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A Comprehensive Treatment Program for Abusive Parents: An Exploratory Study

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A COMPREHENSIVE TREATMENT PROGRAM FOR ABUSIVE PARENTS: AN EXPLORATORY STUDY

by

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CHAPTER I

INTRODUCTION

Problem Statement

Estimates of the incidence of child abuse range from 200,000 to 500,000 (Light, 1973) to over one million children each year (O'Brien, 1980). Child abuse is a leading cause of childhood death and injury (Starr, 1979). Demographic studies (e.g., Steele & Pollock, 1968) suggest that parents who abuse their children were often abused or neglected themselves. Therefore, it is reasonable to expect that many of the present victims of abuse will become abusing parents in the future unless the cycle is broken. The need for effective interventions to reduce this pervasive social problem is obvious.

Child abuse is generally viewed as a problem with multiple causes (Goldstein, Keller, & Erne, 1985; Kadushin & Martin, 1981; Sandgrund, Gaines, & Green 1974). Several authors (e.g., Belsky, 1980; Lutzker, McGimsey, McRae, & Campbell, 1983; Wolfe, 1985) have called for a comprehensive treatment approach that addresses the multivariate nature of child abuse. Treatment modalities used in isolation often do not appear to be of sufficient strength to have a significant impact upon the behavior of abusive parents. A variety of situational demands, such as aversive child behavior and a stress-filled environment, are conditions that can precipitate child abuse. However, the great majority of

previous studies have utilized parent training alone and have not included training in other parent coping skills (Isaacs, 1982; Wolfe, 1985). According to Koverola, Manion, and Wolfe (1985), "Researchers and clinicians have acknowledged that an unknown number of abusive parents fail to benefit from these methods, due most likely to situational and individual characteristics that limit the effectiveness of structured parent training." (p. 500). In a recent review of literature related to child abuse treatment, Wolfe (1985) concluded that child abuse treatment programs should attempt to provide methods for teaching the abusive parent a variety of adaptive skills in order to better prepare him or her for diverse situational demands. Such conclusions clearly indicate that further research is needed in the development of comprehensive treatment programs for abusive parents.

The few researchers who have applied a treatment package to abusive parents (e.g., Denicola & Sandler, 1980; Egan, 1983; Koverola, Elliot-Faust, & Wolfe, 1984) have had difficulty differentiating specific effects of various components because of limitations in their experimental design. The inability to identify the efficacy of each treatment component hinders further refinement of treatment packages. Therefore, components of such treatment packages in future studies should be presented in a systematic, controlled manner so that the relative effect of each phase of treatment can be more easily discerned.

Results of previous studies indicate that many abusive parents lack child management and stress management skills (Wolfe, 1985). Whereas child management training has been the major treatment in many studies, stress management skills have received less attention among investigators. Reduction of stress would appear to be an appropriate intervention for a number of reasons. Compared to nonabusive parents, abusive parents have been found to face greater stress as measured by life change scores (Justice & Duncan, 1976), to exhibit greater physiological responses to stressful child-related stimuli (e.g., Wolfe, Fairbank, Kelly, & Bradlyn, 1983), and to respond with higher ratings of annoyance to aversive stimuli (Bauer & Twentyman, 1985). Several studies have found stress to be a precipitating factor in child abuse (Miller & Myers-Walls, 1983). Koverola et al (1984) stated, "It is increasingly evident that more attention must be focused upon factors...that may impede the parent's ability to learn and use appropriate childrearing skills and to maintain self-control (p. 187)...Relaxation procedures...seem well-suited for teaching self-control skills that counteract frustration and intolerance and potentiate the value of parent training." (p. 191). According to Wolfe (1985), among the several behavioral dimensions of abusive parents that merit assessment and evaluation are teaching the parents child management skills as well as coping strategies, such as "relaxation, stress management, or in vivo desensitization" (p. 477). These recommendations, along with evidence that

abusive parents experience heightened stress, indicate that inclusion of stress management strategies in a comprehensive treatment package is warranted. Relaxation training has been incorporated into treatment packages for abusive parents by some researchers (e.g., Barth, Blythe, Schinke, & Schilling, 1983; Denicola & Sandler, 1980; Egan, 1983). In the few studies which have employed relaxation training, however, methodological problems have existed. The parents have typically participated in only a limited number of brief progressive relaxation training sessions. Also, no data have been provided to demonstrate that the parents actually learned the relaxation skill or, equally important, utilized this skill in their home setting. Therefore, although relaxation training has been used in the treatment of child-abusing parents, there is no evidence that the parents actually learned to relax or that they generalized the skill beyond the artificial training environment.

Although desensitization of parents to aversive child behavior has been suggested as an additional stress management treatment for child abusers (Wolfe, 1985), this technique has yet to be applied to abusive parents in a controlled study. Systematic desensitization (Wolpe, 1958, 1982) would appear to offer potential benefits for abusive parents because it could allow parents to remain relaxed in the presence of disturbing child behavior.

A third intervention which merits inclusion for the management of stress is cognitive modification. This method

has been shown to be an effective coping technique for controlling anger (Novaco, 1976) and has been included in the treatment of abusive parents (e.g., Denicola & Sandler, 1980). However, because cognitive modification has been applied simultaneously with other forms of treatment, the specific effect of this coping method upon abusive behavior is unclear, but deserves further examination.

In summary, because child abuse has been shown to have multiple causes, the need for a multimodal treatment approach for abusive parents has emerged. While child management training has been used in many studies, training in stress management skills, identified by researchers as a deficiency among many abusive parents, has received limited attention in previous studies or has been applied under inadequately controlled experimental conditions. Further research is needed regarding the development of a comprehensive treatment program for abusive parents, including training in stress management as well as child management skills.

Purpose and Objectives

The goal of this research project is to develop and test a method for modifying abusive parent behavior by offering training in a combination of skill areas, including stress management and behavior management techniques. The central research questions to be addressed are: 1) Will the combined effects of the treatment package decrease self-reported abusive verbal and/or physical behavior exhibited by parents

with a history of child abuse?, and 2) Will specific components of the treatment package have differential effects upon abusive parent behavior? Specific research questions are whether the intervention package will result in (a) a decrease in the frequency of the parent's self-reported negative physical contacts with the child(ren), (b) an increase in self-reported positive verbalizations and/or a decrease in negative or abusive statements during parent-child interactions, (c) an increase in the parent's ability to relax in laboratory conditions and at home in the presence of the child(ren) (d) a more positive parental attitude toward the child(ren), and (e) a decrease in the frequency of the parent's abuse-related contacts with local service agencies.

Definition of Child Abuse

Definitions of child abuse vary among researchers. Part of the difficulty in defining child abuse is the fact that there are many forms of abuse, including physical assault and emotional and sexual abuse (Starr, 1979). Also, conceptual problems arise because abuse is a behavior which falls along a continuum of parent-child relationships (Burgess & Conger, 1978). At one end of the continuum are seemingly mild forms of discipline, including verbal threats and typical forms of physical punishment (e.g., spanking). At the other end are forms of physical punishment which clearly exceed community standards, such as hitting a child with a closed fist or

scalding a child with hot water. It is not always clear where a particular case should be placed on this continuum or at what point on the continuum "discipline" ends and "abuse" begins. The frequency and intensity with which disciplinary action is carried is another difficult factor to define. Persistent exposure to verbal ridicule may be more harmful to a child than a single brutal physical incident. All these factors add to the difficulty of creating a clear and specific definition of abuse.

According to O'Brien (1980), the Child Abuse Prevention and Treatment Act (PL93-247) provides a general definition of child abuse: "Physical or mental injury, sexual abuse, negligent treatment or maltreatment of a child under the age of 18 by a person who is responsible for the child's welfare under circumstances which indicate that the child's health or welfare is harmed or threatened" (p. 9). This definition combines child neglect along with physical, psychological, and sexual abuse. For the present study, a more specific definition offered by Burgess & Conger (1978) was adopted: "Child abuse refers to nonaccidental physical and psychological injury to a child under the age of 18 as a result of acts perpetrated by a parent or caretaker" (p. 1163). This definition allows a distinction to be made between abuse and neglect, which refers to endangering a child's well-being by lack of care or supervision. Another reason for selecting this definition was the inclusion of psychological injury in the concept of abuse. This aspect of

the definition is important because of the "tendency to dramatize the bizarre and gruesome occasions of physical violence at the expense of more subtle forms of verbal punishment" (Burgess & Conger, 1978, p. 1163).

CHAPTER II

REVIEW OF RELATED LITERATURE

Child abuse has been shown to have a variety of causes, including poor parenting skills (Bousha & Twentyman, 1984; Sandler, Van Dercar, & Milhoan, 1978; Spinetta & Rigler, 1972), the parent's inability to moderate high levels of stress (Koverola et al., 1985; Wolfe et al., 1983; Wolfe, 1985), and the parent's inability to control anger impulses (Nomellini & Katz, 1983; Steele & Pollock, 1968).

Researchers have shown that training abusive parents in child management skills can reduce aversive behavior (cf, Isaacs, 1982). For example, Crozier and Katz (1979) demonstrated that providing abusing parents with improved child management skills resulted in reduced aversive behaviors from the child (e.g., crying, noncompliance) and the parent (e.g., negative commands and painful physical contact). These results indicate that interventions aimed at modifying overt parent behavior can reduce child abuse. However, the treatment effect in many child-management studies has been only moderate, has failed to increase positive parent-child interaction, and/or has not been maintained after treatment is terminated (Isaacs, 1982).

Recently, a number of investigators (e.g., Egan, 1983; Goldstein et al., 1985; Koverola et al., 1984; Koverola et al., 1985) have suggested that training in multiple skills, including stress management and anger control, is necessary in the treatment of child abuse. According to Egan (1983),

"Since even skillfully applied child management techniques fail at times and since, even under the very best of conditions, child rearing can be stressful, it makes sense to intervene on more than one level." (p. 299). The application of stress management techniques to abusive parents is warranted based on previous research findings. Abusive parents have been found to face greater stress as measured by life change scores (Justice & Duncan, 1976). A higher level of stress-related symptoms such as depression and health problems also have been reported by this population (Wolfe & Manion, 1984). Numerous studies have shown that normal parents exhibit increased levels of physiological arousal (e.g., increased heart rate and electrodermal response) when presented with aversive child-related stimuli (e.g., Donovan, Leavitt, & Balling, 1978; Frodi, Lamb, Leavitt, & Donovan, 1978; Leavitt & Donovan, 1979; Wiesenfeld & Klorman, 1978). In studies comparing abusive and nonabusive parents, the abusive parents have exhibited greater physiological responses to stressful child-related stimuli. Wolfe, Fairbank, Kelly, and Bradlyn (1983) presented videotaped scenes of stressful parent-child interactions to abusive and nonabusive mothers. Physiological data indicated that the abusive mothers showed higher electrodermal responses during stressful scenes than the nonabusive subjects. According to the authors, a parent experiencing increased physiological arousal may become "more capable of abusive acts that might not occur if the individual were relaxed" (p. 369). This

statement is supported by other research (e.g., Berkowitz, 1974; Rule & Nesdale, 1976) which indicated that aggressive responses are more likely to occur when physiological arousal is increased (e.g., by excessive physical exertion) in the presence of an aversive stimulus.

Related studies have shown that abusive parents not only exhibit greater physiological responses to aversive child stimuli, but also maintain elevated levels for longer periods of time than nonabusive parents. Frodi and Lamb (1980) found heart rate and the skin conductance response to be greater among abusive mothers in comparison with nonabusive mothers when presented with videotaped scenes of a crying infant. Furthermore, when viewing smiling infants, the abusive subjects did not relax like nonabusers, but maintained an elevated level of physiological arousal, as indicated by higher diastolic blood pressure and skin conductance levels. Also, self-reports of the participants indicated that abusers rated the infant stimuli as more aversive than nonabusers. Frodi and Lamb urged further studies to explore the link between physiological arousal and behavior patterns of abusive parents.

Recently, Bauer and Twentyman (1985) provided evidence indicating that abusive mothers are hyperresponsive to a variety of situations. Audiotaped stressful stimuli, including prolonged infant crying, were presented to abusive, neglectful, and comparison mothers. Annoyance ratings (as measured by adjustments on a sliding lever) showed that

abusive mothers responded with greater intensity (higher peaks of lever movements) and with higher ratings (overall average of lever displacements) than other subjects to both child-related and nonchild-related aversive stimuli. In light of these results, Bauer and Twentyman suggested that stress reduction techniques be used as a form of treatment for abusive mothers.

This study is designed to provide further information concerning the link between physiological arousal and the behavior patterns of abusive parents. As stated above, abusive parents exhibit greater physiological arousal than nonabusers when presented with stressful child-related stimuli. It follows that the development of an effective stress-reduction technique for abusive parents could provide a valuable intervention for the treatment of child abuse. Additionally, stress reduction might make parents more receptive to complementary modes of intervention, including child management training and the modification of parent self-statements. One of the difficulties with abusive parents is overcoming their negative attitude toward their child(ren) to a degree that they are motivated to learn and apply behavior management techniques. Relaxation and systematic desensitization are seen as ways of neutralizing the stimuli emitted by the child(ren) of abusive parents, thus motivating them to provide positive reinforcement to the child(ren) as one form of behavior management.

Stress management techniques have been applied to abusive parents in a small number of studies. Koverola, Elliot-Faust, and Wolfe (1984) treated a single mother with a combination of parent training, deep muscle relaxation, imaginal desensitization, and anger-control techniques. However, the interventions were applied as the client's needs became apparent, rather than in a systematic, controlled manner. Therefore, results of the treatment were not clear. According to the authors, the purpose of the article was to highlight critical problems frequently encountered when providing services to abusive and multi-distressed families. They concluded that parental deficits in coping abilities present a major challenge to the delivery of services to such families, and can interfere with the parent's ability to successfully apply child management techniques.

Denicola and Sandler (1980) provided training in child management and self-control skills for two abusive mothers. Self-control training, designed to improve the parent's ability to deal with stress, included progressive relaxation with mental imagery, modification of self-statements, and stress inoculation procedures. Results indicated improved family interactions (fewer aversive and more positive behaviors) for both subjects, as measured by changes in self-report data and observed parent and child behavior. However, the researchers were unable to distinguish the relative effects of either treatment method, since parent and child aversive behavior declined rapidly after the first treatment

session and remained low for both parents and in both types of training procedures. The treatments were presented in a two-variable withdrawal design, so that the two forms of treatment overlapped during six of the 12 training sessions. Specific training effects may have been more descernible if a multiple baseline or A-B-A-B experimental design been employed, as suggested by Isaacs (1982). Also, there was no evidence to confirm that the parents learned the coping skills that were presented during training sessions. A competency measure of the newly acquired skills would have strengthened the investigation. Without such data, it is impossible to know whether the immediate decrease in aversive behavior was a function of subject expectancy or other uncontrolled variables. Further, no data were reported regarding changes in the occurence of physical or verbal abuse during the course of the study.

The effects of a child management and stress management treatment package for abusive parents was examined by Barth, Blythe, Schinke, and Schilling (1983). The stress management component involved a mixture of deep breathing, imagery, deep muscle relaxation, use of alternate self-statements, and self-reinforcement for effective coping. All instruction was conducted in a group format in eight training sessions over a four week period. Self-report data from paper and pencil instruments showed an overall decrease in parental anger and irritability, but no significant changes in parent-child conflicts. During a post-treatment role-play exercise,

parents showed improved parenting skills. No data were provided regarding the degree to which parents actually learned stress management skills. According to parent self-report, the treatment did not appear to decrease parent-child conflicts. Therefore, even if the parents learned new coping skills, there was no evidence that these skills were applied during parent-child interactions. Also, no data were provided regarding the effect of treatment on actual verbal and/or physical abuse.

Egan (1983) placed abusive parents in one of four groups for treatment: child management, stress management, combination of child and stress management, and a control group. The stress management component included training in progressive relaxation and cognitive restructuring skills. The treatment groups received 12 hours of instruction in six two-hour meetings. Data were collected by questionnaires, a structured role play situation, and a 10-minute behavior observation of parent-child interactions. Results indicated small but statistically significant differential training effects. For example, parents in the child management group showed an increased use of positive reinforcement with their child whereas parents from the stress management group reported a more positive feeling toward their child and exhibited an increase in positive verbal statements. The combination group showed similar changes, but was not superior to either of the other two treatment groups on any measure. The author pointed out that the combination group

had only three sessions of the child component and three sessions of the stress component, which could be an explanation for the group not doing better on any of the dependent variables than did the stress only and child only component groups. Egan urges that further studies be conducted which would expand the amount of time spent on each component. As in the previously described studies, no objective data are provided to indicate whether the parents in the stress management condition actually learned these skills. The brevity of treatment, particularly for the combination group, would cast doubt on the assumption that the parents were able to master the skills to a level of proficiency.

In summary, although inclusion of stress management training for the treatment of abusive parents is justified based on previous research findings, the few studies which have included a stress management component have provided unclear results, primarily due to methodological and experimental design problems. A major shortcoming has been the lack of data to indicate that the parents actually learned the new skills (e.g., relaxation) which were presented. Similarly, evidence that the parent has applied the new skills in the home environment has been absent in previous studies. Some researchers have combined a variety of techniques under the label of stress management or coping skills without measuring the effect of each specific component. Also, parents typically have participated in only

a limited number of sessions and may not have learned the skills presented to them. These problems indicate that further research in this area is warranted.

CHAPTER III

METHOD

Participants

Recruitment of Participants

A total of 13 parents were interviewed for possible participation in the research project. This group of prospective participants was recruited from four sources. The Utah Division of Family Services (DFS) referred six parents, three were recruited from ongoing therapy groups at the Logan Child and Family Support Center, one was contacted following an evaluation of her daughter at the Developmental Center for Handicapped Persons (DCHP), and three were self-referred.

Selection of Participants

Of these 13 potential subjects, three did not enter the study. One DFS-referred 17-year-old single mother was not present for a number of scheduled appointments at her home. After approximately seven unsuccessful attempts to contact her at her home, no further attempts were made and she was referred back to the DFS for alternate treatment. A second single mother was informed about the research project by a friend and expressed interest in being a participant. However, during an initial interview, it was determined that she did not exhibit significant abusive behavior to justify her inclusion in the study. She expressed concern about one of her son's behavior problems in school, but stated that she

of her son's behavior problems in school, but stated that she was not physically abusive and exhibited only infrequent verbal outbursts directed toward her sons. A third single mother was contacted following the evaluation of her daughter at the Clinical Services Program of the DCHP. Although she expressed interest in the research project, she ultimately declined to enter the study because of her more immediate need to find employment. The three parents that did not participate in the project were provided information regarding alternate services.

Description of Non-Participants

Of the 10 subjects that entered the study, six completed all phases of treatment. The four subjects that withdrew from the program after completion of part of the treatment had been referred by the DFS. The involvement of one couple that withdrew was very erratic. They participated in three child management sessions and completed only three self-report forms in a nine-week period. Appointments were routinely rescheduled because the couple was not home or they requested postponement due to apparently minor domestic or financial obligations (e.g., putting a child to bed, depositing a check in the bank). In an effort to keep the couple in treatment, data-collection requirements (home audiotaping and completion of self-report forms) were decreased and training sessions were reduced from two to one meeting per week. However, treatment was discontinued during the ninth week because the couple moved out of the state.

the ninth week because the couple moved out of the state. The data collected prior to their withdrawal from the study was insufficient to make conclusions about treatment effect.

Another subject that withdrew from the study was a single mother with three children. She completed the initial stress profile and one home monitoring session. Ten attempts were made to contact her at her home in order to complete baseline data collection and begin treatment. On the final visit to her home, the data collection instruments provided for her were found on her doorstep with an attached note stating she did not have time for further participation in the project.

The fourth subject to withdraw was a single mother with a history of child and alcohol abuse. She completed the initial stress profile session and four relaxation training sessions. Prior to her withdrawal from the study, the parent reported that she was feeling overwhelmed with financial, domestic, and legal obligations and that the time required for participation in the study was creating additional stress. Despite reductions in data-collection requirements and the frequency of training sessions, she withdrew from the project. During her 10 weeks of participation, she had spent 10 days in jail on a DWI offense and was court-ordered to attend weekly alcohol and drug counseling sessions. The data collected prior to her withdrawal from the study indicated an improved ability to relax and an absence of self-reported verbal or physical abuse.

In summary, the 13 subjects referred for possible participation in the study comprised 10 families: three couples and seven single mothers (Table 1). Family size ranged from two to seven members; each family had an average of 2.3 children. The ages of children ranged from less that 1 year to 11 years. Of the 10 families, six had automobiles and only three had telephones in their homes (see Table 2). Many of the subjects appeared to have difficulty coping with financial and/or domestic demands.

Description of Participants

Six parents participated in the study. Subject 1 was a 29-year-old single mother with an 11-year-old son in the home and a 10-year-old daughter living out of the state under the custody of a relative. Her principle means of financial support was governmental assistance programs. This subject had been married and divorced twice. In 1979, she participated in one year of court-ordered individual therapy based on charges of child abuse. It was her opinion, however, that the treatment had been relatively ineffective. Prior to enrollment in the present study, the subject was participating voluntarily in group therapy for abusive parents at the Logan Child and Family Support Center. She volunteered for this study, stating that she "gets physical" with her son and frequently experiences "uncontrollable anger" in the home. During the course of treatment, the subject experienced significant stressors, including major

Table 1

Characteristics of Parents Interviewed for Participation in Study

Age	Sex	Marital Status	Phone	Car	Referral Source	Status of Participation
17	F	Single	No	No	DFS	Did Not Enter
30	F	Divorced	No	Yes	Self	Did Not Enter
27	F	Divorced	No	No	Self	Did Not Enter
26	M	Married	No	Yes	DFS	Dropped Out
27	F	Married	No	Yes	DFS	Dropped Out
30	F	Divorced	No	Yes	DFS	Dropped Out
28	F	Divorced	No	Yes	DFS	Dropped Out
29	F	Married	Yes	Yes	Self (Parent's Anon.)	Completed
34	F	Married	Yes	Yes	Self	Completed
35	M	Married	Yes	Yes	Self	Completed
26	F	Separated	Yes	Yes	DFS	Discontinued (Moved)
29	F	Divorced	No	No	Self (Parent's Anon.)	Completed
27	M	Married	Yes	Yes	Self (Parent's Anon.)	Completed

Table 2

Comparison of Availability of an Automobile and Telephone Among Families that Declined to Enter, Withdrew, or Completed Training

	SUBJECTS		
	Did Not Enter (3)	Entered, Then Withdrew (4)	Completed (6)
Automobile	1	3	5
Telephone	0	0	5

surgery during the sixth week and involvement in an ongoing child custody dispute regarding her daughter.

Subjects 2 and 3 were a couple who volunteered for participation in the study. They had obtained information about the research project from acquaintances at the Logan Child and Family Support Center. Five children were in the family, ages 9, 7, 3, and twins at age 2. Both the father, age 34, and the mother, age 35, had graduated from college. Throughout the study, the father was employed on a full-time basis and the mother was a homemaker. They reported experiencing extreme stress related to interactions with their children. Although these parents did not have a documented history of child abuse, self-report data from the baseline period indicated a sufficiently high number of verbal criticisms and negative physical contacts to warrant participation in the study.

The fourth subject was a 26-year old female with three children, ages 5, 3, and 1. She was referred for participation in the study by the Division of Family Services (DFS) because of self-reported verbal and physical abuse of her children. This subject had been separated from her husband for approximately three months prior to entering the study. She reported she had been physically abused as a child. She had not previously participated in a treatment program for abusive parents. This woman withdrew from the program after approximately 2 1/2 months and was unable to be located in order to complete treatment.

Subjects 5 and 6 were recruited from an abusive parent therapy group (Parent's Anonymous) at the Logan Child and Family Support Center. This family was composed of five members: father, age 27, mother, age 29, two boys, ages 4 and 1, and a 3-year-old girl. One year prior to entering the present study, the father had been reported to the DFS by his wife because of physical abuse of herself and all three children. A second anonymous report of paternal child abuse, observed in a public setting, was recorded shortly thereafter. The mother reported that she had been verbally abusive with her children at times, but had not been physically abusive. These parents were required by the DFS to attend group therapy. After eight months of participation in group treatment, the parents decided to enter the research project. At the time of treatment, the mother was a homemaker and the father was employed outside the home. During their five-year marriage, the husband had been employed at six different jobs, having been released on at least three occasions.

Setting and Equipment

The study was conducted in three settings. The initial interview, the preliminary measurement of the participant's baseline level of physiological functioning on specific parameters, and two training components (relaxation and systematic desensitization) were conducted in a laboratory on the Utah State University (USU) campus. The laboratory room,

approximately 8' X 11', contains a comfortable recliner chair, instruments for detecting and recording the participant's physiological state (including peripheral skin temperature [ST], electrodermal response [EDR], electromyogram [EMG], and heart rate [HR]), and various accessory items for attaching electronic sensors to the participant.

A portion of the treatment and data collection took place in each participant's home. Child management and cognitive modification training sessions were conducted in the home settings.

Due to practical considerations, there were two exceptions to the foregoing training settings. First, subject 1 completed relaxation training in a room of the Child and Family Support Center. This location was selected because it was close to her home and she did not have transportation to the University. Second, subjects 5 and 6 received all training sessions in their home because of difficulty locating and paying for a babysitter. Relaxation and desensitization training was conducted in a guest bedroom by transporting necessary instruments to their home for each training session.

