of central importance in most behavior-modification programs. Generalization, however, needs to be more thoroughly investigated (Conway & Bucher, 1976; Kazdin, 1976; Keeley et al., 1976; Mash et al., 1976).

This study adds support to the literature that generalization effects do occur within this behavior modification procedure. It supports some of the effects found by Brown (1975), Hyde, (1975), and Capanzano (1976) and demonstrates new effects in stimulus generalization. Significant changes occurred across situations without direct school intervention. Furthermore, the significance was reached with the use of a control group in the experimental design and thereby adds to the internal validity of the results.

The improved behaviors of the children were maintained in the treatment group in a four-month follow-up. Therefore, generalization of effects over time is also a function of the Directive Parental Counseling program. This study adds support to the immediate and long-term effects of the DPC program.
It is recommended that future research areas include the presentation of the DPC within the school system in order to assess its general effectiveness there and to see if reverse generalization effects occur. This parent-training procedure could also be used in Day Care Centers in order to assess whether or not the DPC could act as a preventive tool.

It is further recommended that other measuring instruments be investigated and used in assessing the effects of the Directive Parental Counseling Program.
APPENDIX A

MEASURING INSTRUMENTS A
DATA SURVEY FOR DPC

The following questions are to help us gather some information about your family. The information will be confidential and will not be shared with other outside persons except in the form of statistics in research reports from which all personal identification has been removed.

Name ___________________________ Age ________

Marital status - please check one:

________ single parent ________ both parents in home

Name of spouse ___________________________ Age ________

Employment - please check where appropriate:

________ husband employed ________ wife employed

Please indicate approximate level of income ________ per year.

Please indicate years of schooling completed:

husband ________ wife ________

Number of children in the home ________

Ages of children ____________________________

Age of child in the DPC program ________ Sex ________

Grade in school ____________________________

Number of rooms in the house ________

Number of people living in the home ____________________________

(relatives, roomers, friends, etc.)
TARGET BEHAVIOR DATA SHEET

Name of child ___________________________ Date ___________________________

Target behavior: Aspect 1
Behavior you want to decrease ___________________________

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
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</tbody>
</table>

Please mark the week that the program went into effect by placing a check mark before that week. Thank you.
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WALKER PROBLEM BEHAVIOR IDENTIFICATION CHECKLIST
REVISED 1976
BY HILL M. WALKER, PH.D.

PUBLISHED BY
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THE CHILD BEHAVIOR RATING SCALE
BY
RUSSELL N. CASSEL, ED.D.

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1970 EDITION
BY D.H. STOTT AND N.C. MARSTON


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APPENDIX C

PROBABILITY RESULTS
## PROBABILITY RESULTS

### Walker Problem Behavior Identification Checklist

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<tr>
<th>Scale</th>
<th>Pre-Test Score Differences</th>
<th>Fisher Exact Probabilities</th>
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<tr>
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<td>Pre-Post-Test Change</td>
<td>Home Results</td>
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<tr>
<td>2. Withdrawal</td>
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<td>.286</td>
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<tr>
<td>3. Distractibility</td>
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<td>.028</td>
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<td>4. Disturbed Peer Relations</td>
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<td>5. Immaturity</td>
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<td>6. Total score</td>
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### Cassel Child Behavior Rating Scale

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<tr>
<td>2. Home adjustment</td>
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<tr>
<td>3. Social adjustment</td>
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<td>4. School adjustment</td>
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<td>.011</td>
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<tr>
<td>5. Physical adjustment</td>
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<td>6. Personality total adjustment</td>
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<td>.058</td>
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### Walker Problem Behavior Identification Checklist

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<td>.097</td>
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<tr>
<td>3. Distractibility</td>
<td>.058</td>
<td>.160</td>
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<tr>
<td>4. Disturbed Peer Relations</td>
<td>.221</td>
<td>.291</td>
</tr>
<tr>
<td>5. Immaturity</td>
<td>.160</td>
<td>.047</td>
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<tr>
<td>6. Total score</td>
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<td>.053</td>
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</table>

### Fisher Exact Probabilities School Results

### Cassel Child Behavior Rating Scale

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<td>1. Self-adjustment</td>
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<td>2. Home adjustment</td>
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<td>3. Social adjustment</td>
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<td>4. School adjustment</td>
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</tr>
<tr>
<td>5. Physical adjustment</td>
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<td>.266</td>
</tr>
<tr>
<td>6. Personality total adjustment</td>
<td>.266</td>
<td>.058</td>
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</tbody>
</table>
APPENDIX D

PATTERSON IMPROVEMENT RATING SCALE
PATTERSON IMPROVEMENT RATING SCALE

1. As a result of treatment your child has:

   _______ Become much worse
   _______ Become slightly worse
   _______ Not changed
   _______ Improved slightly
   _______ Improved markedly

2. In regard to the effect of this treatment, you feel:

   _______ Much more negatively toward him/her
   _______ Slightly more negative toward him/her
   _______ About the same toward him/her
   _______ Slightly more positive toward him/her
   _______ Much more positive toward him/her

3. As a result of treatment, my family has on the whole, begun to function:

   _______ Better
   _______ About the same
   _______ Words

4. On the whole, I think treatment was:

   _______ Harmful
   _______ Useless
   _______ Slightly effective
   _______ Very effective

5. The effect of treatment on my child was:

   _______ Better than I expected
   _______ About what I expected
   _______ Worse than I expected
6. As a result of treatment, my child seems:

- [ ] Less happy at home
- [ ] About the same
- [ ] More happy at home
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133


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