Five instruments were used to measure physiological changes. Muscle tension was measured with the EMG 100T, an electromyogram manufactured by Thought Technology Limited of Montreal, Canada. Peripheral skin temperature was measured with the Autogen 1000 Feedback Thermometer, manufactured by

Autogenic Systems, Inc., of Berkeley, California. Electrodermal response was measured with the Autogen 3000 Dermograph produced by Autogenic Systems, Inc. Heart rate was measured with the HR/BVP 100T, made by Thought Technology Limited. Also, in the home setting, skin temperature was monitored with a Biotic Band II from Bio-Temp Products, Inc., of Indianapolis, Indiana.

Interventions

Four modes of treatment were provided: relaxation training, systematic desensitization, child management training, and cognitive modification. Treatment sessions were conducted during two 45-minute sessions each week. The length of treatment ranged from 17 to 23 weeks.

Relaxation Training

All parents participated in eight sessions of autogenic relaxation exercises (Schultz & Luthe, 1969). The autogenic method entails the regular practice of standard exercises designed to produce subjective sensations of relaxation, such as heaviness and warmth, while the subject maintains a passive attitude. Actual measurable physiological changes are produced with this method. Cognitive strategies such as visual imagery and self-statements are components of this relaxation method. Through the practice of these exercises, participants often come to recognize the influence of cognitive activity upon subsequent behavior. Therefore, one

rationale for selecting autogenic training was its similarity to the methods used in the cognitive modification techniques taught during a separate phase of the treatment package.

Each session was composed of a five minute baseline, three "sets" of relaxation exercises, and a five minute final baseline. Components of each exercise included a body check, deep breathing, mental imagery, silent repetition of a specific formula (e.g., "My right arm is heavy"), and a brief termination sequence. Some modifications of the standard autogenic exercises, as presented by Jencks (1979), were incorporated into the training sequence. A detailed description of the relaxation training procedures is provided in Appendix B.

During each relaxation training session, self-report and physiological data were collected to monitor the participant's progress. The parent was asked to verbally rate his/her level of relaxation on a 0 to 100 scale (Very Relaxed = 0, Very Tense = 100) on five occasions: prior to the initial baseline, once after each of the three exercises, and after the final baseline. Wolpe (1958, 1982) advocated the use of the 0 to 100 scale because it allows the rater to make fine distinctions when reporting and rating subjective levels of discomfort.

Physiological data also were recorded every 30 seconds during the training sessions. The specific physiological parameter monitored for each subject was determined by the

results of a stress profile conducted prior to initiation of training (this procedure is described later).

As an adjunct to laboratory training, participants were intructed to practice relaxation daily at home. A relaxation diary (sample in Appendix B) was provided as a motivator and to monitor each participant's progress.

Systematic Desensitization

The theory of systematic desensitization (Wolpe, 1958, 1982) specifies that a person cannot be relaxed and physiologically aroused at the same time. The intent is to expose the relaxed participant to disturbing stimuli that are not of sufficient strength to disrupt the relaxed state. If the exposure is repeated several times, the stimulus progressively loses its ability to evoke physiological arousal. Systematic desensitization also involves the construction of a hierarchy of stimuli arranged in sequence from the least disturbing to the most disturbing, based upon the participant's subjective rating of discomfort that accompanies each stimulus. Stimuli in the hierarchy should be selected so that the level of disturbance from one item to the next increases by small increments that are equal throughout the hierarchy. The rating scale of 0 to 100 enables the subject to make fine gradations during the hierarchy construction process. The number of trials at each step on the hierarchy varies depending on whether the participant remains relaxed or exhibits tension. When the

individual no longer exhibits tension at one step in the hierarchy, the process is repeated at the next step.

This phase of treatment was initiated upon completion of the eight relaxation training sessions. Before desensitization sessions began, an anxiety hierarchy was constructed.

Constructing the anxiety hierarchy. The hierarchy for each parent was composed of 10-second segments selected from home audiotapes. The hierarchy was constructed in two steps which are described in greater detail in Appendix C. First, a pool of samples was systematically selected from home audiotapes. Second, the samples were presented to the subject who provided a subjective rating of discomfort for each sample. These ratings allowed for the subsequent construction of a hierarchy of 10 items arranged in order from least to most stressful, based upon the subject's self report.

Conducting systematic desensitization sessions. Prior to conducting the first session, data from the subject's previous relaxation training sessions were examined to determine the lowest SUDS rating. This value became the criterion for relaxation during the desensitization procedure. Throughout the desensitization sessions, SUDS ratings that exceeded this criterion required that the subject relax further before proceeding with stimulus presentations.

Eight systematic desensitization sessions were conducted for each subject. Each session followed a standardized format. First, the subject was connected to the previously selected biofeedback instrument. Next, he or she was given instructions similar to the following:

> After you have relaxed, I am going to play segments of your audiotapes. As we did last time, when you hear the tape, try to imagine the scene as clearly as you can. I will be asking for SUDS ratings before and after the tapes. Sometimes you may hear the same tape more than once. Just try to be aware of your breathing, muscle tension, or other physical reactions as you listen to the tapes.

The subject then was instructed to proceed through autogenic exercises in a manner similar to the relaxation training sessions, including provision of SUDS ratings after each set. Physiological data and SUDS ratings were recorded like that which occurred during relaxation training sessions. Relaxation exercises were continued until the subject reported a SUDS rating equal to or below the SUDS criterion value. If the criterion had not been met after three sets of autogenic exercises, the subject was encouraged to do an additional set. In the event that the SUDS criterion had not been attained after the extra set, the experimenter inquired into the subject's experiences and, when appropriate, made suggestions to aid the subject in relaxing.

When the SUDS criterion had been met (indicating the subject felt deeply relaxed), the first stimulus of the anxiety hierarchy was played. Immediately after playing the card, instructions similar to the following were given in a quiet tone of voice: "Stop visualizing that scene. How

relaxed are you now? (Subject responds with a SUDS rating). Okay, now continue to relax." A SUDS rating was requested in a similar manner immediately following each stimulus presentation. When the post-stimulus rating did not exceed the SUDS rating reported before the stimulus, the next card was played after one minute. Before presenting the next stimulus, a SUDS rating was again requested to assure that the subject had remained below the SUDS criterion. As with the first card, if the post-stimulus rating was equal to or below the SUDS rating before the presentation, the next stimulus in the hierarchy was presented after one minute, and so forth. When a post-stimulus SUDS rating exceeded the pre-stimulus rating, a similar procedure was followed except that the identical stimulus was presented again after a one minute interval. On some occasions, the pre-stimulus SUDS rating exceeded the criterion value. When this happened, the subject was instructed to relax and the next stimulus was not presented until the SUDS rating returned to a level equal to or below the criterion.

Physiological data points were recorded along with each SUDS rating. Also, a physiological data point was recorded 30 seconds after the onset of the stimulus card. This point showed the greatest deflection (in the direction of tension) of the parameter that was observed any time during the 20 seconds after the stimulus ended. The additional 20 seconds was included because some physiological parameters (e.g., skin temperature) show a gradual rather than immediate

response to stressful stimuli. The physiological data were used to assess the degree of correspondence between subjective ratings and physiological variations.

When all items in the hierarchy had been presented successfully (i.e., with the SUDS ratings remaining below the criterion), the next treatment phase was initiated.

Child Management Training

Each parent participated in eight sessions of child management training. Sessions were approximately 45 minutes in length. Participants were provided a manual entitled Parenting Packet: A Step-by-Step At-Home Approach to Changing Children's Behavior (Children's Behavior Therapy Unit, n.d.). This unpublished manual is intended as a supplement to an eight-week parenting course at the Children's Behavior Therapy Unit in Salt Lake City. Permission to use the manual was granted by William Jensen, the first author of the document. Topics presented during this phase of treatment included goal setting, principles of reinforcement, differential attention, precision commands, time out procedures, chart systems, contracting, response cost, and overcorrection techniques. At the beginning of each session, topics from the previous session were reviewed and further clarification was provided, if necessary. Also, the parent provided a SUDS rating at the beginning and ending of each session. Homework tasks were assigned for the periods between sessions. An outline of the specific topics presented during each session is provided in Appendix D. A

20-item verbal assessment was conducted during the eighth session to determine the parent's degree of understanding of child management principles.

Cognitive Modification

The fourth component of the treatment package was cognitive modification training. Techniques for this treatment were based on the principles of rational-emotive therapy (Ellis, 1984). Within this approach, undesirable behaviors and emotions are viewed as the result of unrealistic or inappropriate thoughts. Therefore, modification of the individual's cognitive state is the goal of the treatment. This treatment approach has been used to reduce stress (e.g., Meichenbaum, 1985) and to control anger (e.g., Novaco, 1976). Modification of cognitive processes has also been helpful in the treatment of abusive parents (e.g., Denicola & Sandler, 1980; Egan, 1983; Nomellini & Katz, 1983).

In the present study, three goals were identified for the cognitive modification procedures. The first goal was to enable the parent to use a cohesive, step-by-step problem-solving strategy for handling problematic parent-child situations. Second, within this strategy, the parent was assisted in identifying his/her irrational beliefs and in challenging and refuting them. Third, the parent was trained on identifying anger- and stress-producing self-statements and generating appropriate alternate self-statements to replace the dysfunctional ones. Each parent participated in

four 45-minute sessions over a two week period. During the sessions, a 7-step problem solving strategy was presented, irrational beliefs and stress-producing self-statements were identified, and methods of generating more appropriate self-statements were presented and practiced. Procedures included didactic presentations, modeling, role-playing, and completion of worksheets. Homework assignments were made at the end of each session. Also, a SUDS rating was requested from each participant before and after each session. These ratings were obtained in order to compare the parent's subjective level of tension during this phase of treatment with ratings from other phases of treatment. During the final session, the parent was presented two imaginary problem situations and requested to apply the problem-solving strategy to both of them. Included in the problem situation were irrational beliefs and dysfunctional self-statements. This procedure was conducted to assess the parent's ability to apply the problem solving strategy to probable situations. A detailed description of the cognitive modification procedures and the forms used during this phase of treatment are provided in Appendix E.

Experimental Design

A multiple-baseline across subjects design was used in this study. Single-subject designs have been recommended for clinical applications in which the treatment focuses on individual subjects (Kazdin, 1982). Isaacs (1982) suggested

that multiple-baseline designs are highly appropriate for research with abusive parents, particularly in light of the ethical and legal problems of placing abusive parents in no-treatment control groups, which may be necessary in a group experimental design. Single subject designs circumvent the problems due to the unavailability of a large population of abusing parents who are not participating in treatment and the equipment costs which increase rapidly as the experimental population size increases. Additionally, single-subject designs are appropriate for a new procedure which may require refinement before a large control-group study is warranted.

With a multiple-baseline across subjects design, treatment is introduced to each participant at a different point in time. If each individual's baseline rate changes when the intervention is introduced, and not before, the effects can be more confidently attributed to the intervention rather than to extraneous events (Kazdin, 1982).

The six parents were placed into four experimental conditions according to the order in which they entered the study (see Figure 1). Participants in conditions 1 and 2 received the same sequence of treatments (relaxation training, systematic desensitization, child management, cognitive modification) but the length of baseline differed. One week of baseline data was collected for the parent in condition 1 whereas the couple in condition 2 received two weeks of baseline. Participants placed in conditions 3 and 4

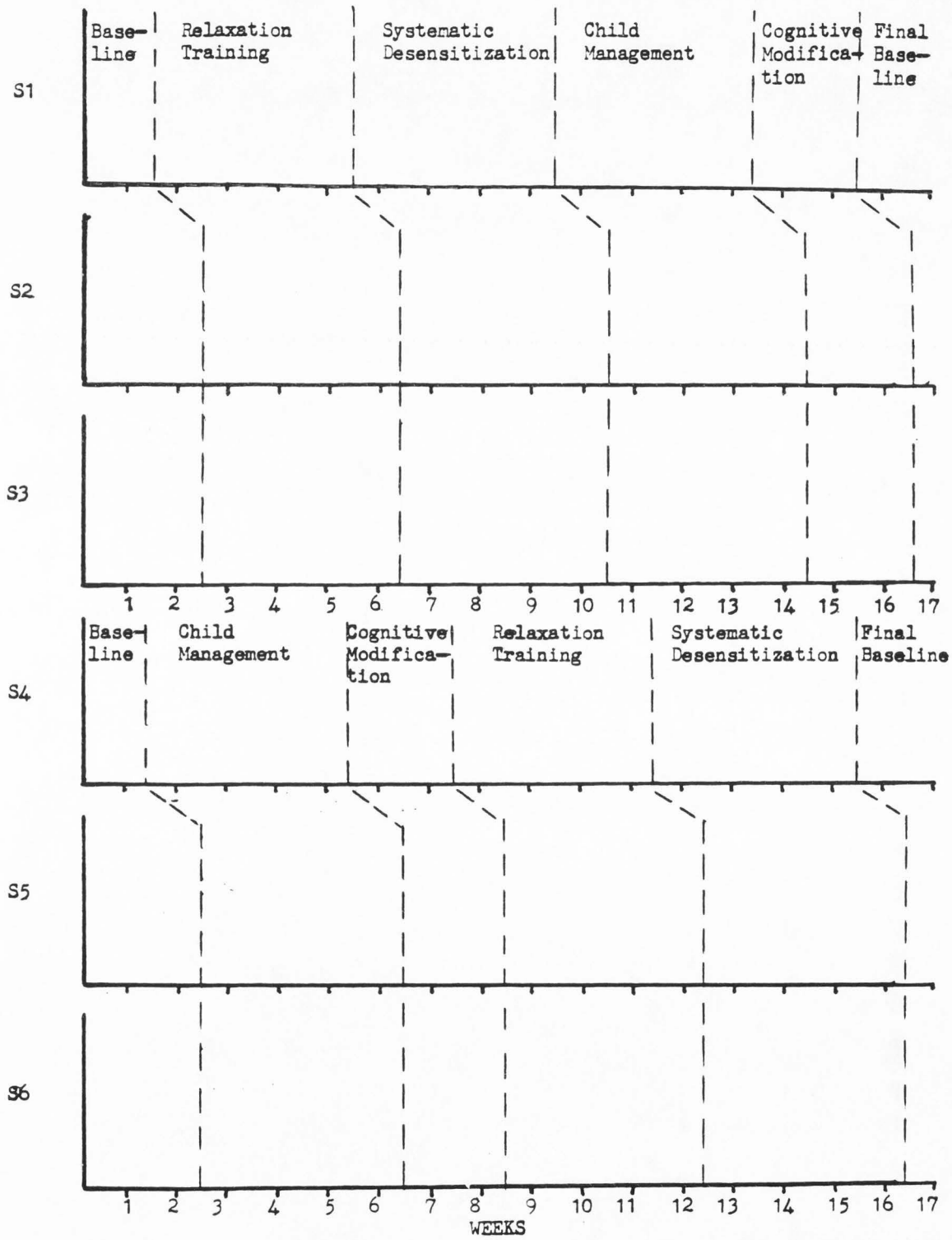


Figure 1. Multiple baseline counterbalanced experimental design.

were presented with the same treatments, but in a reversed sequence (child management, cognitive modification, relaxation training, systematic desensitization). Again, the baseline period varied from one week for the parent in condition 3 to two weeks for the couple in condition 4. By systematically varying the length of the baseline condition and the sequence of treatment, experimental control is increased.

Of the two couples, the husband and wife each completed the same sequence of treatment. This procedure was used to avoid confounding the treatment effects that may have occurred had one spouse received a different sequence than the other.

Data Collection

Three forms of data were collected: physiological, self-report, and behavioral (see Table 3). Physiological data were collected in the laboratory and in the participant's home. In the laboratory, the physiological parameter targeted during the initial stress profile session was measured and recorded at 30-second intervals during each training session in order to monitor the parent's degree of relaxation within each session and to detect progress from one session to the next (see form RT-1 in Appendix B and form SD-1 in Appendix C). Physiological data were also collected in the home with a portable instrument once a week. A research assistant brought a portable instrument to the home

Table 3.

Summary of Dependent Measures

Type	Mode of Collection	Description
Physiological	1) EMG, EDR, ST, and HR Monitors	Data collected during relaxation and systematic desensitization sessions
	2) Portable Monitor	Physiological arousal measured at home with the children present
	3) EMG, EDR, ST, and HR Monitors	Data collected during stress profiles conducted after each phase of treatment
Self-Report	1) Parent Self-Ratings	SUDS ratings (0 - 100) collected during training sessions, home monitoring sessions, stress profiles, and daily self-report forms
	2) Parent Self-Ratings	Daily ratings on a scale of 0 to 100 regarding attitude toward child(ren) during the 30-minute target period
	3) Parent Self-Ratings	Frequency of negative verbal statements and negative physical contacts with child(ren) during last 24 hours
Behavioral	1) Audiotaping	Parent and child statements were recorded at home and coded as positive, negative, and abusive
	2) Child Abuse	Frequency of child-abuse related contacts with local agencies; obtained after completion of treatment

once a week. The purpose of the home data was to help determine whether the effect of the training sessions conducted in the laboratory was generalizing to the parent's daily home routine.

A third form of physiological data was collected during stress profile sessions. Five such sessions were conducted: one before treatment was initiated and one after each of the four treatment phases. During each session, data from four parameters (EDR, EMG, HR, and ST) were collected. The same audiotape was played during each of the five stress profile sessions.

Self-report data were also collected in both the home and laboratory settings. Three variables were measured by parent self-report. First, self-ratings of relaxation (SUDS ratings) were obtained from parental verbal report during training sessions, stress profiles, and home monitoring sessions. Each participant also completed a paper-and-pencil self-report form (see Appendix F) each day at home which requested a SUDS rating during the 30-minute high-stress period. Second, the parent's attitude toward the child(ren) during the 30-minute high-stress period was reported on a 0 to 100 scale (0 = Very Positive, 100 = Very Negative). The third dependent variable measured by parental self-report was the frequency of abusive behavior exhibited toward the child(ren). The frequency of negative statements (e.g, criticisms, yelling, swearing, etc.) and the frequency of negative physical contacts (e.g., spanking, hitting, shaking,

etc.) directed toward the child(ren) during the previous 24 hours was requested on the daily self-report form.

Two forms of behavioral data were also collected. Participant's were requested to audiotape a 30-minute high-stress period at least two times each week. The high-stress period used for audiotaping had been selected on an individual basis during the initial interview for each parent. Two microcassettes a week were coded to determine the percentage of parental statements that were positive, negative, and/or abusive. Child statements and verbalizations (e.g., crying, praising) were also coded as positive or negative. For each audiotape, six behavioral categories were coded by an occurrence/nonoccurrence method during ninety 20-second intervals. The coding system used was a modified form of the Behavioral Coding System Modified for High Risk Parents and Young Children (Koverola, Edwards, & Wolfe, 1983) (see Appendix H for category definitions). Audiotapes were coded by a research assistant naive to the treatment procedures. Before the assistant had access to the audiotapes, all identifying information and dates were removed from the microcassettes. During the coding process, identification of each tape was temporarily maintained only by code numbers, selected from a table of random numbers, which were written on each tape. This precautionary procedure was conducted to assure that the research assistant would not be biased in the coding process. Reliability checks were conducted on 8% of the coded audiotapes. A

Point-by-Point Agreement Ratio was used because it is widely applied in research and is more precise than the Frequency Ratio Method, which evaluates agreement on totals rather than on an interval by interval basis (Kazdin, 1982). The average percentage of agreement between the two observers was 74%, as shown in Table 4. In a study conducted by Koverola et al (1985), an inter-rater agreement ratio of 80% was obtained with The Behavioral Coding System. This coding system was originally designed for direct observation of abusive parents and their children. The slightly lower agreement ratio in the present study is likely the result of coding interactions that were audiotaped rather than observed directly.

As an additional measure of parent behavior change, nonobtrusive behavioral data was obtained from the records of the local agency that is likely to be contacted in the event of child abuse (the Division of Family Services). The frequency of abuse-related agency contacts with the family during the previous six months was obtained from agency records and compared with agency-family contacts recorded between treatment initiation and the two-month follow-up probe.

Table 4.

Interobserver Reliability Ratios for Audiotape Coding Categories

Category	Agreement Ratio
Parent Positive	100%
Parent Negative	48%
Parent Abusive	70%
Child Positive	100%
Child Negative	52%
Neutral Interaction	74%
No Interaction	72%
Total	74%

Procedures

Preparatory Sessions

Prior to the initiation of treatment, two preparatory sessions were conducted with each participant. During the first session, treatment procedures were reviewed and the parent was given the opportunity to ask questions. A form describing all procedures, risks, and potential benefits was presented to the parent (Appendix A). Participants were informed that a medical clearance was required prior to the initiation of treatment. This voluntary consent to participate in the research project was then signed by the parent and the experimenter.

Selecting Target Home Situation

Next, the participant selected a 30-minute home situation in which problematic child behaviors typically occurred. Examples of problematic behaviors were provided, including crying at bedtime, fighting with siblings, or whining before meals. The experimenter assisted the parent in his/her selection of a target situation by suggesting the following guidelines: (a) the situation should typically occur at a similar time each day or night, (b) the problematic behavior should occur during this period at least twice a week, (c) the problematic behavior must include an auditory component (because the target period was to be audiotaped), and (d) the child behaviors which typically occurred during this period must be judged by the parent to

be stress-producing. After the stressful home situation had been identified, the parent was provided a 60-minute microcassette (30 minutes on each side), a microcassette tape recorder, a battery recharger and batteries, and a cloth pocket and belt for carrying the recorder at home. The parent was instructed to turn on the recorder during the targeted 30-minute period the next day.

Stress Profile Preparation

A stress profile was constructed during the second session. The parent returned to the laboratory with the microcassette which contained interactions recorded during the targeted stressful period. During this 20-minute procedure, physiological functions (EMG, ST, EDR, and HR) were measured during rest and while listening to the home audiotape. The parent was seated in a recliner chair and electronic sensors were attached. EMG electrodes were placed on the forehead, approximately 1-1/2 inches above the center of each eyebrow (Gaardner & Montgomery, 1981) with the ground electrode placed midway between the two recording electrodes. To measure peripheral skin temperature, a thermistor was taped on the end of the little finger (meaty portion on the opposite side of the finger from the fingernail) of the nondominant hand, as described in the manual published by Autogenic Systems, Inc.. Electrodermal response was monitored by attaching sensors to the ends of the palmar sides of the second, third, and fourth fingers on the dominant hand (Autogenic Systems, Inc., n.d.). Finally, the

index finger of the nondominant hand was placed in a photoplythysmograph which provided an ongoing measurement of the participant's heart rate. After all sensors had been attached, the parent was allowed 10 to 15 minutes to adjust to the monitors. It was explained to the participant that the instruments were battery operated and, therefore, the likelihood of shock was minimal.

SUDS Ratings

During this adjustment period, the concept of the Subjective Units of Disturbance Scale (SUDS) (Wolpe, 1982) was presented by the experimenter. The SUDS scale was described as a rating of one's level of tension on a 0 to 100 scale (0 = Very Relaxed, 100 = Very Tense). The parent was encouraged to imagine situations at each extreme on the scale (SUDS of 0 and 100) as well as situations in the low, average, and high ranges (SUDS of 25, 50, and 75, respectively). This procedure was conducted to assist the parent in identifying "landmarks" to which future SUDS ratings could be compared.

Conducting the Stress Profile

After this discussion, the stress profile procedure was conducted. The parent was asked to provide a SUDS rating and then was instructed to relax for the first five minutes. After a five minute baseline period, a second SUDS rating was recorded, then the microcassette containing home interactions was played for 10 minutes. A third SUDS rating was requested

was played for 10 minutes. A third SUDS rating was requested after the audiotape, followed by a final five minutes of relaxation and a fourth SUDS rating.

Throughout this 20-minute period, the physiological parameters (EDR, ST, EMG, and HR) were measured and recorded at 30-second intervals. These data were plotted on a graph to determine the physiological parameter which showed the strongest reaction to stimuli from the child and which was slowest to return to the baseline level after the audiotape was discontinued. The parameter to be focused on during relaxation training was determined by visual inspection of the graph to detect the greatest change in any of the four physiological parameters which coincided with the presentation of the audiotape. For cases in which no variation in physiological measures was observed, selection of the target parameter was made according to the parameter which conformed least to the following criteria of relaxation: EMG of 5 microvolts or less (Gaardner & Montgomery, 1981), ST of 90 degree or more (Autogenic Systems, Inc., n.d.), HR below 75 bpm, or EDR of 3 micromhos or less (Venables & Christie, 1980).

Initial Baseline

Prior to the beginning of treatment, data were collected for one or two weeks (the length of baseline varied according to the subject's placement in the experimental design, as described earlier). The parent completed one self-report form each day, audiotaped family interactions at least twice

a week, and had his/her selected physiological parameter monitored at home two times a week during this period.

Home Monitoring

Beginning during the baseline phase and continuing throughout the treatment, a research assistant brought a portable instrument to the family's home. Precautions were made to avoid possible ethical and/or legal complications during the home monitoring sessions. When visits to the homes of female participants were made, the male researcher was accompanied by a female research assistant. Likewise, female research assistants did not conduct home visits unless accompanied by the male researcher or both the husband and wife were in the home.

Sensors were attached to the parent during the previously selected 30-minute high-stress period while the parent continued with his/her daily routine in the presence of children. Five of the six subjects were monitored on an EDR instrument (based on their high EDR response during the stress profile). For these parents, a 30 foot extension cord was attached to the instrument so the parent was relatively free to move around the house with the sensors attached to the fingers. The research asistant remained with the instrument in an adjacent room and recorded EDR levels at 30-second intervals. Skin temperature was the targeted physiological parameter for one parent (Subject 5). She was provided a Biotic Band II which was placed on the little finger of her nondominant hand. For this parent, skin

temperature level was recorded three times during the 30-minute period: after 1, 15, and 30 minutes.

Intervention

After the completion of the initial baseline period, bi-weekly training sessions were conducted. The four treatment components were presented in the standardized formats described earlier. Throughout training, the parents continued to complete daily self-report forms, tape record interactions twice weekly, and participate in a home monitoring procedure once a week. Stress profiles were conducted after each treatment phase.

MMPI

When each parent completed the final training session, he or she was administered the Minnesota Multiphasic Personality Inventory (MMPI). Because this procedure was included in the program after training was underway, a clear message was given to the subjects that this procedure was optional. The test was completed by subjects in their homes.

Final Baseline and Follow-Up Probes

Upon completion of training, data collection was continued for one week. Procedures identical to those of the initial baseline phase were conducted. Additional data were collected at 30 and 60 days after treatment was completed. During these 30-minute follow-up probes, an audiotape was recorded, home monitoring was conducted, and the parent completed a self-report form.

CHAPTER IV

RESULTS

The primary purpose of this study was to determine if the treatment package would reduce or eliminate abusive behavior. A related goal was to detect differential effects among the various treatment modes that were applied. Because of the four treatment conditions and the variety of dependent variables, a tremendous amount of data was generated during the course of this study. It is a challenging task to present the results in a logical format that highlights the more salient points without overwhelming the reader with overly detailed, yet relevant information. Therefore, results are presented in response to the following questions. First, did the treatment package reduce abusive behavior? Second, what were the specific effects of each treatment component on abusive behavior? Next, to what extent did participants actually learn the skills and concepts presented? And, finally, were the skills maintained and did they generalize to other settings? In the following pages, these questions are addressed in the foregoing sequence, each section beginning with a summary statement followed by a more detailed examination of the data. The data presented in Tables 5-10 provide a general overview of changes in dependent variable values across treatment conditions for all subjects. Subsequent data displays are generally designed to clarify and expand on the results shown in these tables.

Table 5

Average Values of Dependent Variables Across Treatment Conditions.

	Subject # 1	Treatment Conditions							
		Baseline	Relaxation	Systematic Desensitization	Child Management	Cognitive Modification	Baseline II	Probe #1	Probe #2
Physiological	EDR: Training Sessions (micromhos)		8.0	7.7					
	EDR: Home Monitoring (micromhos)	8.6	13.0	7.7	8.6	8.7	7.3	10.8	17.0
	EDR: Stress Profiles (micromhos)	11.0	7.0	*	6.0	4.0			
Self-Report	SUDS Ratings from all sources 0=Relaxed 100=Tense	55	48	48	45	39	35	30	20
	Attitude Toward Child 0=Positive 100=Negative	44	31	15	18	7	**	5	0
	Verbal Abuse (Ave. Daily Frequency)	1.2	1.8	.4	0	0	0	0	0
	Negative Physical Contacts (Ave. Daily Frequency)	0.6	0.7	0.3	0	0	0	0	0
Behavioral (Audiotaped Statements)	Parent Positive	0%	0%	1%	1%	0%	0%	0%	0%
	Parent Negative	2%	13%	8%	11%	2%	4%	4%	4%
	Parent Verbal Abuse	0%	9%	5%	4%	0%	0%	1%	0%
	Child Positive	0%	0%	1%	0%	0%	0%	0%	0%
	Child Negative	0%	14%	8%	6%	2%	4%	0%	0%

*missing data
**data not submitted

Table 6

Average Values of Dependent Variables Across Treatment Conditions.

	Subject #2	Treatment Conditions							
		Baseline	Relaxation	Systematic Desensitization	Child Management	Cognitive Modification	Baseline II	Probe #1	Probe #2
Physiological	EDR: Training Sessions (micromhos)		7.3	6.2					
	EDR: Home Monitoring (micromhos)	9.3	4.6	7.0	8.5	5.5	6.8	7.4	6.6
	EDR: Stress Profiles (micromhos)	7.2	4.4	5.5	7.7	4.0			
Self-Report	SUDS Ratings from all sources 0=Relaxed 100=Tense	40	46	37	42	41	48	54	43
	Attitude Toward Child 0=Positive 100=Negative	38	42	46	40	38	47	43	30
	Verbal Abuse (Ave. Daily Frequency)	6.2	3.9	1.7	3.3	1.7	2.5	3.0	2.0
	Negative Physical Contacts (Ave. Daily Frequency)	2.3	1.6	0.9	1.3	0.6	0.5	0.0	0.0
Behavioral (Audiotaped Statements)	Parent Positive	1%	0%	1%	0%	0%	0%	0%	0%
	Parent Negative	7%	3%	2%	1%	7%	1%	4%	9%
	Parent Verbal Abuse	0%	0%	0%	0%	0%	0%	0%	0%
	Child Positive	0%	0%	0%	0%	0%	0%	0%	0%
	Child Negative	33%	46%	26%	19%	28%	8%	18%	35%

*missing data
**data not submitted

Table 7

Average Values of Dependent Variables Across Treatment Conditions

	Subject #3	Treatment Conditions							
		Baseline	Relaxation	Systematic Desensitization	Child Management	Cognitive Modification	Baseline II	Probe #1	Probe #2
Physiological	EDR: Training Sessions (micromhos)		7.9	5.9					
	EDR: Home Monitoring (micromhos)	5.3	7.5	5.1	10.5	8.8	11.3	8.8	15.7
	EDR: Stress Profiles (micromhos)	8.7	4.8	3.8	7.4	4.5			
Self-Report	SUDS Ratings from all sources 0=Relaxed 100=Tense	47	54	50	50	47	44	50	50
	Attitude Toward Child 0=Positive 100=Negative	49	58	57	40	46	43	35	40
	Verbal Abuse (Ave. Daily Frequency)	13.0	14.0	9.9	16.0	11.0	8.0	10.0	5.0
	Negative Physical Contacts (Ave. Daily Frequency)	3.2	1.2	1.4	1.3	0.1	1.5	0.0	2.0
Behavioral (Audiotaped Statements)	Parent Positive	0%	1%	0%	0%	0%	0%	0%	1%
	Parent Negative	3%	1%	1%	0%	2%	2%	0%	2%
	Parent Verbal Abuse	0%	0%	0%	0%	0%	0%	0%	0%
	Child Positive	0%	0%	0%	0%	0%	0%	0%	0%
	Child Negative	54%	41%	26%	19%	28%	8%	18%	35%

*missing data
**data not submitted

Table 8

Average Value of Dependent Variables Across Treatment Conditions

	Subject #4	Treatment Conditions							
		Baseline	Child Management	Cognitive Modification	Relaxation	Systematic Desensitization	Baseline II	Probe #1	Probe #2
Physiological	EDR; Training Sessions (micromhos)								
	EDR; Home Monitoring (micromhos)	36	36	33					
	EDR; Stress Profiles (micromhos)	28	25	14					
Self-Report	SUDS Ratings from all sources 0=Relaxed 100=Tense	48	46	54					
	Attitude Toward Child 0=Positive 100=Negative	57	**	**					
	Verbal Abuse (Ave. Daily Frequency)	18	10	2					
	Negative Physical Contacts (Ave. Daily Frequency)	6.7	1.2	1.4					
Behavioral (Audiotaped Statements)	Parent Positive	0%	2%	1%					
	Parent Negative	10%	15%	3%					
	Parent Verbal Abuse	0%	0%	0%					
	Child Positive	0%	0%	0%					
	Child Negative	35%	19%	15%					

Note. This subject discontinued after cognitive modification.
**data not submitted

Table 9

Average Value of Dependent Variables Across Treatment Conditions

	Subject #5	Treatment Conditions							
		Baseline	Child Management	Cognitive Modification	Relaxation	Systematic Desensitization	Baseline II	Probe #1	Probe #2
Physiological	ST: Training Sessions				94°	96°			
	ST: Home Monitoring	90.4°	87.6°	90.3°	91.6°	95°	95°	94°	96°
	ST: Stress Profiles	92.5°	94°	90.2°	91.1°	97°			
Self-Report	SUDS Ratings from all sources 0=Relaxed 100=Tense	26	11	8	12	8	10	10	13
	Attitude Toward Child 0=Positive 100=Negative	13	7	7	6	7	7	10	10
	Verbal Abuse (Ave. Daily Frequency)	0.9	0.2	0.1	0.3	0.3	1.5	0.0	1.0
	Negative Physical Contacts (Ave. Daily Frequency)	0.7	0.6	0.7	0.2	0.3	0.3	0.0	0.0
Behavioral (Audiotaped Statements)	Parent Positive	1%	1%	0%	0%	0%	**	0%	0%
	Parent Negative	1%	1%	1%	1%	2%	**	1%	4%
	Parent Verbal Abuse	0%	0%	0%	0%	0%	**	0%	0%
	Child Positive	0%	0%	0%	0%	0%	**	0%	0%
	Child Negative	5%	14%	5%	14%	30%	**	0%	20%

*missing data
**data not submitted

Table 10

Average Value of Dependent Variables Across Treatment Conditions

	Subject # 6	Treatment Conditions							
		Baseline	Child Management	Cognitive Modification	Relaxation	Systematic Desensitization	Baseline II	Probe #1	Probe #2
Physiological	EDR: Training Sessions (micromhos)				9.9	13.5			
	EDR: Home Monitoring (micromhos)	20.9	17.5	12.8	14.3	20.0	19.9	17.0	28.0
	EDR: Stress Profiles (micromhos)	23.3	10.3	14.3	11.2	14.1			
Self-Report	SUDS Ratings from all sources 0=Relaxed 100=Tense	23	16	6	8	6	10	5	13
	Attitude Toward Child 0=Positive 100=Negative	18	6	5	6	5	**	5	10
	Verbal Abuse (Ave. Daily Frequency)	2.5	0.4	0	0.1	0	**	0	0
	Negative Physical Contacts (Ave. Daily Frequency)	0.6	0.3	0	0.3	0	**	0	0
Behavioral (Audiotaped Statements)	Parent Positive	1%	1%	0%	1%	0%	**	0%	0%
	Parent Negative	2%	5%	4%	3%	3%	**	6%	10%
	Parent Verbal Abuse	0%	2%	1%	1%	1%	**	1%	2%
	Child Positive	0%	0%	0%	0%	0%	**	0%	0%
	Child Negative	5%	14%	5%	14%	30%	**	0%	20%

*missing data
**data not submitted

Abusive Behavior

The first question to be addressed is: Did the treatment package reduce abusive behavior? The results show that self-reported abusive behavior was reduced for all six participants. The data displayed in Figures 2-7 indicate that the frequency of self-reported negative physical contacts was reduced for all parents. Self-reported verbal abuse was reduced for five of the six parents (see Figure 8). (The results of Subject 5 showed that the rate of self-reported verbal abuse was low throughout treatment). A third indication of reductions in abuse was obtained from audiotaped parent-child interactions. Data from this source indicated that verbal abuse (Figure 9) either was reduced across treatments (Subject 1) or remained at a low level throughout treatment (Subjects 2-6). Audiotaped parent statements rated as negative, but judged to be non-abusive (Figure 10), also showed a decrease for four of the parents (Subjects 1-4) and remained at low levels for two parents (Subjects 5 and 6). However, positive parent statements were unchanged and remained at extremely low levels for all subjects (Figure 10). Similarly, positive child statements were infrequent throughout the study (Figure 11). The rates of negative child statements (Figure 11) were variable, but showed a clear decrease for four subjects (Subject 1, 2, 3, and 4) and and an increase for two subjects (Subjects 5 and 6). Finally, self-report ratings indicated that the parents' attitudes toward their children (Figure 12) became more

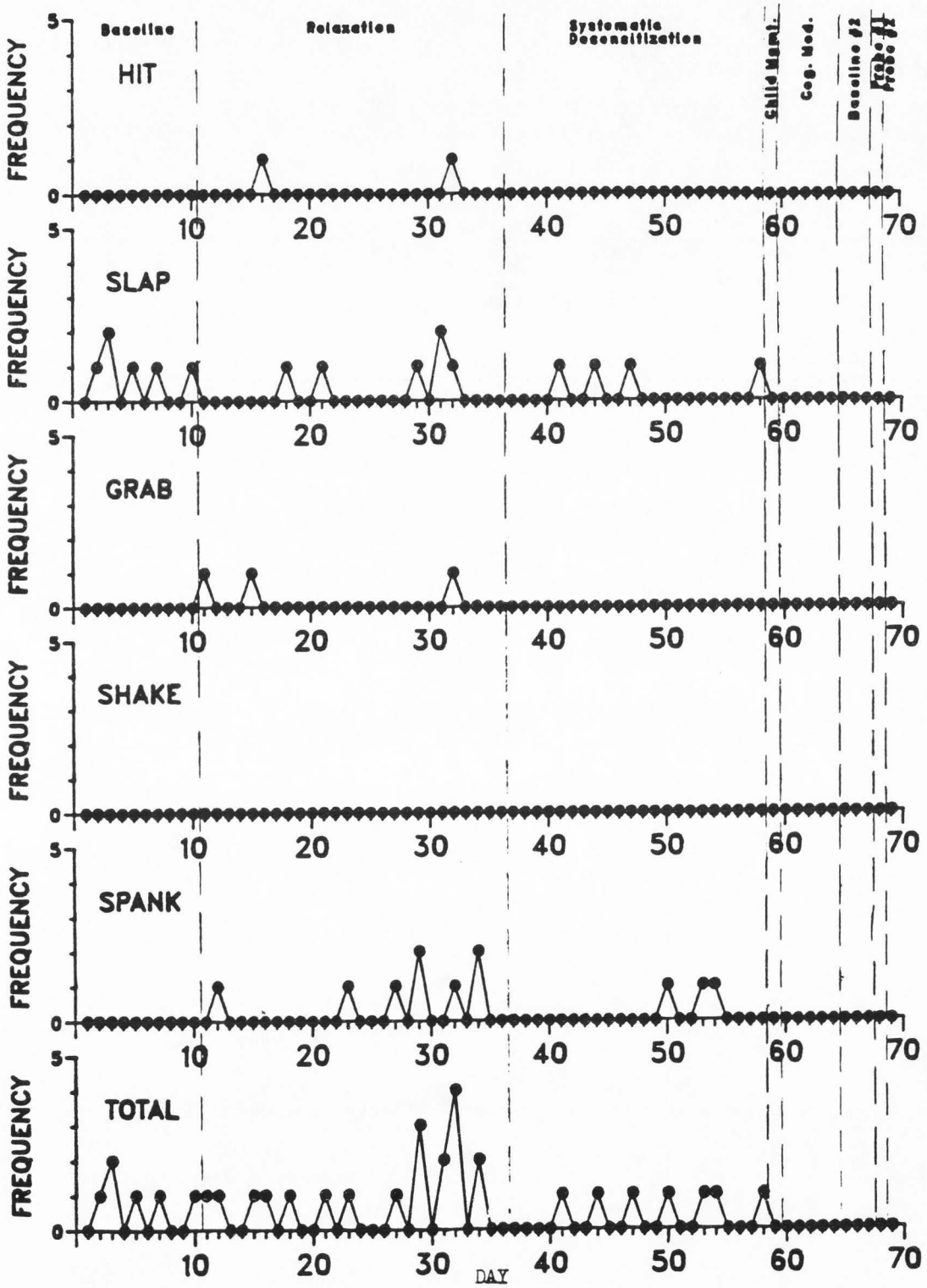


Figure 2. Self-reported daily frequency of negative physical contacts. (Subject 1)

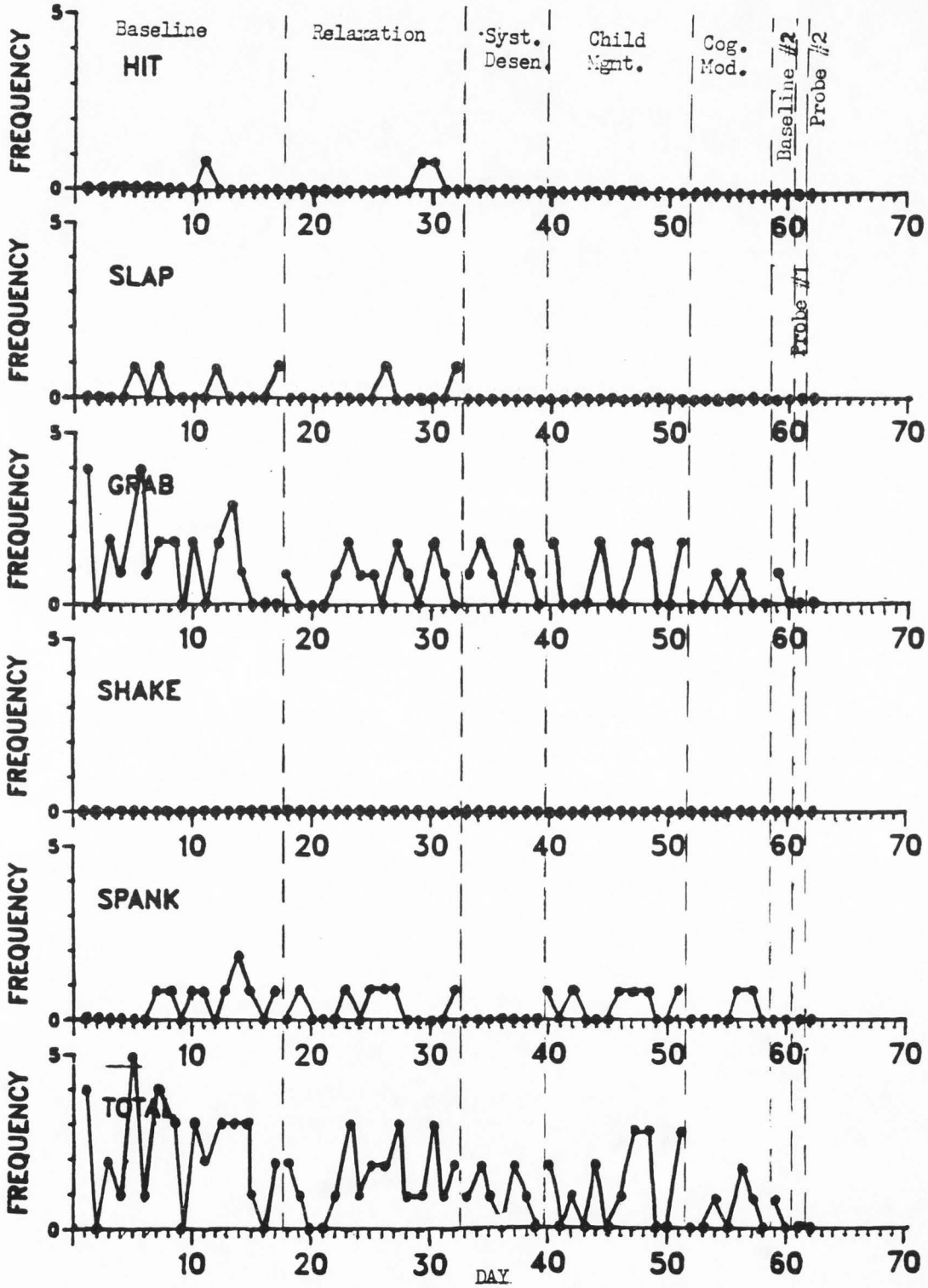


Figure 3. Self-reported daily frequency of negative physical contacts. (Subject 2)

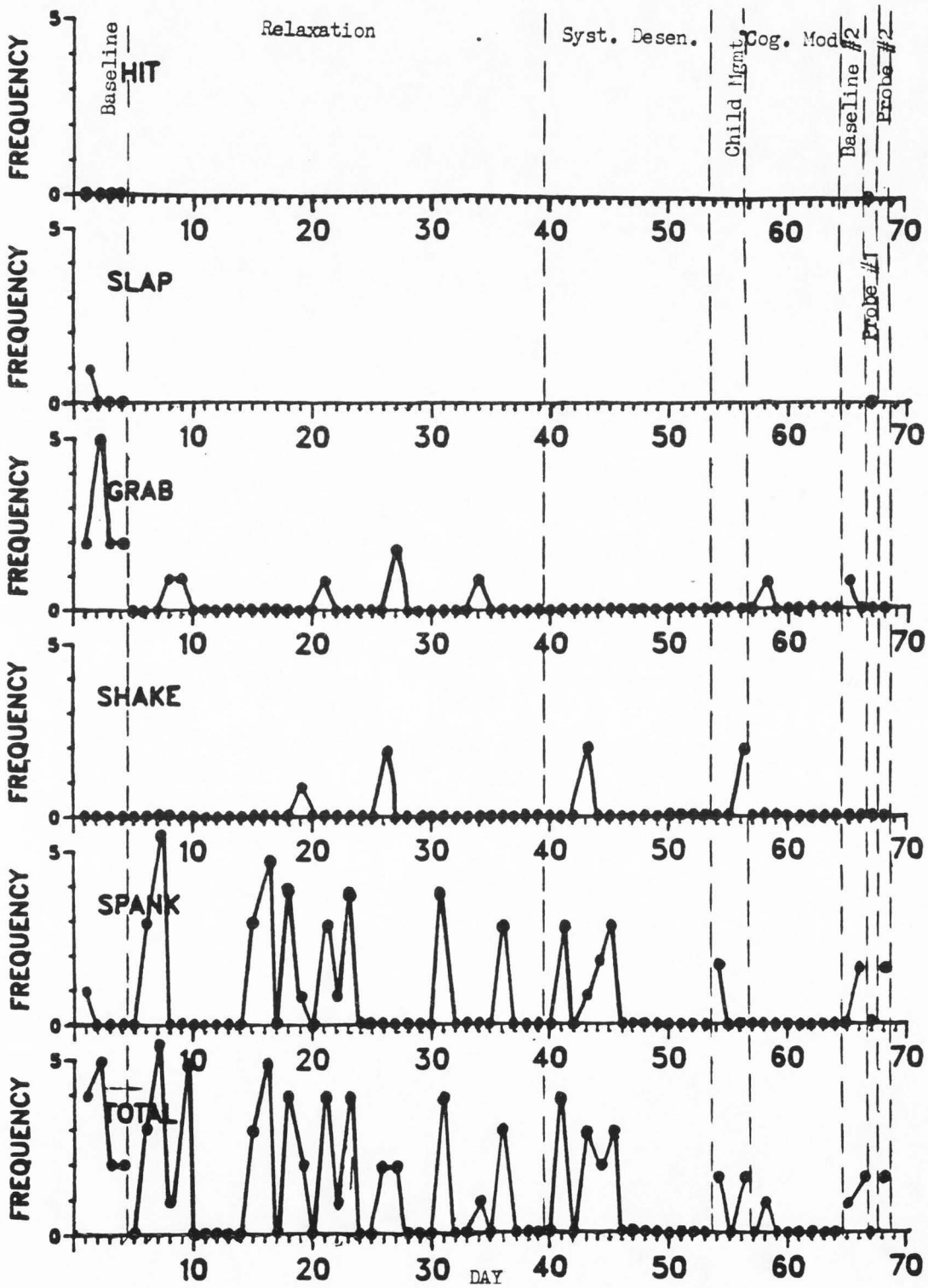


Figure 4. Self-reported daily frequency of negative physical contacts. (Subject 3)

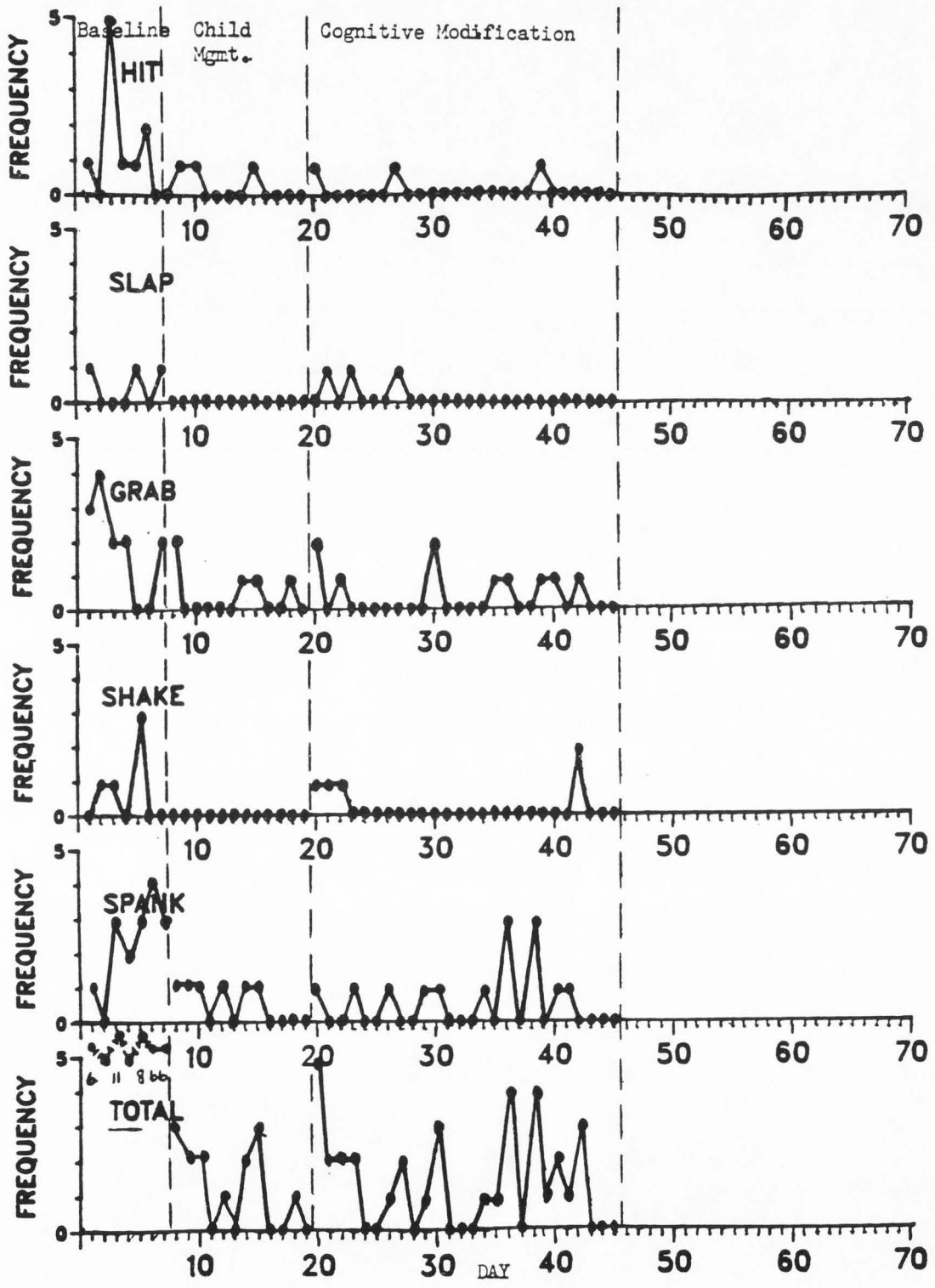


Figure 5. Self-reported daily frequency of negative physical contacts. (Subject 4)

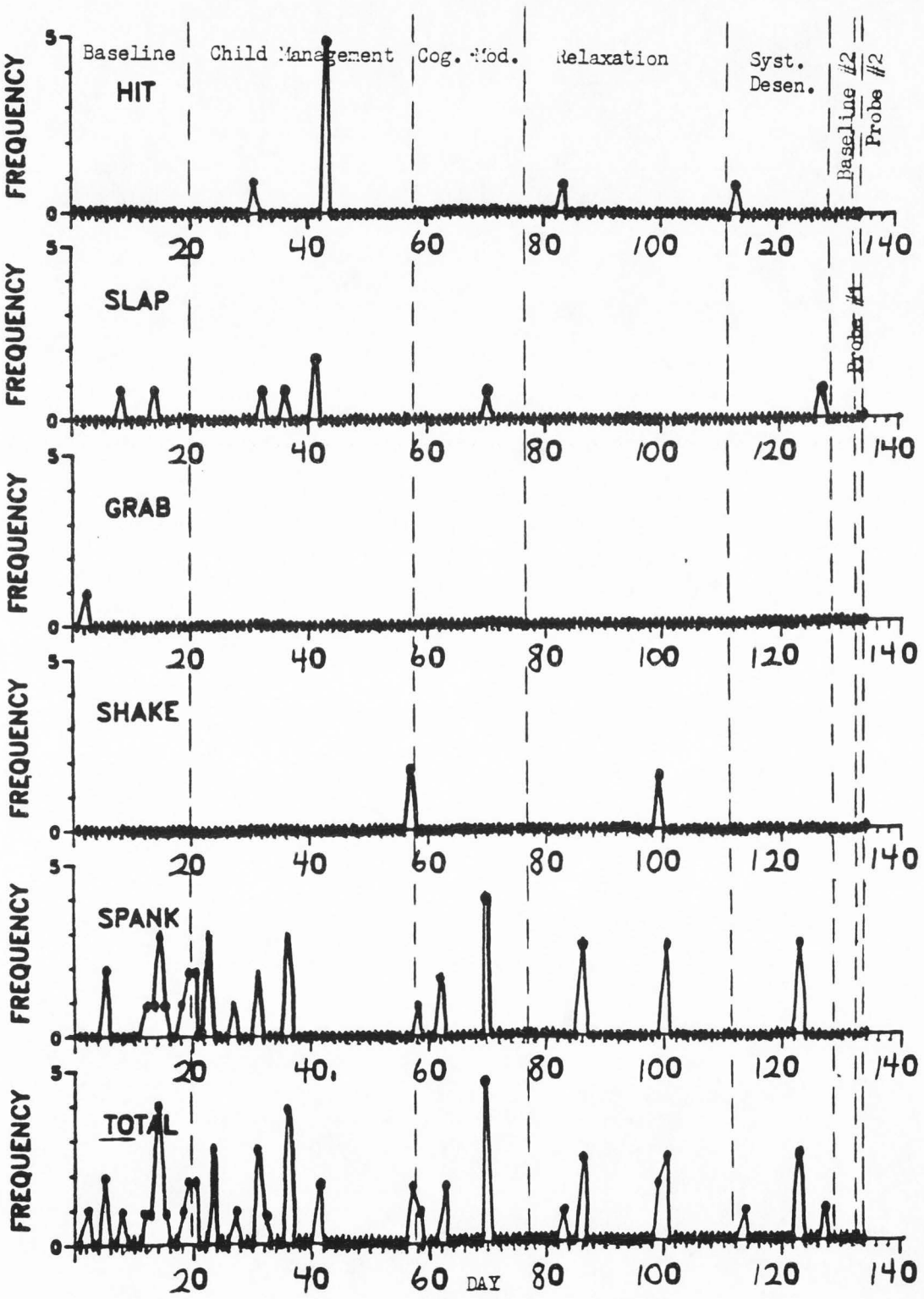


Figure 6. Self-reported daily frequency of negative physical contacts. (Subject 5)

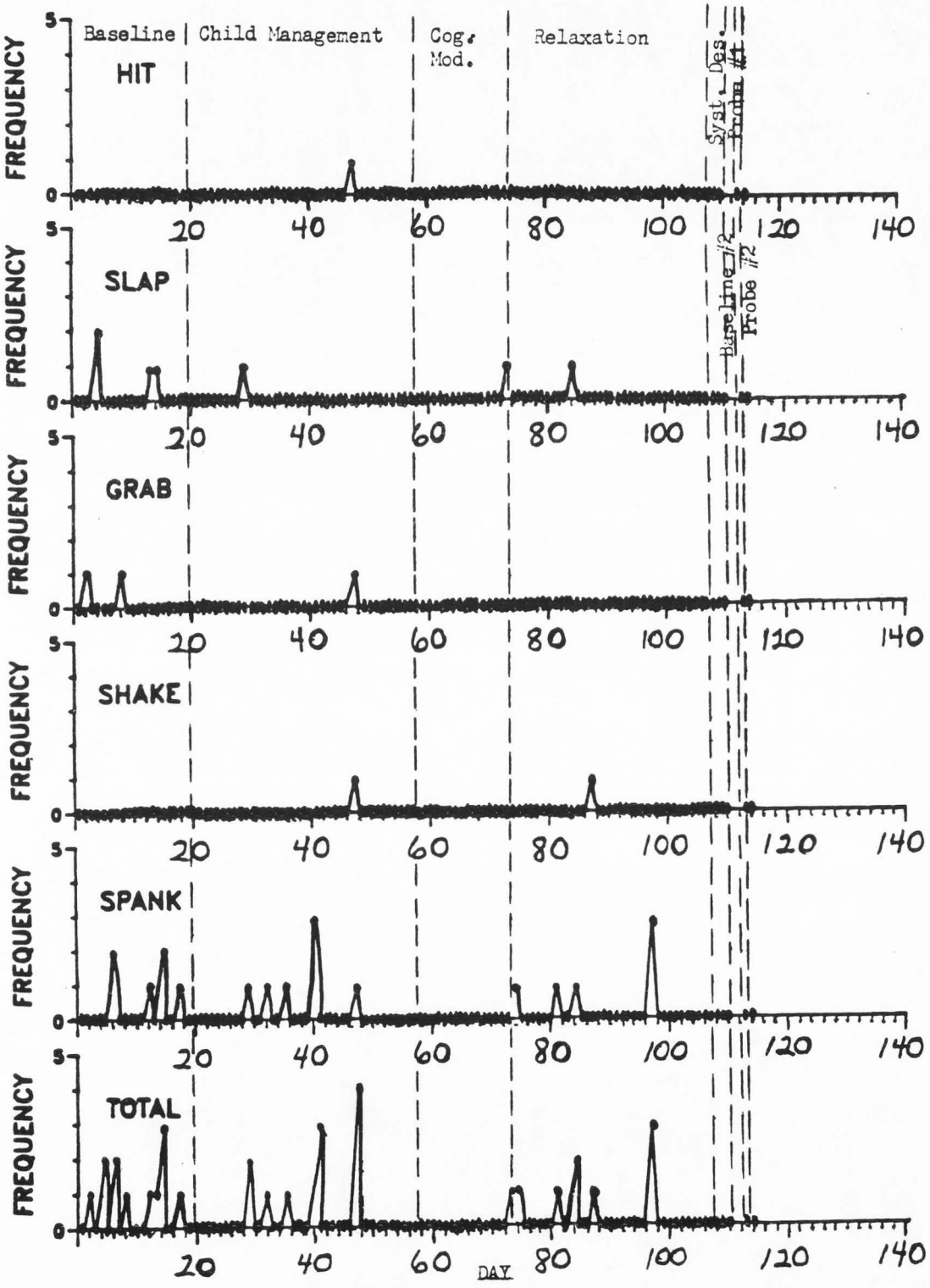


Figure 7. Self-reported daily frequency of negative physical contacts. (Subject 6)

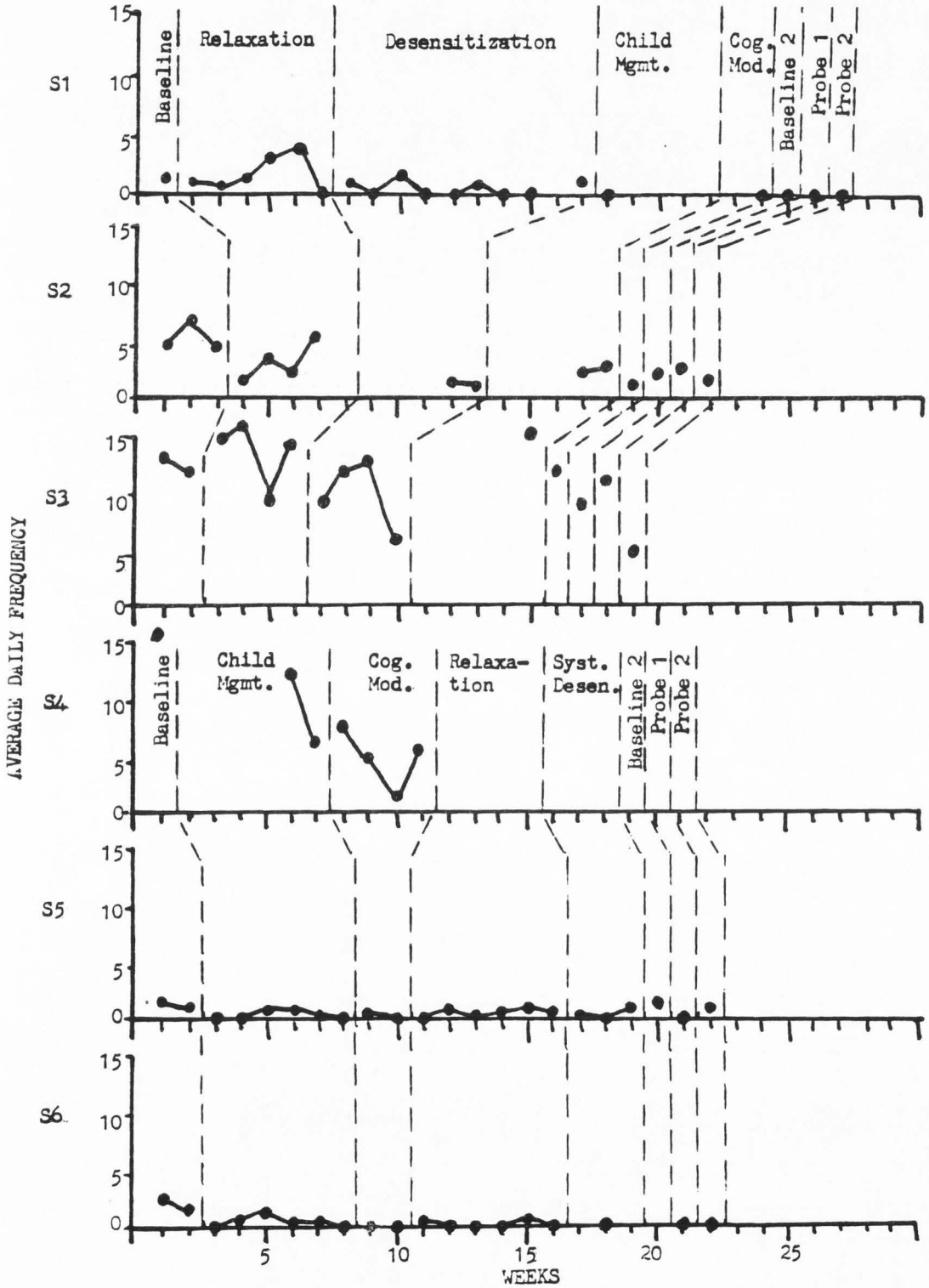


Figure 8. Self-reported verbal abuse.

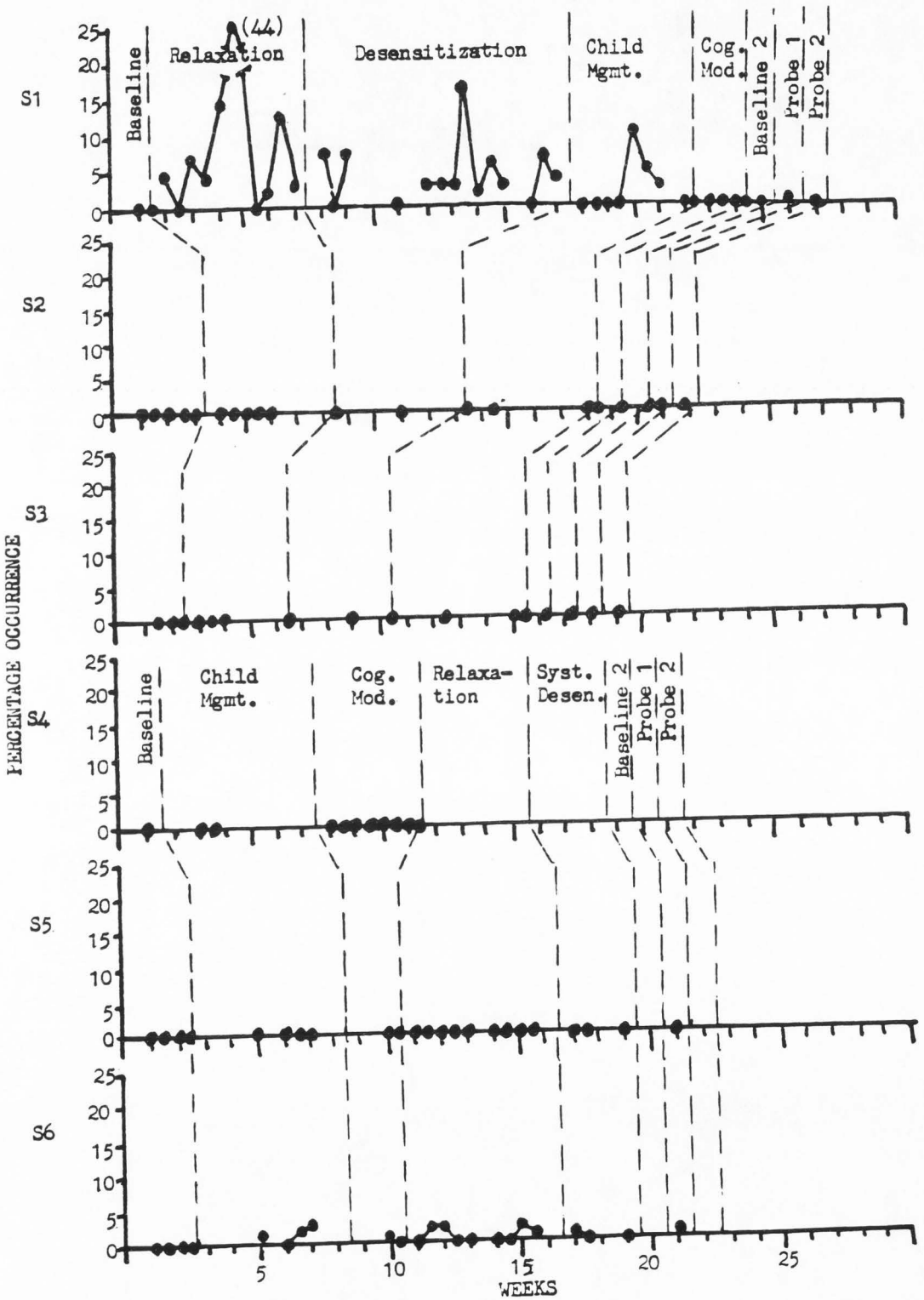


Figure 9. Audiotaped verbal abuse across treatment conditions.

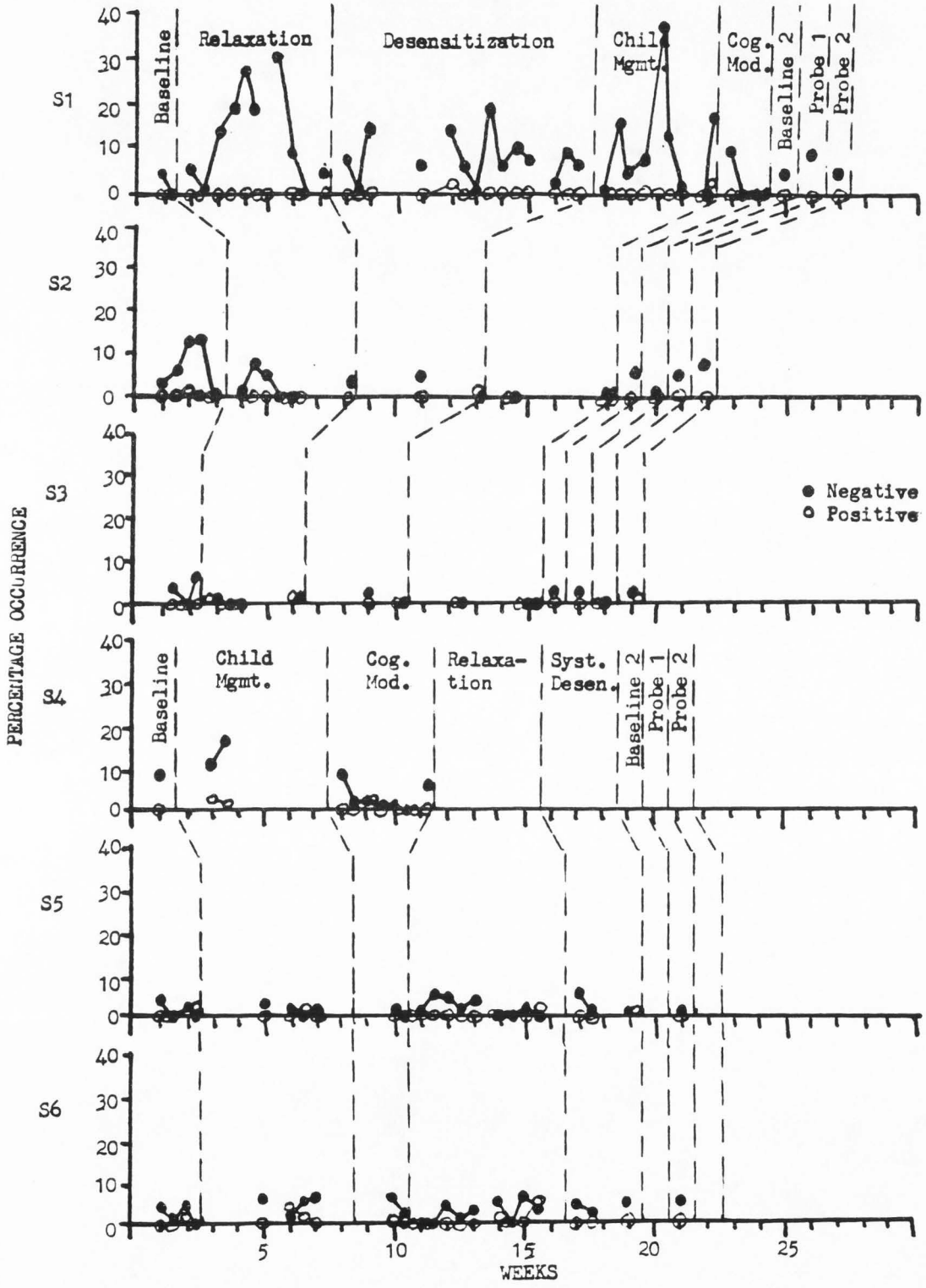


Figure 10. Audiotaped parent statements across treatment conditions.

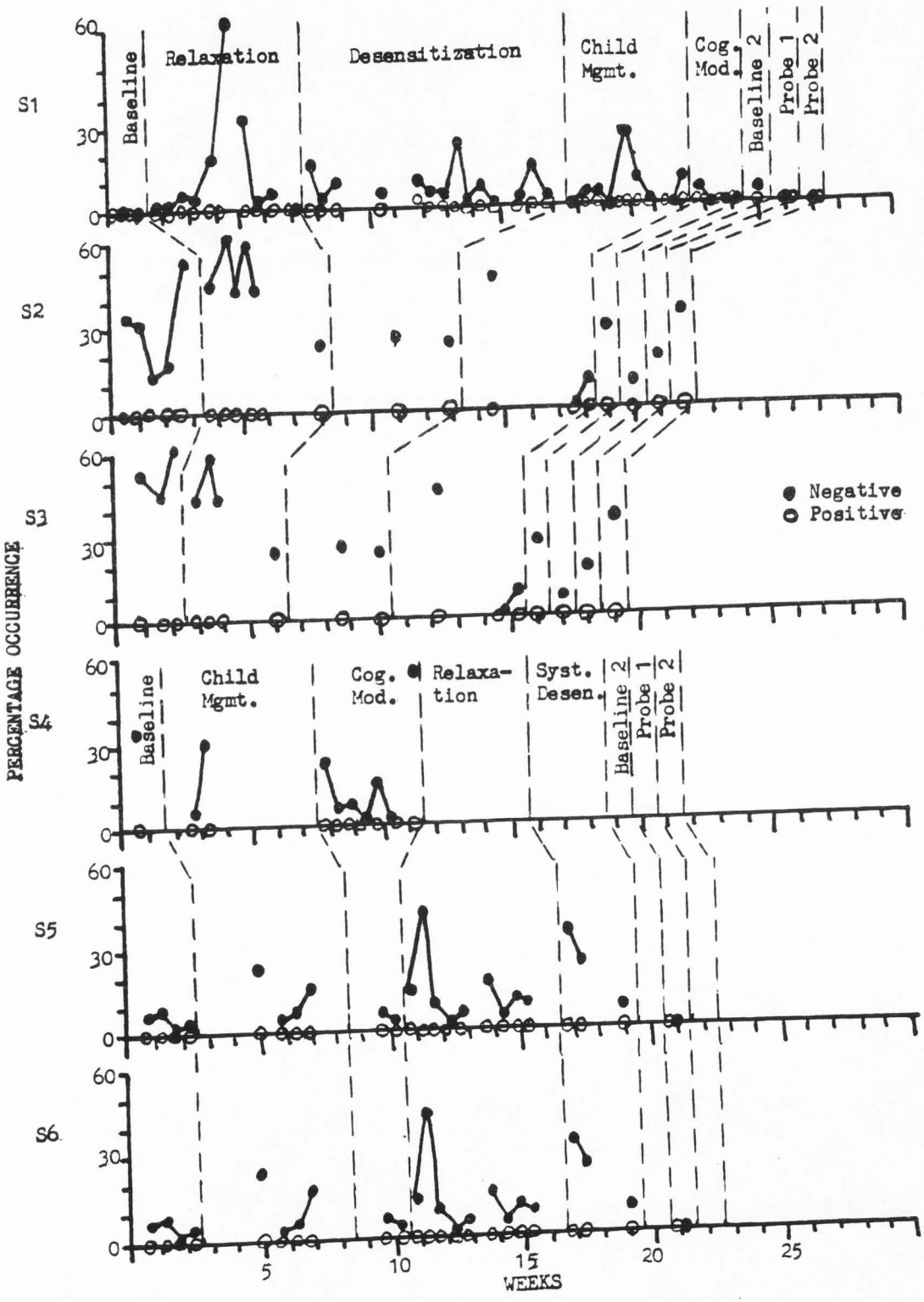


Figure 11. Audiotaped child statements across treatment conditions.

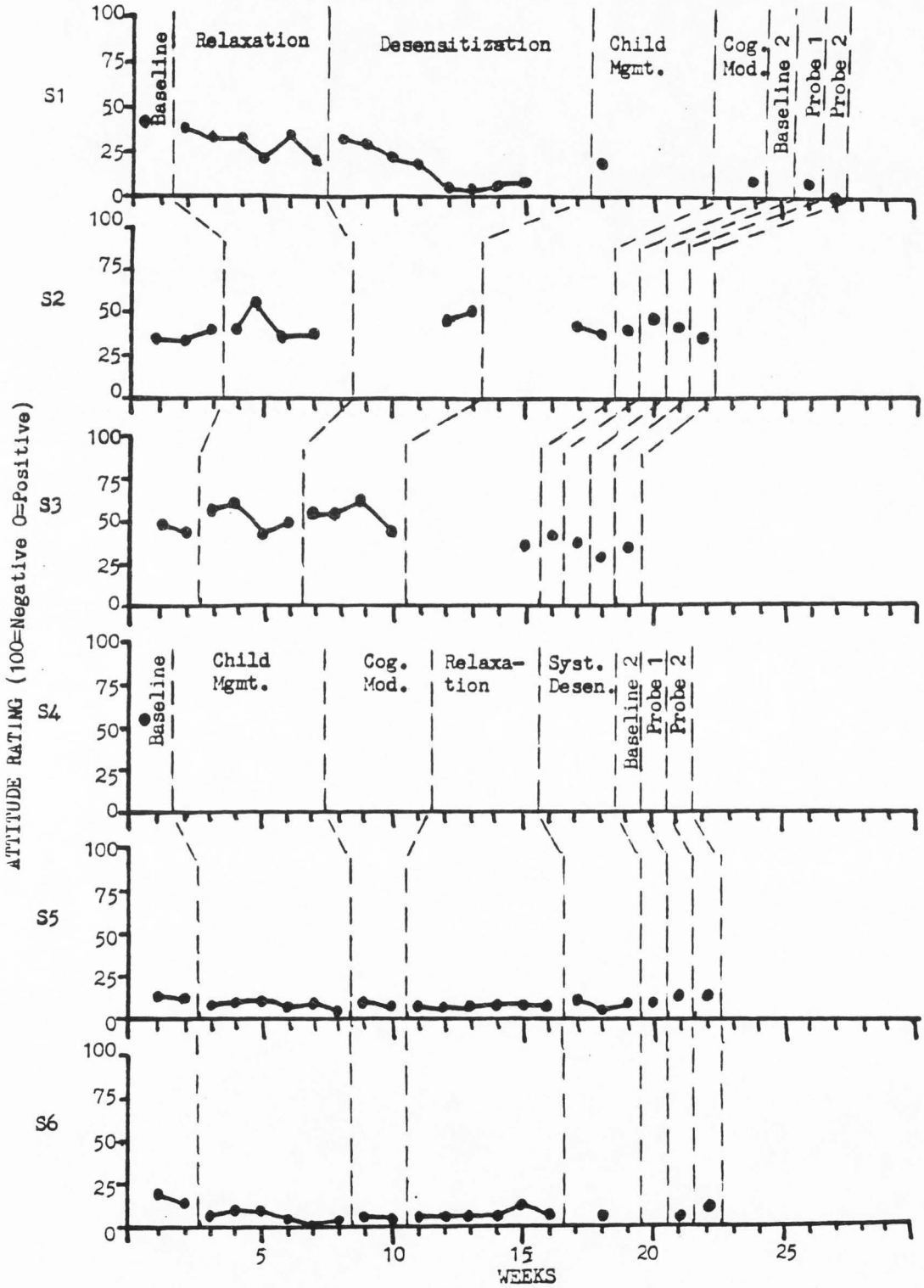


Figure 12. Parental attitude toward children across treatment conditions.

positive for three of the participants (Subjects 1, 5, and 6), were relatively unchanged for two parents (Subjects 2 and 3), and were unable to be measured due to a lack of data for one parent (Subject 4).

Negative Physical Contacts

The frequency of negative physical contacts (hit, slap, grab, shake, and spank) ultimately decreased for all subjects, according to self-report data (Figures 2-7). Subject 2 (Figure 3) continued to exhibit an elevated frequency of negative physical contacts at the end of treatment. It should be noted, however, that the frequency of contacts reported by this parent was decreased from baseline levels and that the more severe forms of contact (hitting and slapping) were not reported after the initiation of systematic desensitization.

Self-Reported Verbal Abuse

Additional self-report data, presented in Figure 8, show that verbal abuse decreased relative to baseline levels for subjects 1, 2, 3, 4, and 6. The frequency of verbal abuse for subject 5 remained at a consistently low level throughout treatment. Although there are no direct observational data to support these self-reported results, the positive relationship between other self-report data and both physiological data (e.g., EDR levels) and behavioral data (e.g., audiotaped verbal abuse), especially for subjects 1, 2, 3, and 5, increases the probability that these results are

valid for these parents. (More detailed information on the validity of the self-report data is provided later in this chapter).

Audiotaped Parent Statements

Results obtained from audiotaped parent-child interactions in the home indicate that verbal abuse (Figure 9) decreased for subject 1 as treatment progressed. In fact, no incidents of verbal abuse were recorded during the final treatment phase, final baseline period, or the second follow-up probe. Verbal abuse was not detected on the audiotapes of Subjects 2, 3, 4, and 5. Subject 6 showed an increase in verbally abusive behavior during the child management and relaxation phases of treatment compared to baseline levels. This frequency of this parent's verbal abuse decreased, however, during the systematic desensitization and cognitive modification treatment phases.

The frequency of negative parent statements (Figure 10) decreased for Subjects 1, 2, 3, and 4. Subjects 5 and 6 showed a low, but variable, rate of negative statements.

Positive statements made by the parents (Figure 10) continued at a low rate throughout the study.

Negative Child Statements

The frequency of negative child statements showed a decrease for subjects 1, 2, 3, and 4 (Figure 11). The frequency of negative statements made by the children of subjects 5 and 6 was quite variable. Negative child statements in this family were lowest during cognitive

modification training, and showed an increase during the systematic desensitization phase of treatment.

Positive Child Statements

The absence of positive child statements (Figure 11) was observed for all subjects across all treatment conditions.

Parental Attitude

Affirmation of a positive treatment effect for the parents is provided from results regarding self-reported parental attitude toward the child (Figure 12). For subject 1, the gradual transition toward a predominantly positive attitude is apparent in the plotted data. The data of subjects 2 and 3 also show slight trend toward a more positive attitude. The data of subjects 5 and 6 show a mild shift toward a more positive attitude coincidental with the onset of treatment, with continuation of this positive attitude throughout the study.

Agency-Reported Abuse

One agency-reported incident of child abuse occurred during the study. Midway through treatment, subjects 5 and 6 were reported to the DFS by a neighbor for suspected abuse. However, a doctor's examination verified the parents' claim that their 1 1/2-year-old son's swollen eye was caused by a mosquito bite. Therefore, the absence of agency-reported abusive incidents provides additional support to the results obtained from parents during the study.

Summary

With a few exceptions, the varying sources of data suggest that the overall treatment package did reduce the incidence of child abuse in these families. Although the apparent reduction in abusive behavior was a significant gain for these families, negative parent-child interactions continued to be observed toward the termination of treatment for subjects 1 (Negative Parent Statements, Figure 10) and 3 (Negative Physical Contacts, Figure 4). Also, as stated above, positive parent statements did not increase for any of the participant's during the treatment components or follow-up sessions.

Comparison of Treatment Components

The second question to be addressed is whether specific treatments had differential effects upon abusive behavior. The data presented in Table 11 allow for a gross comparison of the effectiveness of each treatment phase. The average frequency of abusive behavior recorded during each treatment phase is compared to the frequency before the initiation of treatment. These data are presented to indicate whether the frequency of abuse increased, decreased, remained the same, or could not be decreased further due to a floor effect. As shown in Table 11, each treatment phase was associated with reductions of self-reported abuse for at least some of the parents. A comparison of summary values at the bottom of the Table suggests that systematic desensitization, child

Table 11

Average of Abuse-Related Variables During Treatment Components Compared to Initial Baseline Values*

Inc = Increased Frequency
Dec = Decreased Frequency
NC = No Change in Frequency

		TREATMENT COMPONENTS			
		Relaxation	Systematic Desensitization	Child Management	Cognitive Modification
MEASURES OF ABUSE	Self-Reported Negative Physical Contacts	Inc-1 Dec-4 NC-0	Inc-0 Dec-5 NC-0	Inc-0 Dec-6 NC-0	Inc-0 Dec-5 NC-1
	Self-Reported Verbal Abuse	Inc-2 Dec-3 NC-0	Inc-0 Dec-5 NC-0	Inc-1 Dec-5 NC-0	Inc-0 Dec-6 NC-0
	Audiotaped Verbal Abuse	Inc-2 Dec-0 NC-0	Inc-2 Dec-0 NC-0	Inc-2 Dec-0 NC-0	Inc-1 Dec-0 NC-0
	Audiotaped Negative Parent Statements	Inc-2 Dec-2 NC-1	Inc-2 Dec-2 NC-1	Inc-3 Dec-2 NC-0	Inc-1 Dec-3 NC-2
	TOTAL	Inc-7 Dec-9 NC-1	Inc-4 Dec-12 NC-1	Inc-6 Dec-13 NC-0	Inc-2 Dec-14 NC-3

*Variables for which further decreases were not observable due to a floor effect are not included.

management, and cognitive modification were most consistently associated with decreased abuse. However, examination of the data from individual subjects, described in the next section, shows that no single treatment was consistently effective for all parents. An example is the frequency of self-reported negative physical contacts (see Tables 5-10). Physical contacts were initially decreased to the lowest levels during three different treatments: child management (Subject 1), cognitive modification (Subjects 2, 3, and 6), and relaxation (Subject 5). The idiosyncratic response patterns are described further in the following section.

Mastery of Skills and Concepts Presented

Overview

The results indicate that all subjects showed an improved ability to relax and were less reactive to aversive child-related stimuli after treatment. Assessments of the principles and skills presented during the child management and cognitive modification components of treatment indicated that the subjects had acquired only partial competence in these areas.

Relaxation

Subject 1. For S1, the first phase of treatment was relaxation training. Several sources of data indicate that the parent did learn to relax. During relaxation training sessions, a reliable and significant decrease in arousal was

observed in the parent's subjective rating of tension as well as the physiological parameter measured (Figures 13 and 14). The difference between SUDS ratings at the beginning and end of each session are shown in Figure 13. The difference between the two is most pronounced during the two phases of treatment in which techniques of relaxation were applied (relaxation training and systematic desensitization), suggesting that the subject's report of decreased tension was a result of participation in relaxation training, rather than simply the effect of interacting with the experimenter in a training session, per se. An alternate explanation is that this subject's large decreases in subjective tension within sessions diminished as the novelty of treatment wore off. This hypothesis is weakened, however, by the fact that subjects for whom relaxation and systematic desensitization were the final phases of treatment (e.g., subject 5) showed a similar decrease in subjective tension only during these two treatment components. It is also noteworthy that a decrease between beginning and end EDR levels within sessions (Figure 14) did not occur until the third session of the first phase, suggesting that the ability to decrease EDR levels during the training session emerged as a result of the training procedures and was not present at the onset of treatment. The data on these graphs show not only that the participant was able to relax during individual sessions, but also that she was able to reliably discriminate between tension and relaxation in her subjective ratings. The reliability of

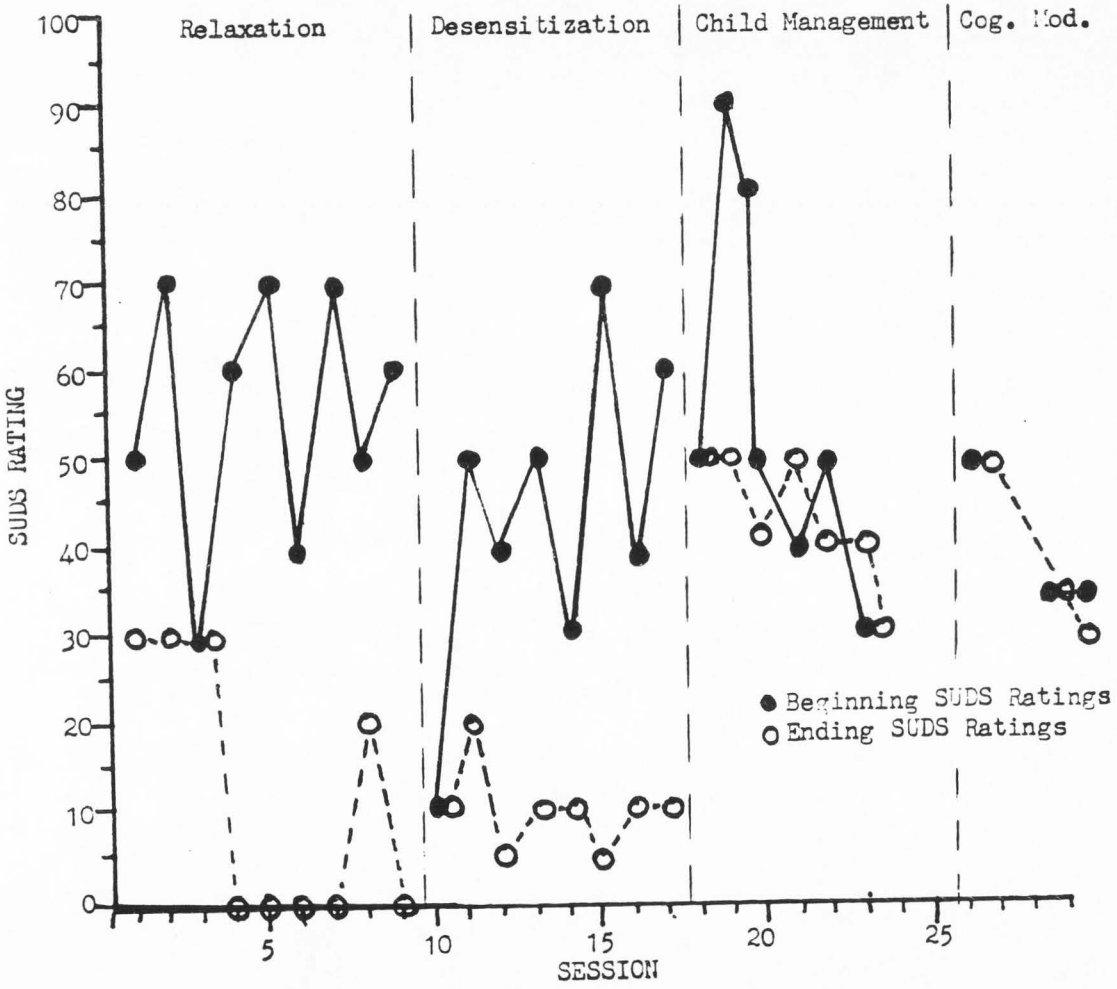


Figure 13. Subjective units of discomfort ratings from the beginning and end of each training session. (Subject 1)

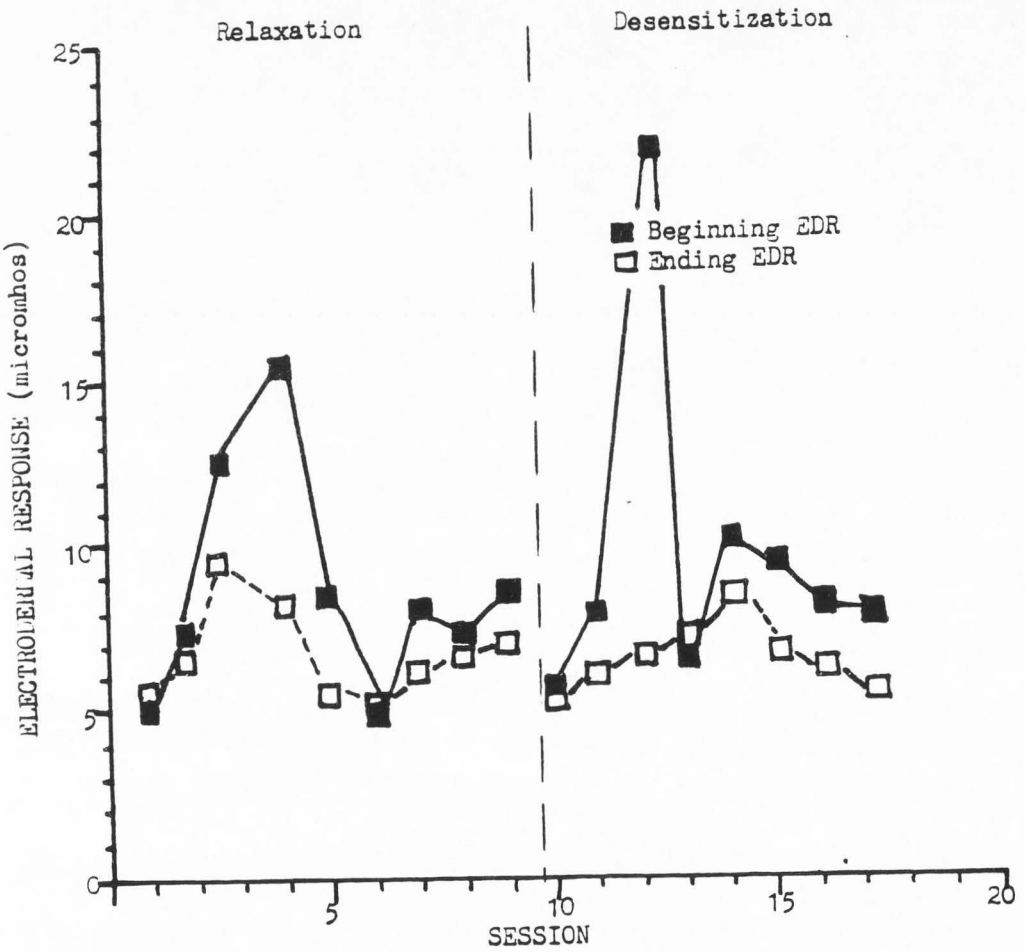


Figure 14. Electrodermal response from the beginning and end of each training session. (Subject 1)

self-report data in isolation has been shown to be questionable (Lipinsky & Nelson, 1974). Therefore, it is important to note the positive relationship between physiological readings and the subjective ratings provided by this subject. The data in Figure 15 provide additional support that this parent was capable of discriminating between subtle differences in tension or relaxation. This parallel pattern between subjective and physiological data in the laboratory lends credibility to the following subjective data collected in the home setting. A second source of data which indicates that subject 1 learned to relax came from the relaxation diary completed by the parent after each home practice session (Figure 16). The large and consistent decrease between the beginning and ending SUDS ratings (an average decrease of 32 points on the 100-point scale) for subject 1 during home practice sessions is consistent with the data observed in the laboratory during training sessions. Further evidence of relaxation is found in Figure 17, in which SUDS ratings are shown to have gradually decreased from 55 during the baseline period to 20 during the second follow-up probe. Collectively, these data indicate that this subject acquired the ability to relax.

Subject 2. Data for subject 2 also indicate that a decrease in self-reported tension ocurred reliably during relaxation and systematic desensitization sessions (Figure 18). As was observed in the data from subject 1, a pattern of decreased SUDS ratings did not occur during child

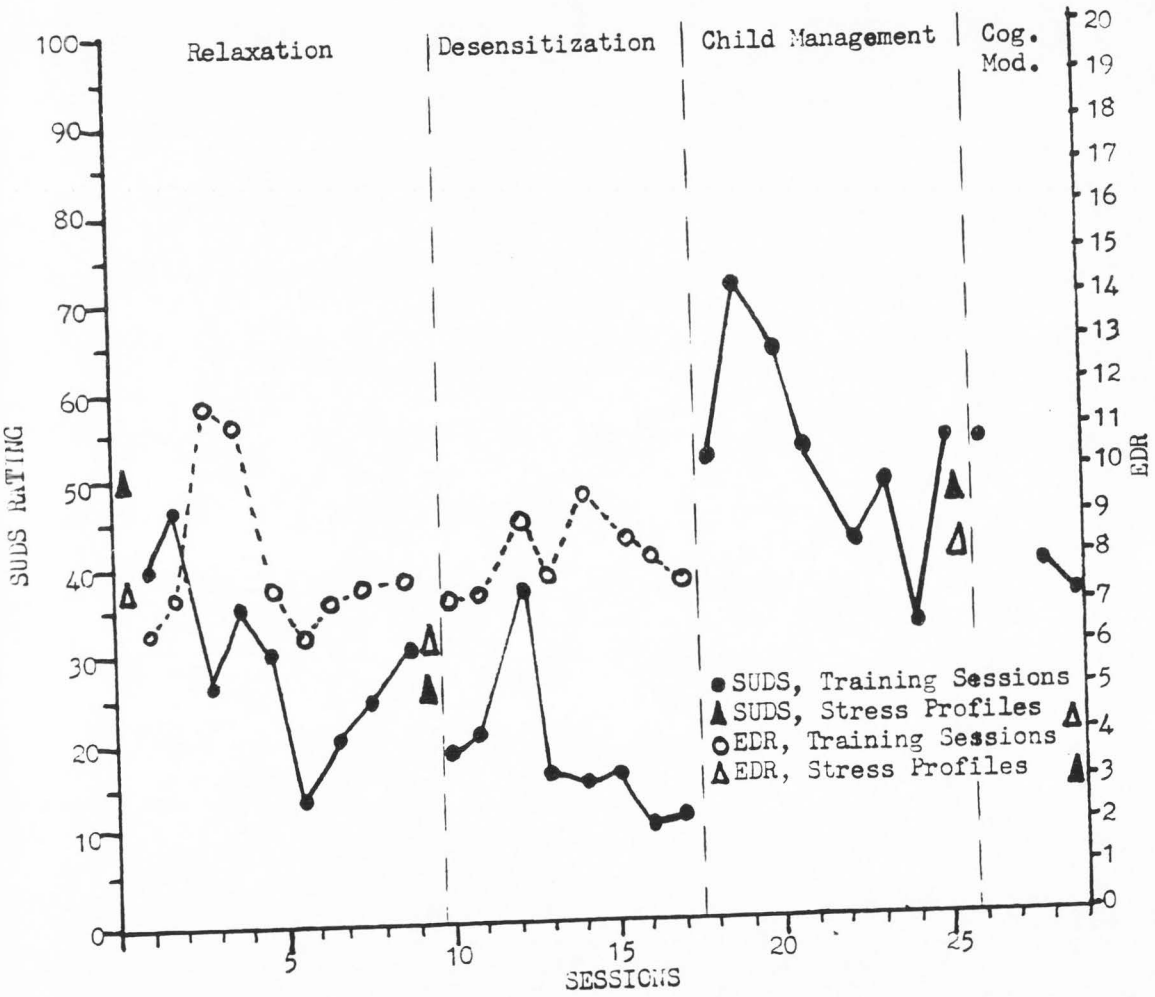
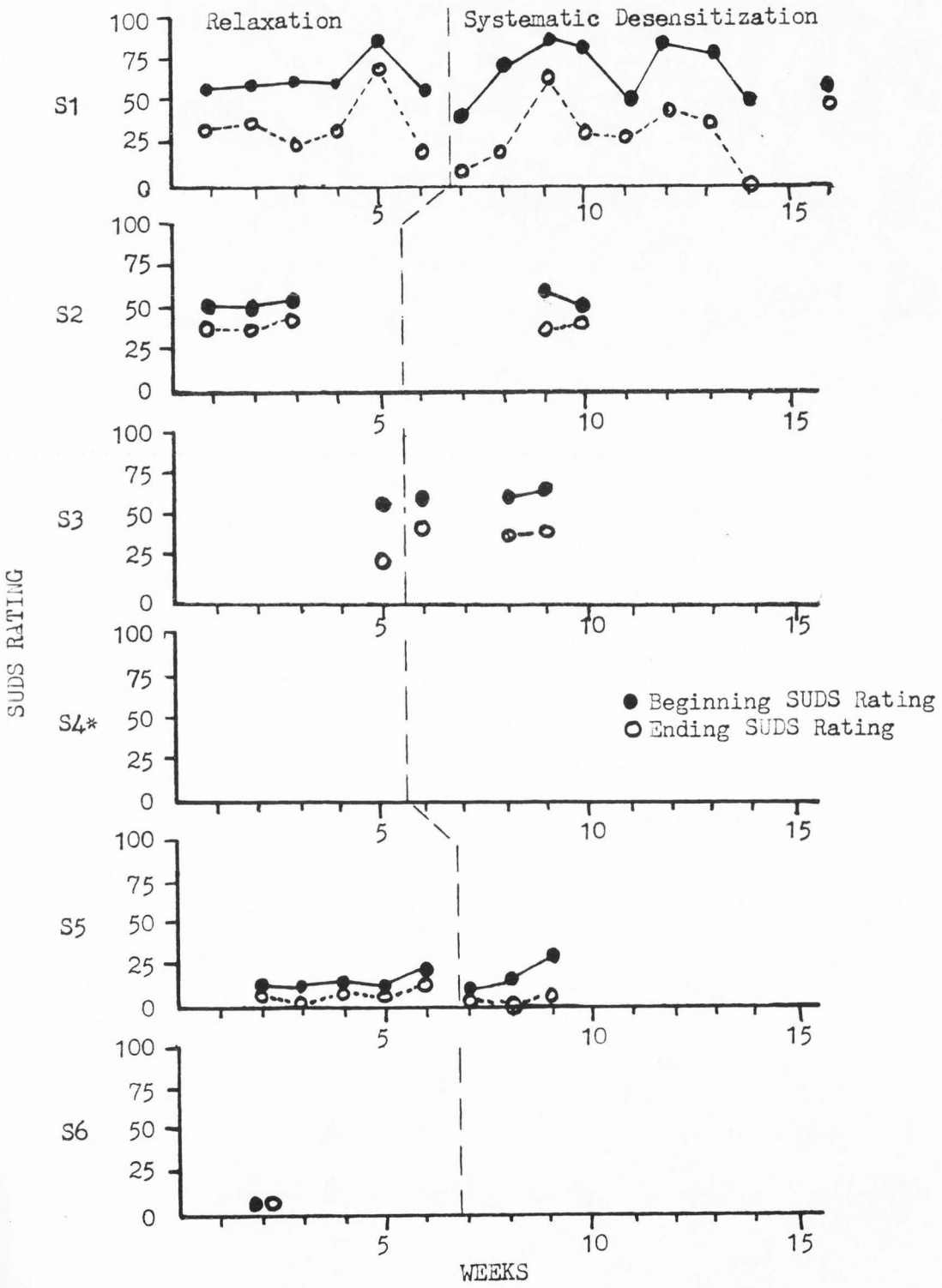


Figure 15. Comparison of subjective units of discomfort ratings and electrodermal response during training sessions and stress profile sessions. (Subject 1)



*did not complete training

Figure 16. Beginning and ending subjective units of discomfort ratings during relaxation practice sessions at home.

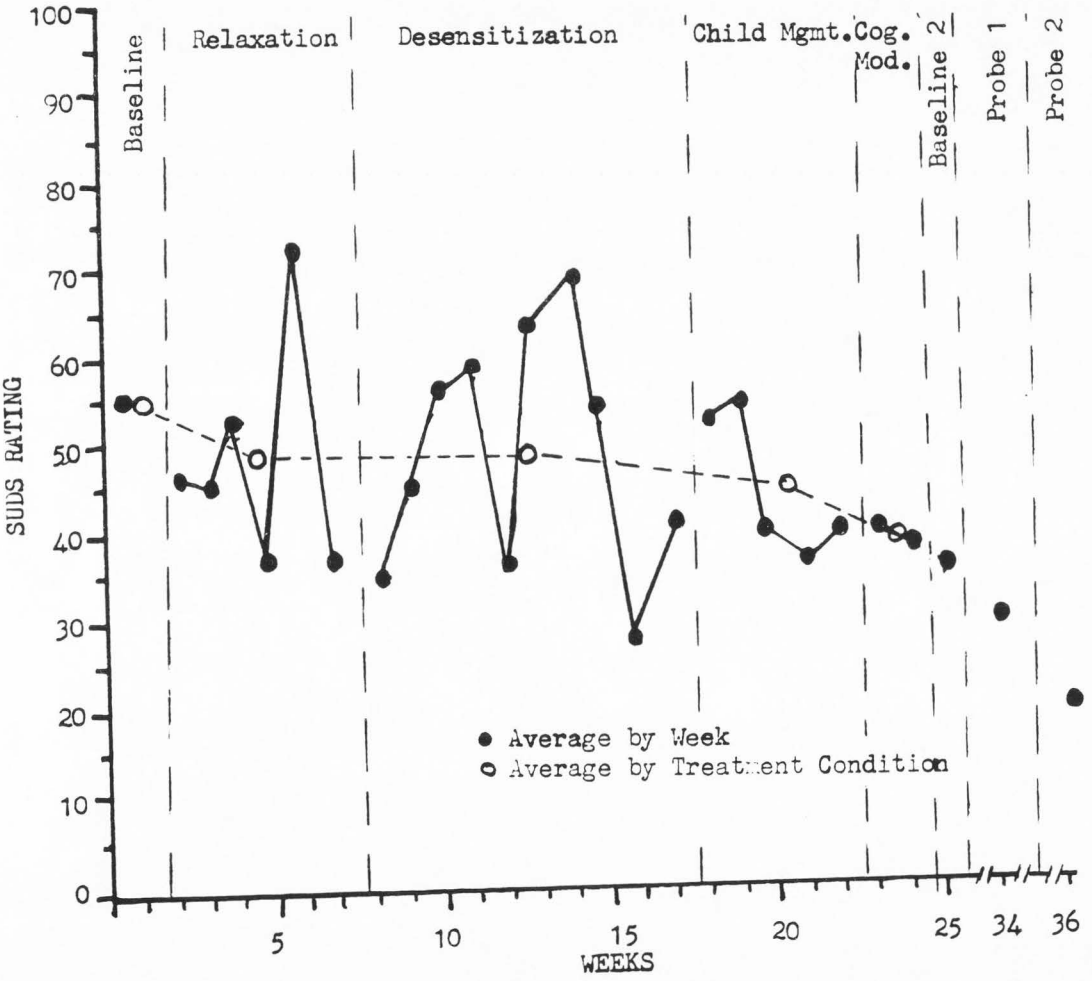


Figure 17. Summary of subjective units of discomfort ratings from self-report forms, relaxation diary, training sessions, and home monitoring sessions. (Subject 1)

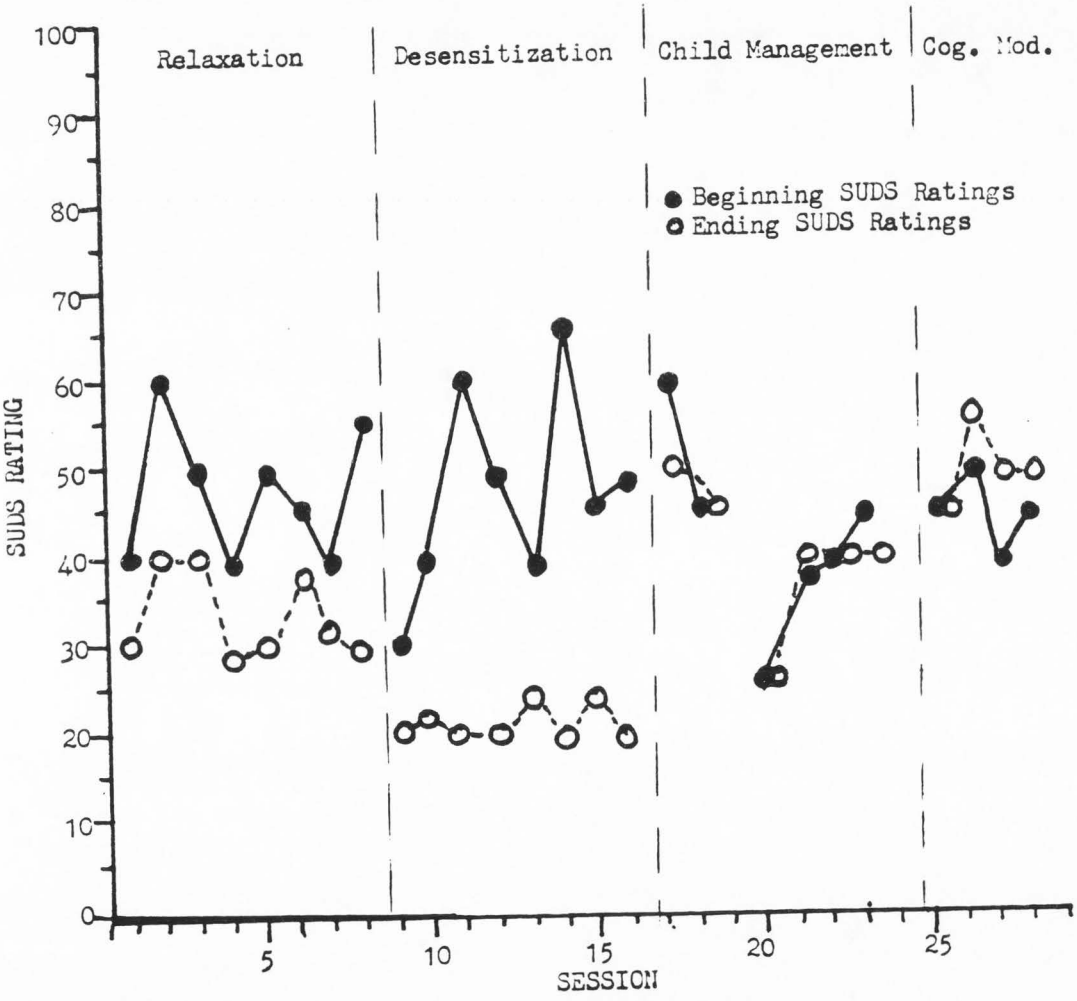


Figure 18. Subjective units of discomfort ratings from the beginning and end of each training session. (Subject 2)

management and cognitive modification training sessions. Electrodermal response levels also decreased during most of the training sessions (from beginning to end of session) for subject 2 (Figure 19). It is noted that a decrease in EDR levels did not occur during the 4th and 5th sessions of systematic desensitization for this subject. This pattern is similar to that of subject 1 and is apparently related to the presentation of stressful stimuli during the session. According to data presented in Figure 20, SUDS ratings and EDR levels followed a similar pattern, suggesting that the subject could generally discriminate between tension and relaxation. The data displayed in Figure 16 show that SUDS ratings decrease when subject 2 practiced relaxation at home. Based on the relaxation diary forms submitted by this parent, he practiced relaxation on at least 25 occasions and experienced an average of a 12 point decrease in subjective tension on the 0 to 100 scale during these home sessions.

Subject 3. Data from subject 3 also showed a decrease in self-reported tension during relaxation and systematic desensitization sessions in the laboratory (Figure 21). Electrodermal response levels showed a similar decrease during most training sessions (Figure 22). On those occasions when the EDR level did not decrease during a session for subject 3 (Figure 22, sessions 2, 8, and 9), the beginning level was relatively low. These data suggest that this subject was able to decrease her EDR level consistently when the level at the beginning of the session was elevated.

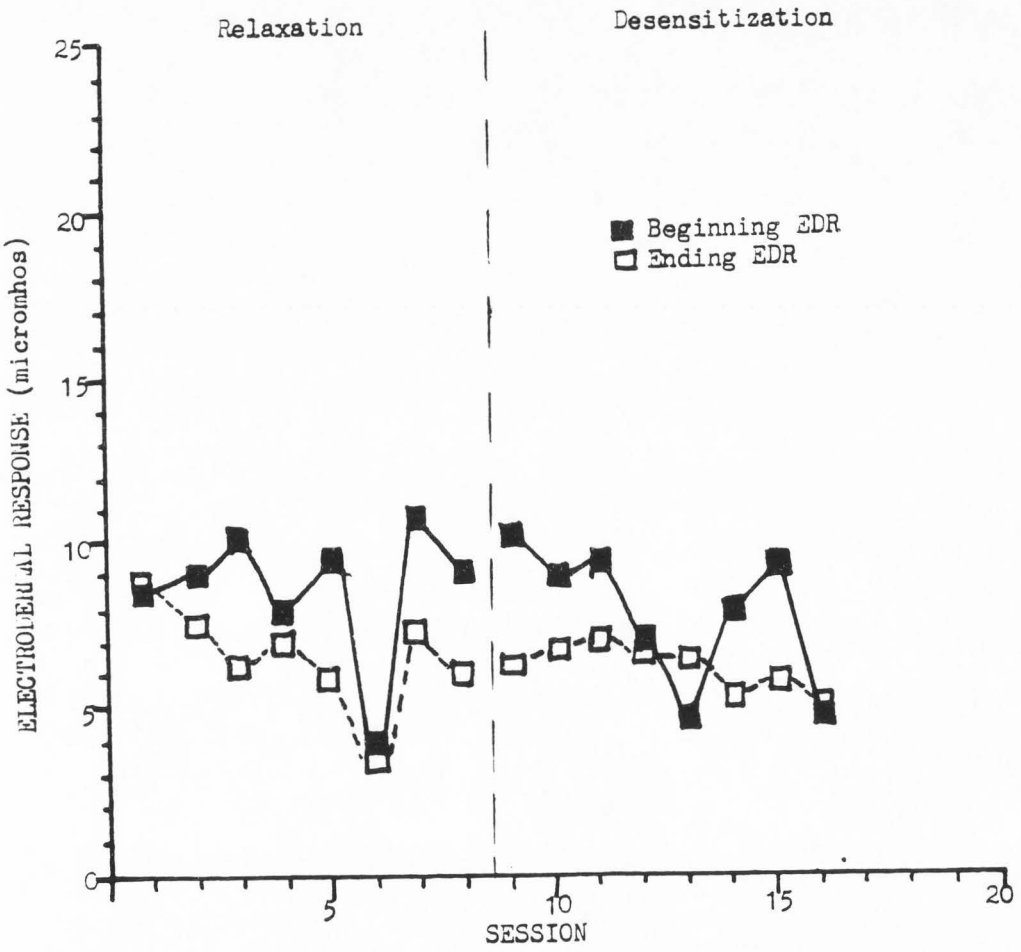


Figure 19. Electrodermal response from the beginning and end of each training session. (Subject 2)

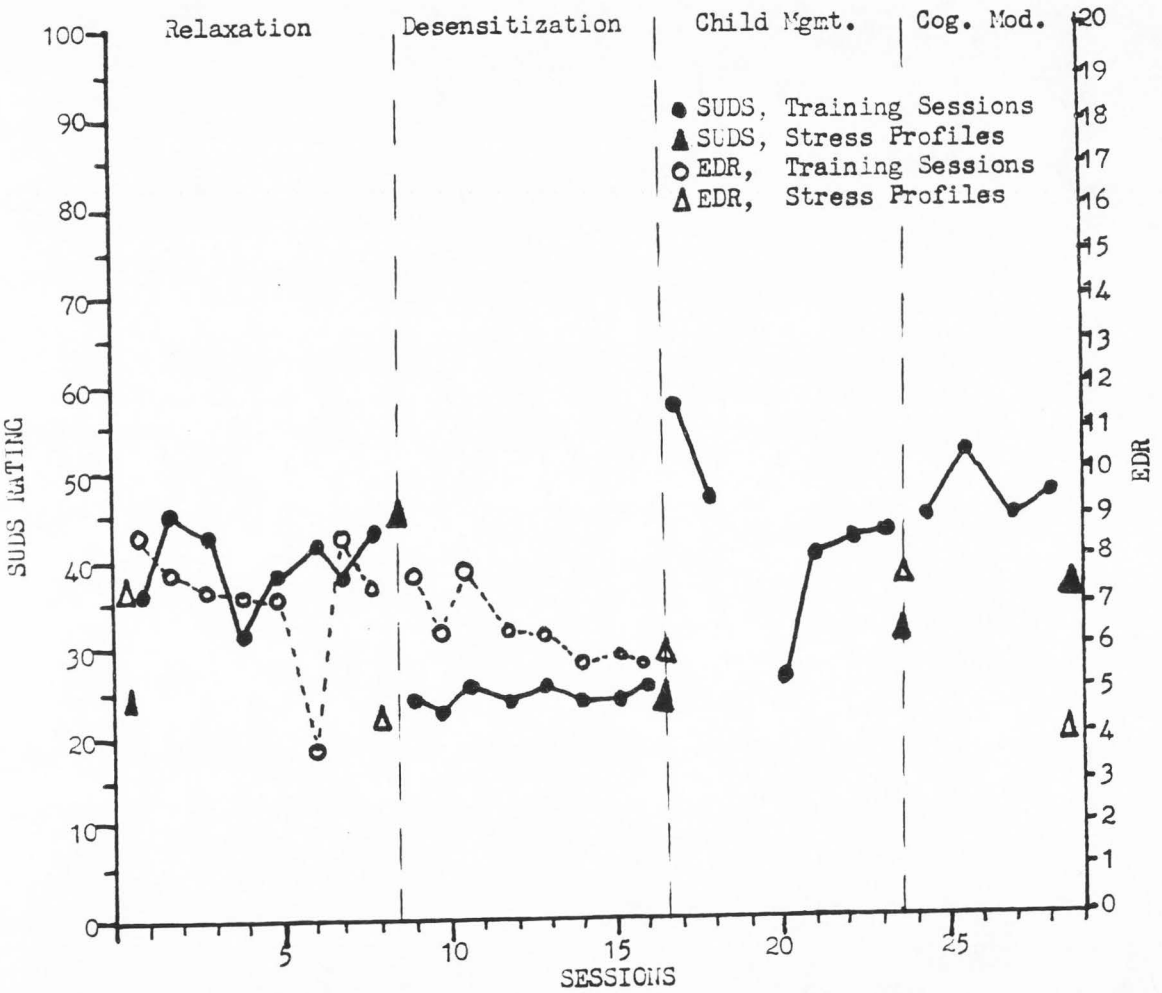


Figure 20. Comparison of subjective units of discomfort ratings and electrodermal response during training sessions and stress profile sessions. (Subject 2)

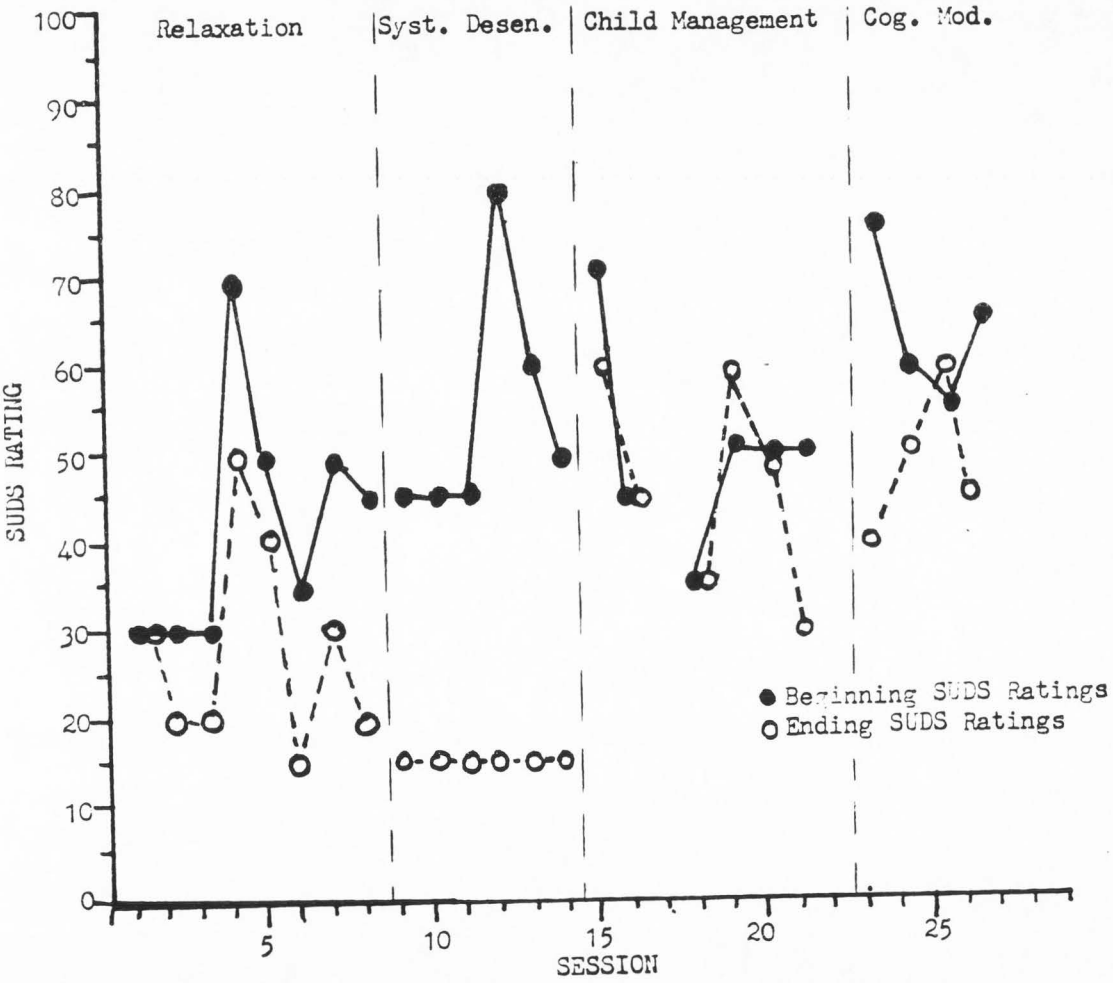


Figure 21. Subjective units of discomfort ratings from the beginning and end of each training session. (Subject 3)

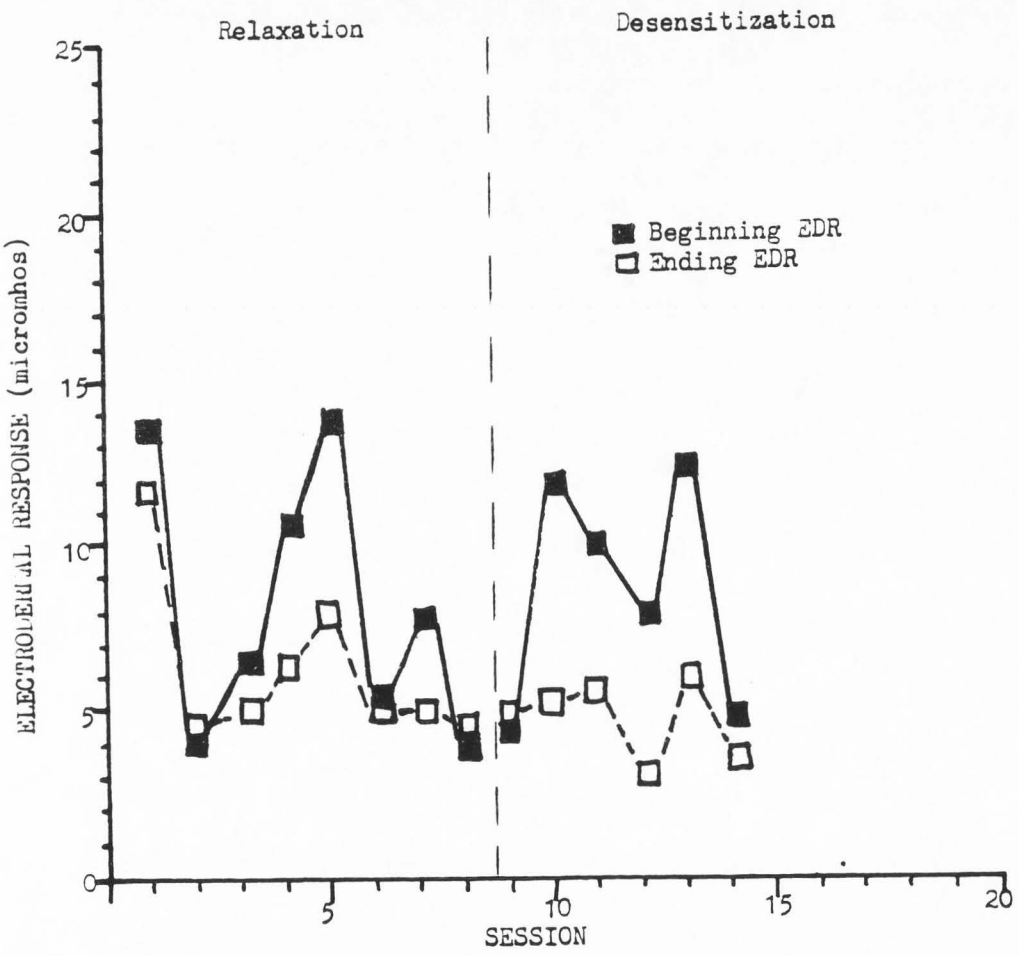


Figure 22. Electrodermal response from the beginning and and of each training session. (Subject 3)

For subject 3, SUDS ratings and EDR levels showed a positive relationship during relaxation training and the stress profiles (Figure 23). However, the two measures are not closely related during the desensitization phase of training. As was the case with subjects 1 and 2, we have an indication that the self-report data provided by this participant is fairly reliable. Subject 3 completed 14 relaxation diary forms. During home practice sessions, her SUDS ratings decreased an average of 30 points on the 0 to 100 scale (Figure 16). These data suggest that subject 3 was able to relax during home practice sessions as well as during laboratory training sessions.

Subject 4. Because Subject 4 discontinued treatment prior to relaxation and systematic desensitization training, only partial results are available. The data presented in Figure 24 indicated that her ratings of tension varied widely and changed little within training sessions. No comparison can be made between her subjective ratings of tension and EDR levels during training sessions (Figure 25). However, EDR levels measured during stress profile sessions (Figure 25) suggest that this parent was becoming somewhat more relaxed with repeated stress profiles as training progressed.

Subject 5. The data presented in Figure 26 show that subject 5 reported a decrease in tension during and across relaxation and systematic desensitization training sessions. The physiological data displayed in Figure 27 indicate that a slight increase in skin temperature occurred during 8 of the

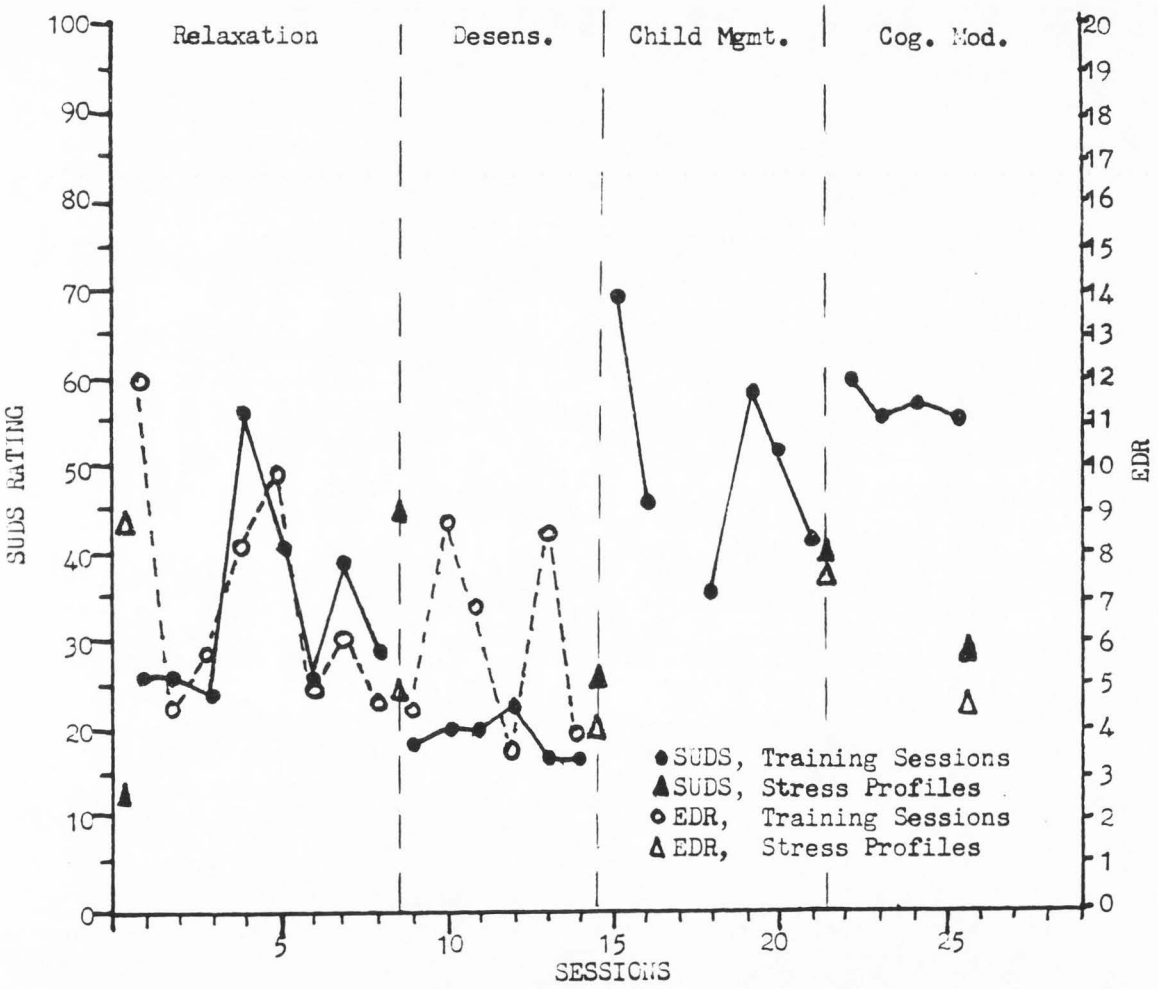


Figure 23. Comparison of subjective units of discomfort ratings and electrodermal response during training sessions and stress profile sessions. (Subject 3)

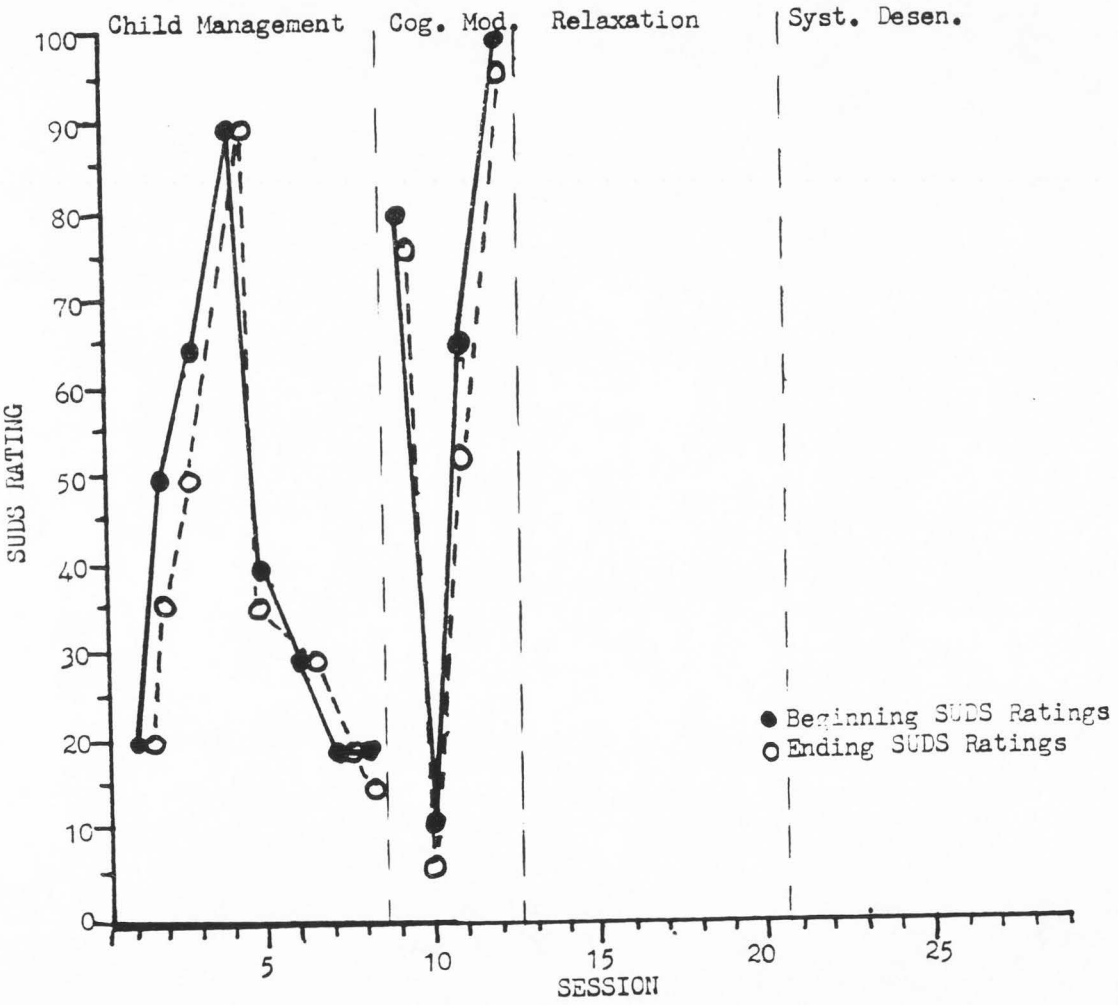


Figure 24. Subjective units of discomfort ratings from the beginning and end of each training session. (Subject 4)

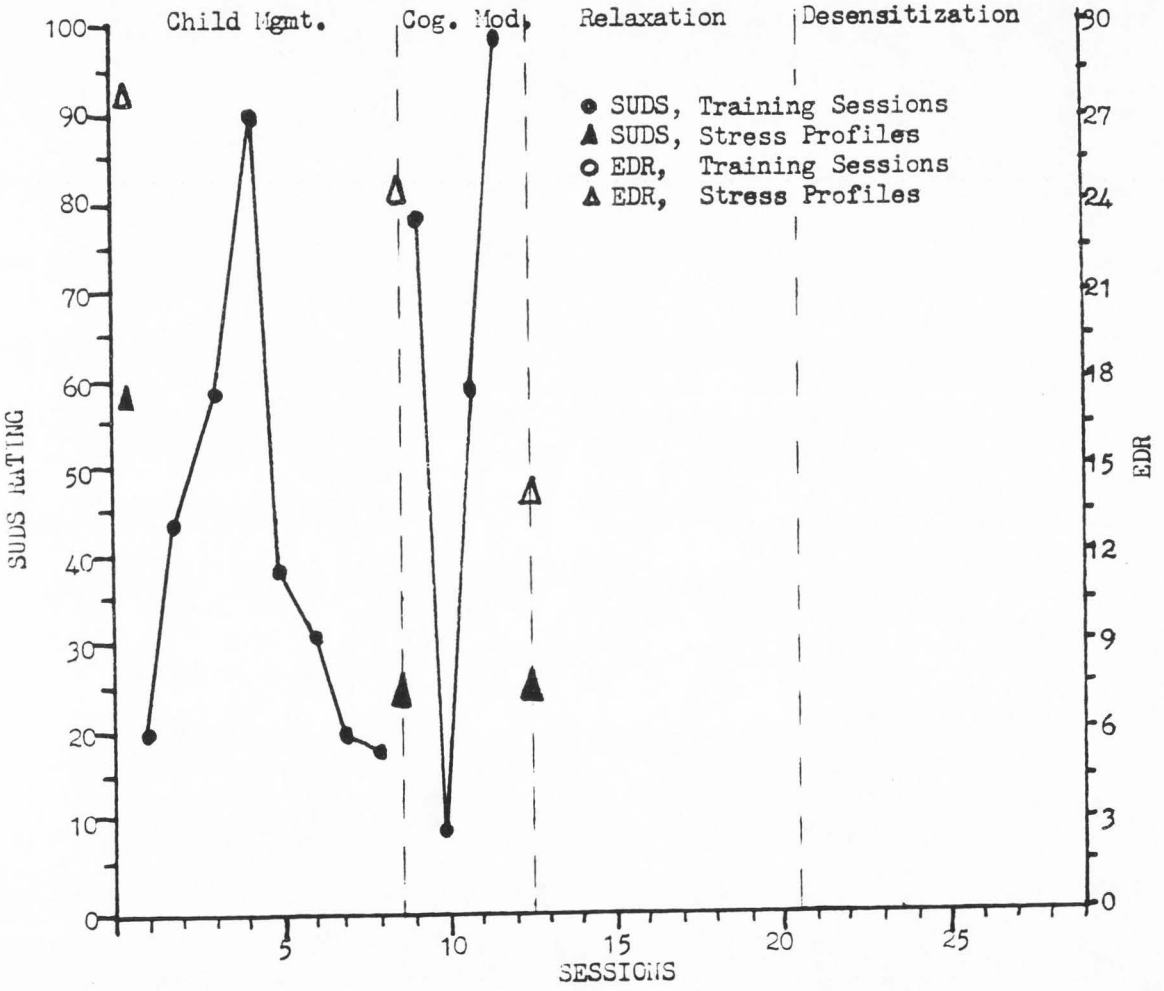


Figure 25. Comparison of subjective units of discomfort ratings and electrodermal response during training sessions and stress profile sessions. (Subject 4)

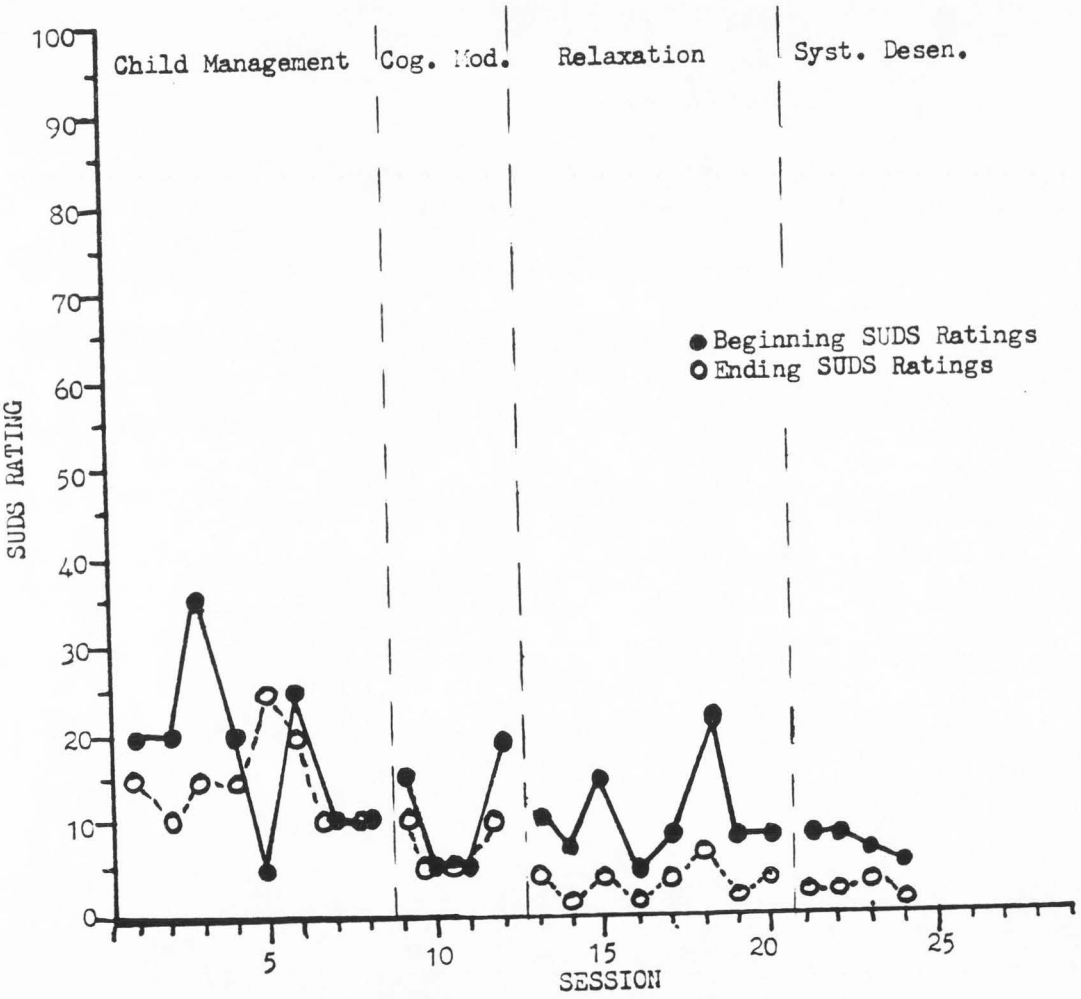


Figure 26. Subjective units of discomfort ratings from the beginning and end of each training session. (Subject 5)

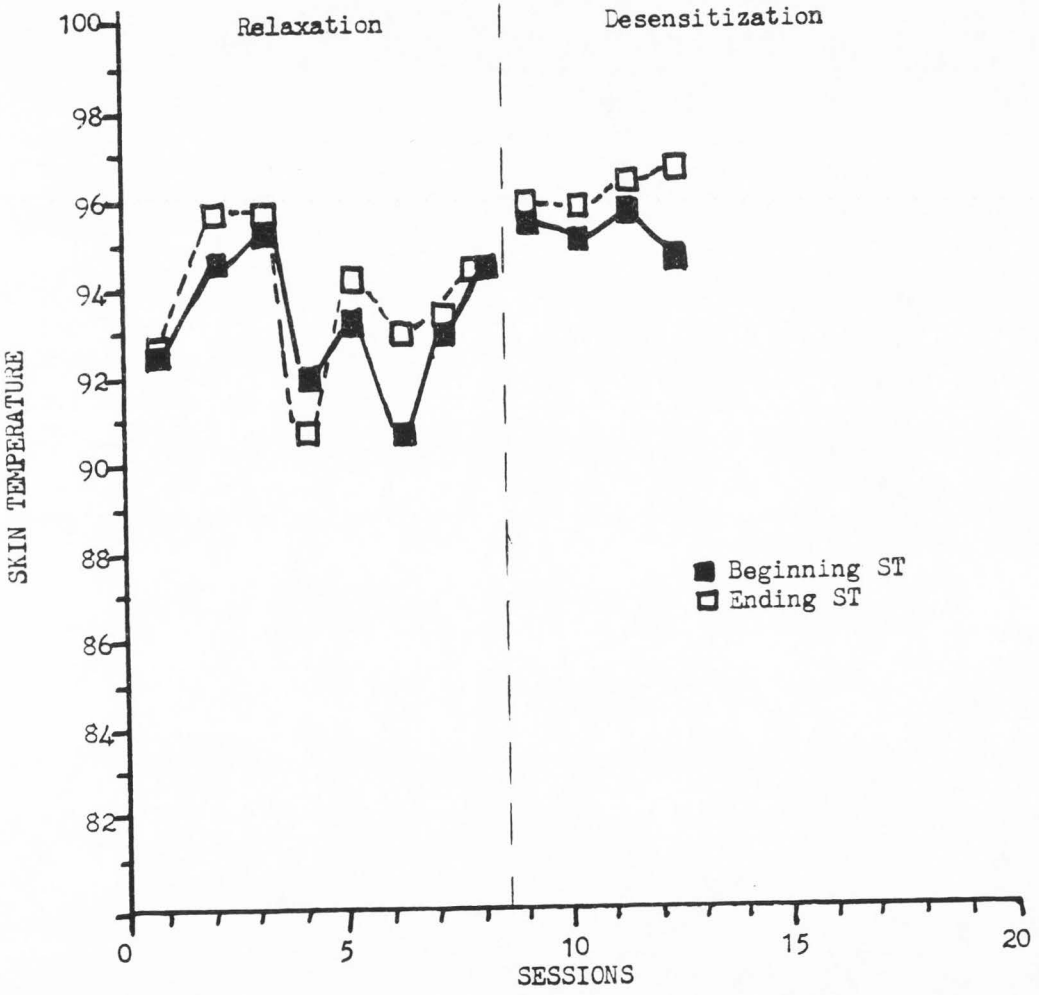


Figure 27. Skin temperature from the beginning and end of each training session. (Subject 5)

12 training sessions. Both the self-report data and skin temperature levels suggest that subject 5 was fairly relaxed from the onset of relaxation training. However, an increased ability to relax is indicated by a further decrease in SUDS ratings as well as higher skin temperature readings during systematic desensitization training sessions (Figure 28). As was observed with subjects 1, 2, and 3, a positive relationship exists between SUDS ratings and a physiological index of stress (Figure 28). As skin temperature increased, SUDS ratings decreased. Subject 5 completed 39 relaxation diary forms. During these home practice sessions, SUDS ratings decreased an average of 8.5 points on the 0 to 100 scale (Figure 16). These findings indicate that she was capable of relaxing on her own as well as in the training sessions.

Subject 6. The data presented in Figure 29 suggest that subject 6 felt very relaxed during most training sessions. Electrodermal levels decreased during 9 of the 12 training sessions (Figure 30). However, a trend toward overall higher EDR readings can be observed as training progressed. For this parent, there appears to be little or no relation between SUDS ratings and EDR levels (Figure 31). Therefore, the validity of subsequent self-report data is uncertain. Subject 6 completed only one relaxation diary form (Figure 16). During that home practice session, no decrease in SUDS rating was reported.

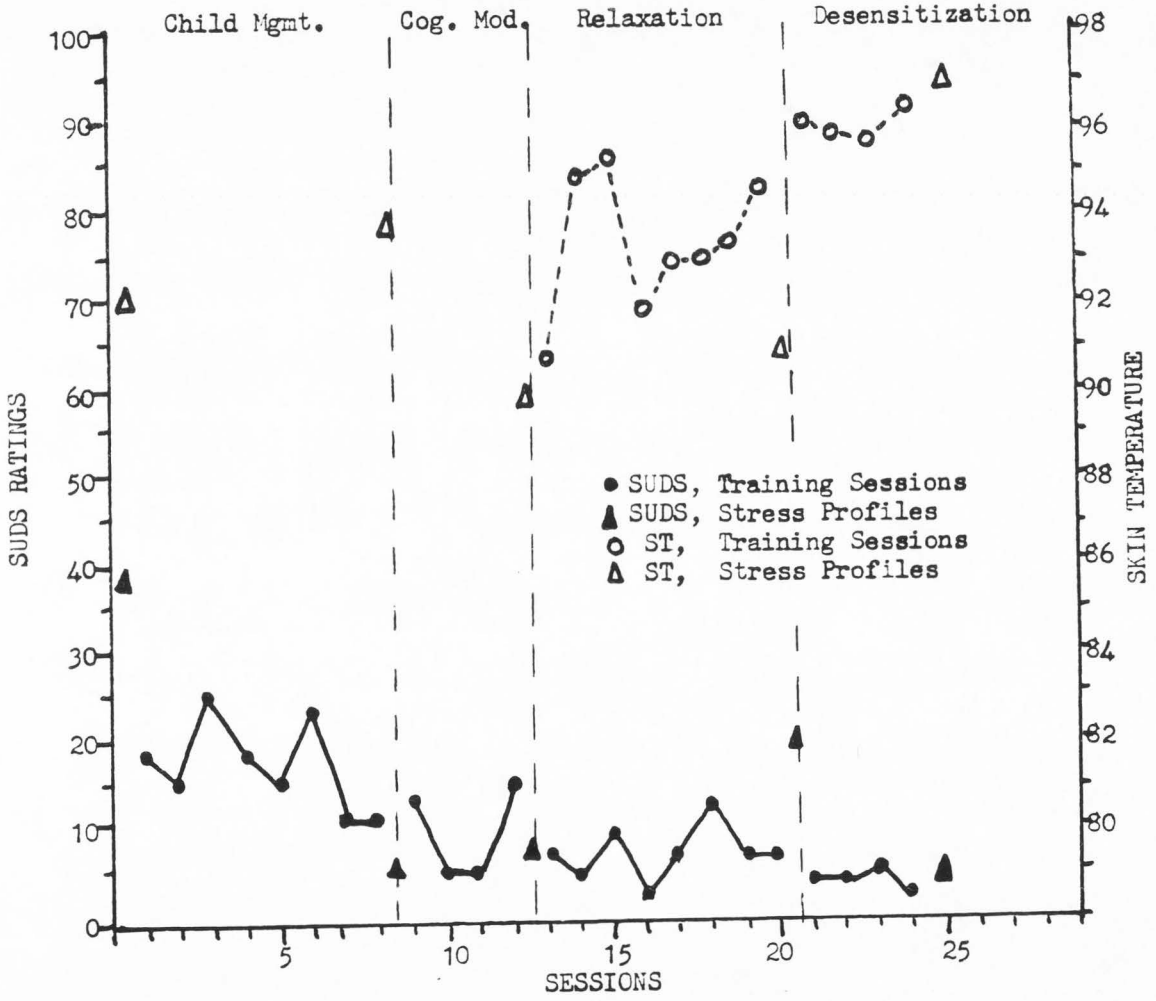


Figure 28. Comparison of subjective units of discomfort ratings and skin temperature during training sessions and stress profile sessions. (Subject 5)

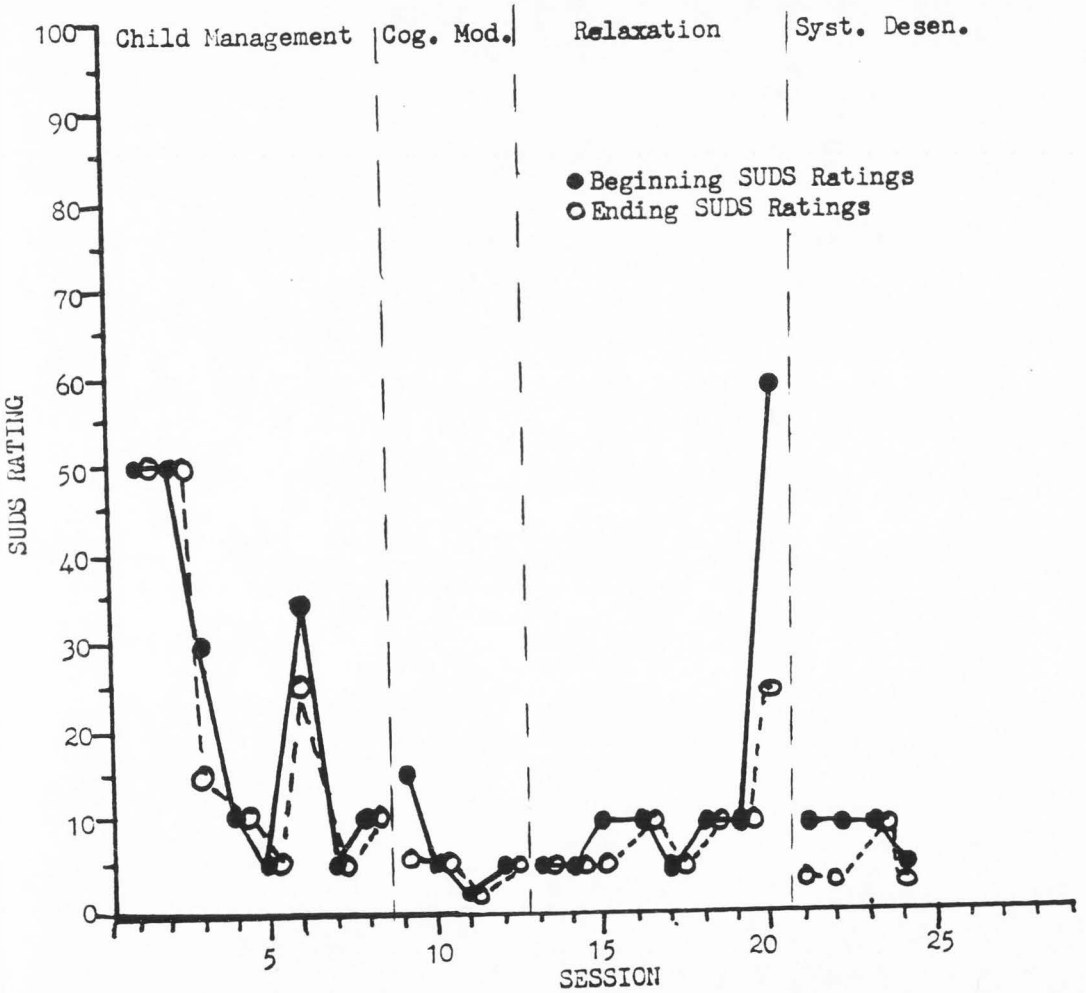


Figure 29. Subjective units of discomfort ratings from the beginning and end of each training session. (Subject 6)

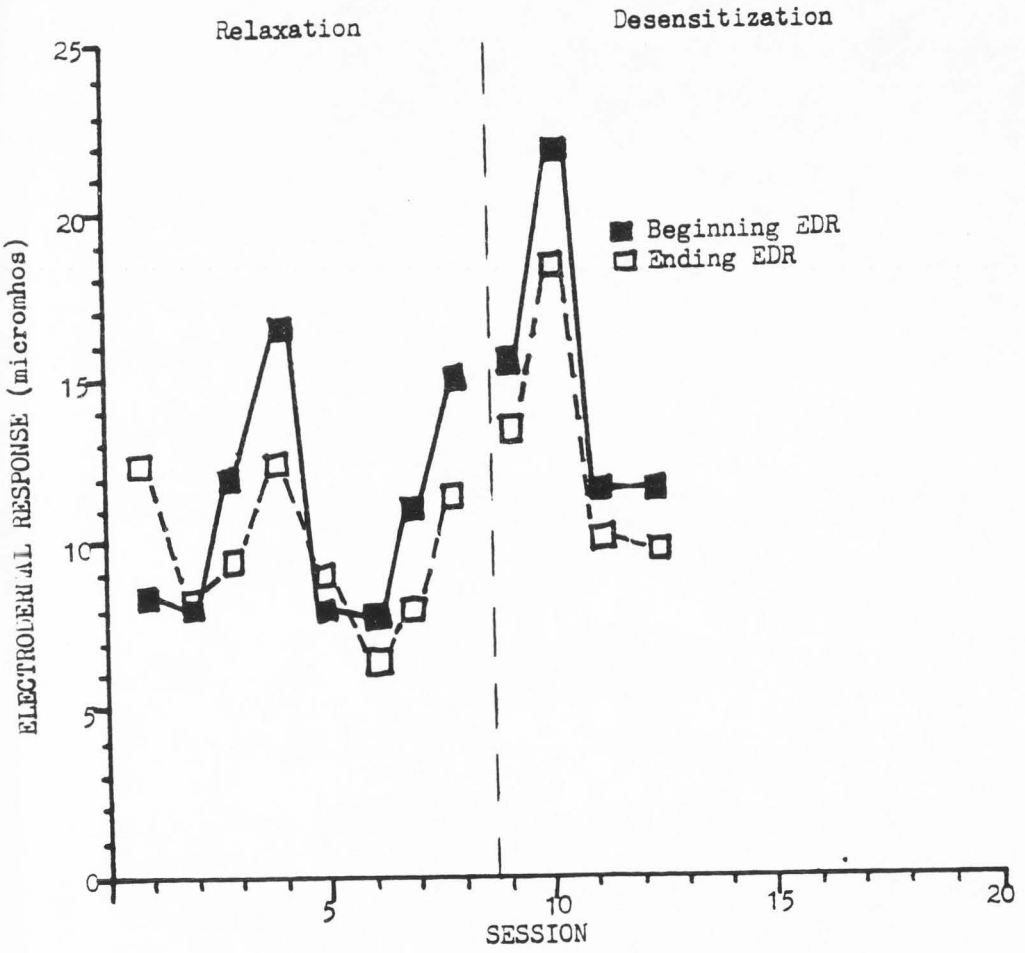


Figure 30. Electrodermal response from the beginning and end of each training session. (Subject 6)

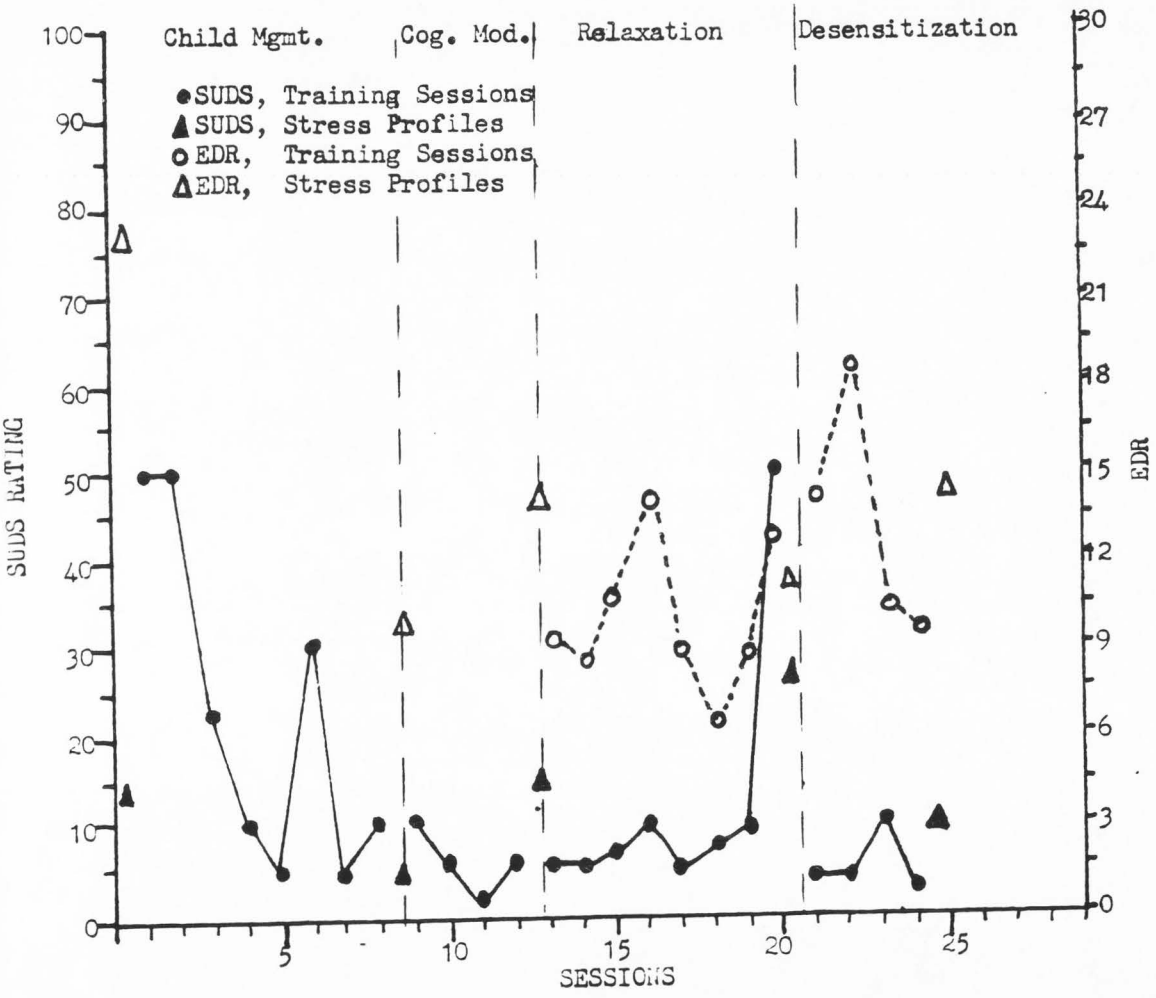


Figure 31. Comparison of subjective units of discomfort ratings and electrodermal response during training sessions and stress profile sessions. (Subject 6)

Systematic Desensitization

Systematic desensitization was conducted with five of the six subjects following the completion of relaxation training (Subject 4 did not participate in this phase of treatment). Results indicate that the skill presented during this phase of intervention (remaining relaxed in the presence of stressful child stimuli from the anxiety hierarchy) was acquired by all five of the parents. The data presented in Figures 14, 19, 22, 27, and 30 show that physiological readings at the end of training sessions were consistently in the direction of relaxation compared to beginning levels, despite presentation of stressful auditory stimuli from the anxiety hierarchy. (The only two exceptions to this finding were during the 13th sessions for subjects 1 and 2, [Figures 14 and 19] when ending EDR levels were higher than beginning levels). This relaxation pattern is particularly clear during the last three to four training sessions for each subject, even though items from the upper end of the hierarchy (rated as more stressful by the parent) were being presented. An average of 37 trials (range 13 to 82) were required to proceed through each parent's 10-item anxiety hierarchy. Subject 6 was an exception, requiring only 3 repetitions (a total of 13 trials) during the entire hierarchy. The low number of repetitions, along with stable SUDS ratings and EDR levels during desensitization sessions, suggests that the items presented in the hierarchy were not

stressful for this parent or he did not attend to or visualize the items as they were presented.

The data displayed in Table 12 provide an example of the desensitization process. These data, taken from the 5th through 8th sessions of subject 1, show that the parent became desensitized to items in the anxiety hierarchy. During the nine presentations of this particularly stressful auditory stimulus (rated by the parent as 9th of the 10 hierarchy items), the subject's physiological response to the stimulus gradually decreased. Also, the pre-stimulus EDR level became lower as training progressed, suggesting improvement in overall relaxation, as well as desensitization to specific stimuli. It should be noted that other stimuli from the anxiety hierarchy constructed for this parent required fewer presentations (ranging from one to four trials) than this stimulus. The ninth item is displayed because it appeared to be a particularly potent one for the parent and clearly exemplifies the desensitization process. Subjective ratings, shown in Figures 13, 18, 21, 26, and 29, also indicate that the parents were able to relax during exposure to the anxiety hierarchy items. The specific effect of systematic desensitization is most apparent when comparing the topography of the stress profile graphs for subject 1 (Figure 32). During the post-relaxation stress profile, the parent showed decreased arousal in comparison to the baseline taken before treatment, but continued to react to the audiotaped stimuli. However, no response is apparent during

Table 12

Subjective Ratings and EDR Levels of Subject 1 Before and After Presentations of an Item of the Anxiety Hierarchy

Hierarchy Item #9	Session #	Trial #	SUDS Rating		EDR Level	
			Pre	Post	Pre	Post
	5	1	10	15	9.5	16.0
		2	10	20	9.3	16.6
		3	10	10	9.0	9.0
	6	4	10	30	6.0	8.0
		5	10	40	6.6	8.9
		6	0	5	6.5	6.8
	7	7	10	10	6.4	7.9
		8	5	10	6.1	6.2
	8	9	10	10	5.4	5.4

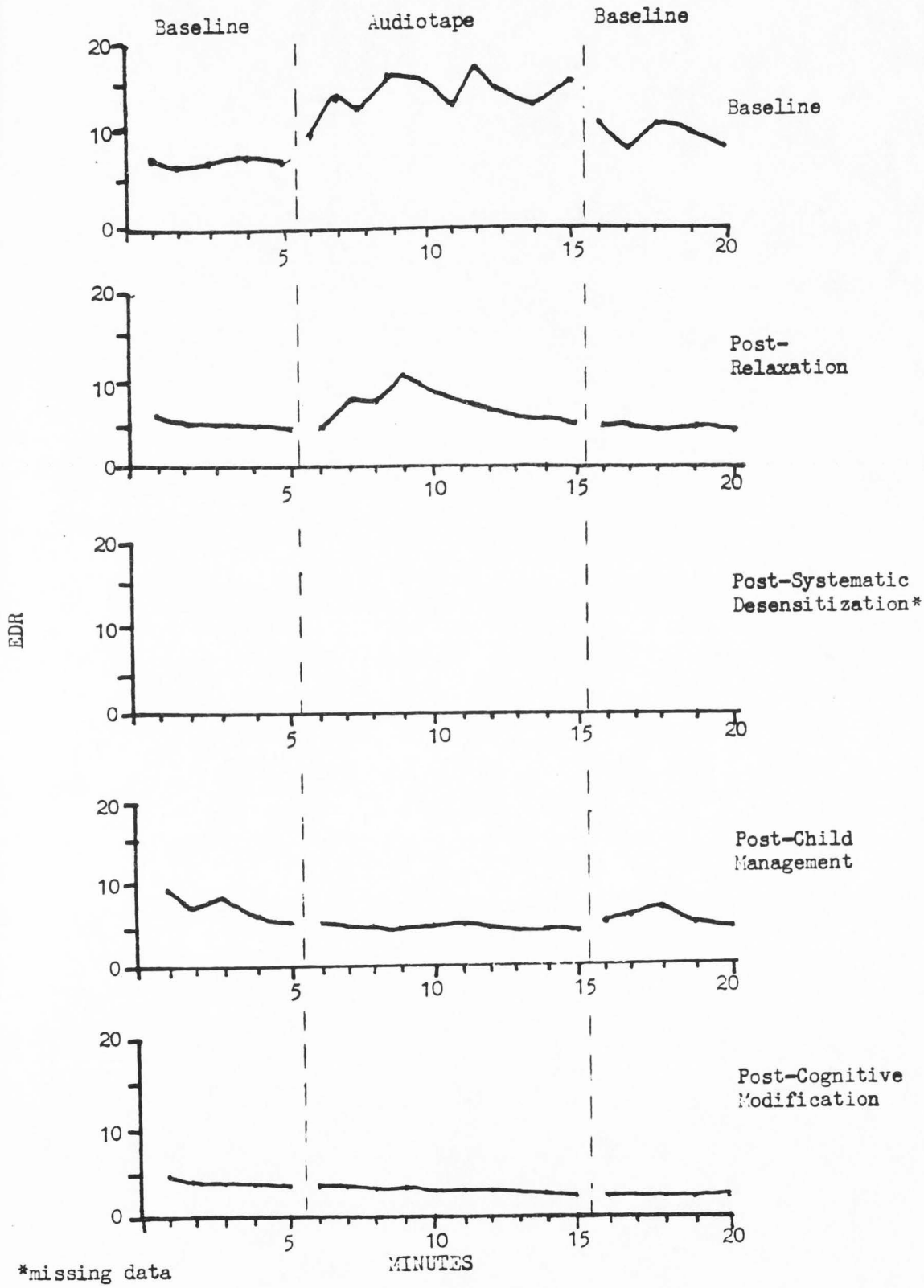


Figure 32. Electrodermal response levels within and across stress profile sessions. (Subject 1)

the post-child management stress profile. In fact, the parent responded with lower EDR levels during the audiotape presentation than during the initial and final baselines within the session. It is unfortunate that data from the post-desensitization stress profile for subject 1 are missing. (Although data from the stress profile were recorded, the data sheet was misplaced and was lost). However, results of subjects 2, 3, 4, and 5 (Figures 33-37) confirm that desensitization to child-related stimuli occurred following the systematic desensitization phase of treatment. The effect of desensitization training on subject 6 is less apparent based on the stress profile data (Figure 37). It should be noted that during the post-desensitization stress profile for this subject, the EDR level decreased steadily during the audiotape until the 12th minute when he shifted physical positions and complained of "boredom" with the procedure. Thereafter, the EDR level increased gradually, suggesting that variations in the physiological parameter were not related to stress created by the audiotape, per se.

Child Management

Child management is the third treatment component to be examined. Three methods were used to assess the subjects' understanding and application of child management skills (Table 13). First, during the final session of this component, a verbal review was conducted in which the parent responded to 14 selected questions about child-rearing

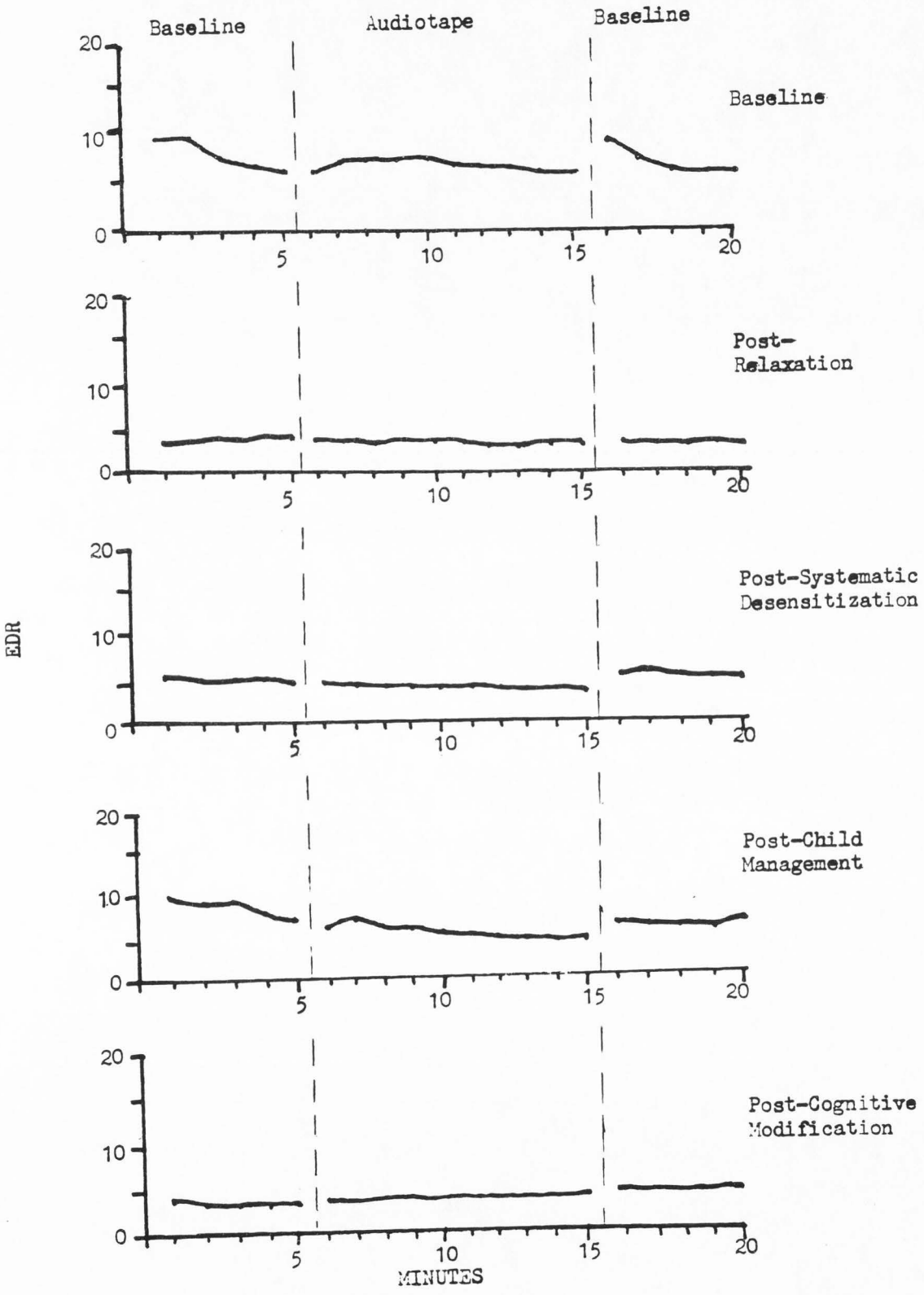


Figure 33. Electrodermal response levels within and across stress profile sessions. (Subject 2)

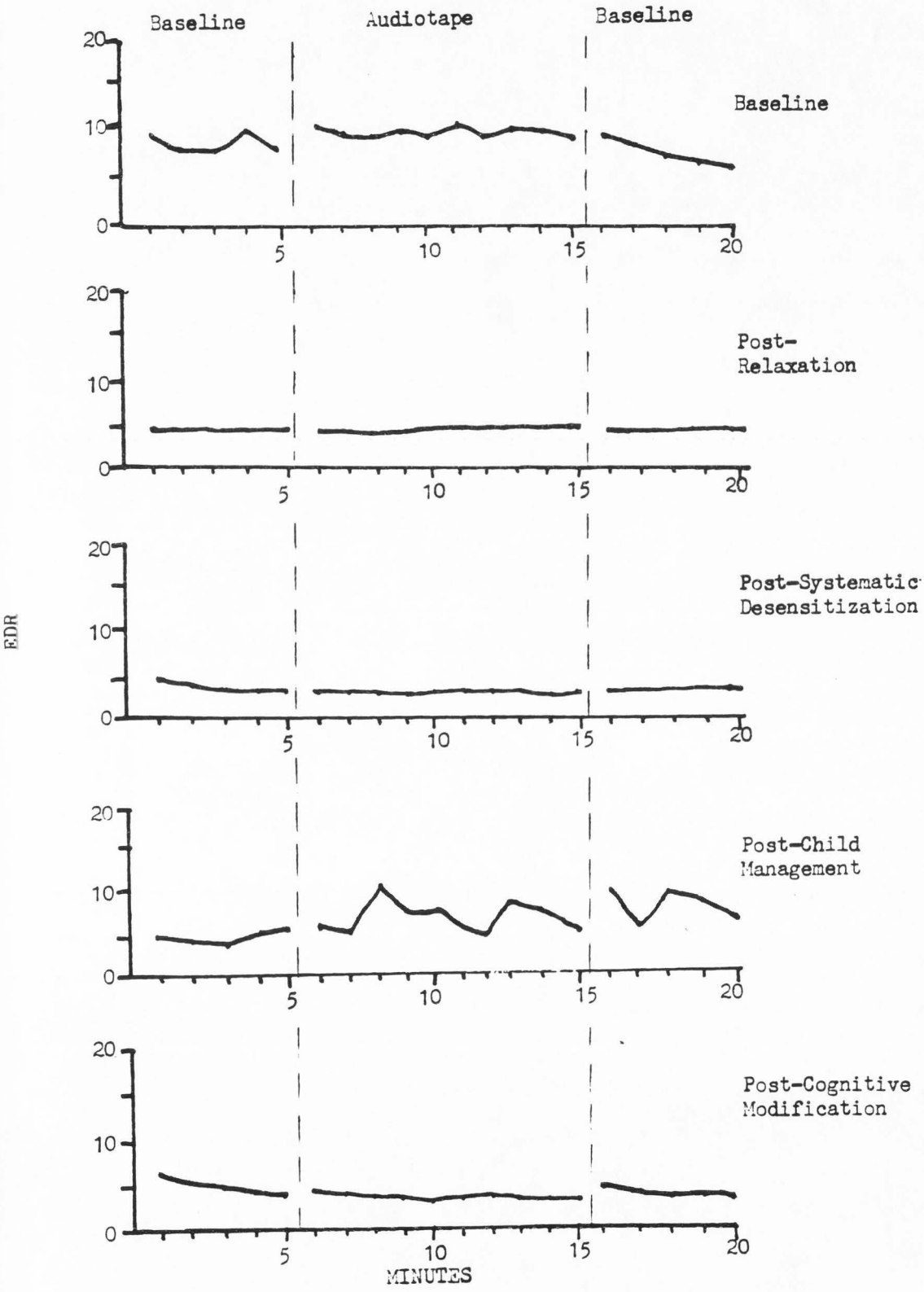
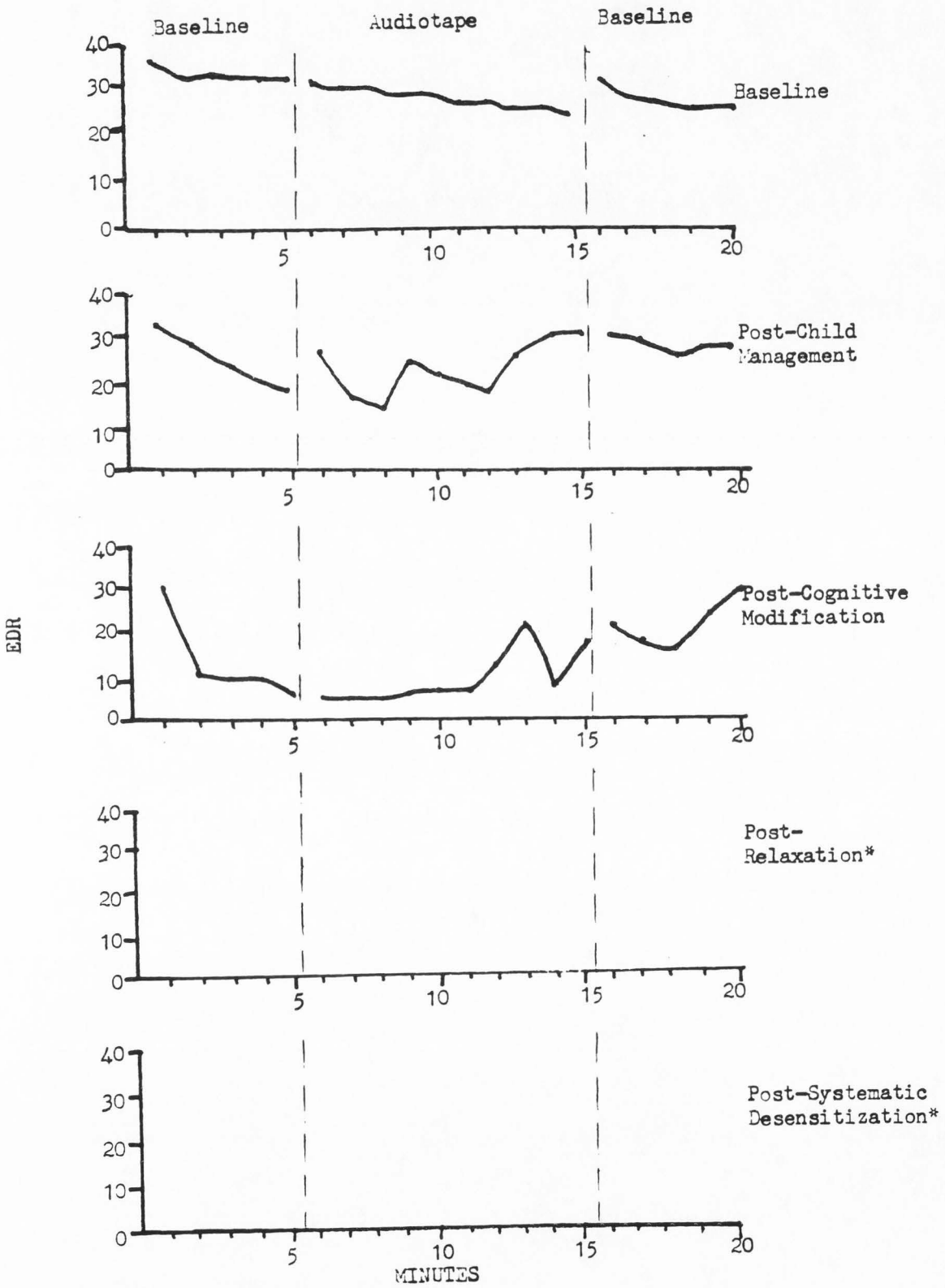


Figure 34. Electrodermal response levels within and across stress profile sessions. (Subject 3)



*Subject did not complete treatment.

Figure 35. Electrodermal response levels within and across stress profile sessions. (Subject 4)

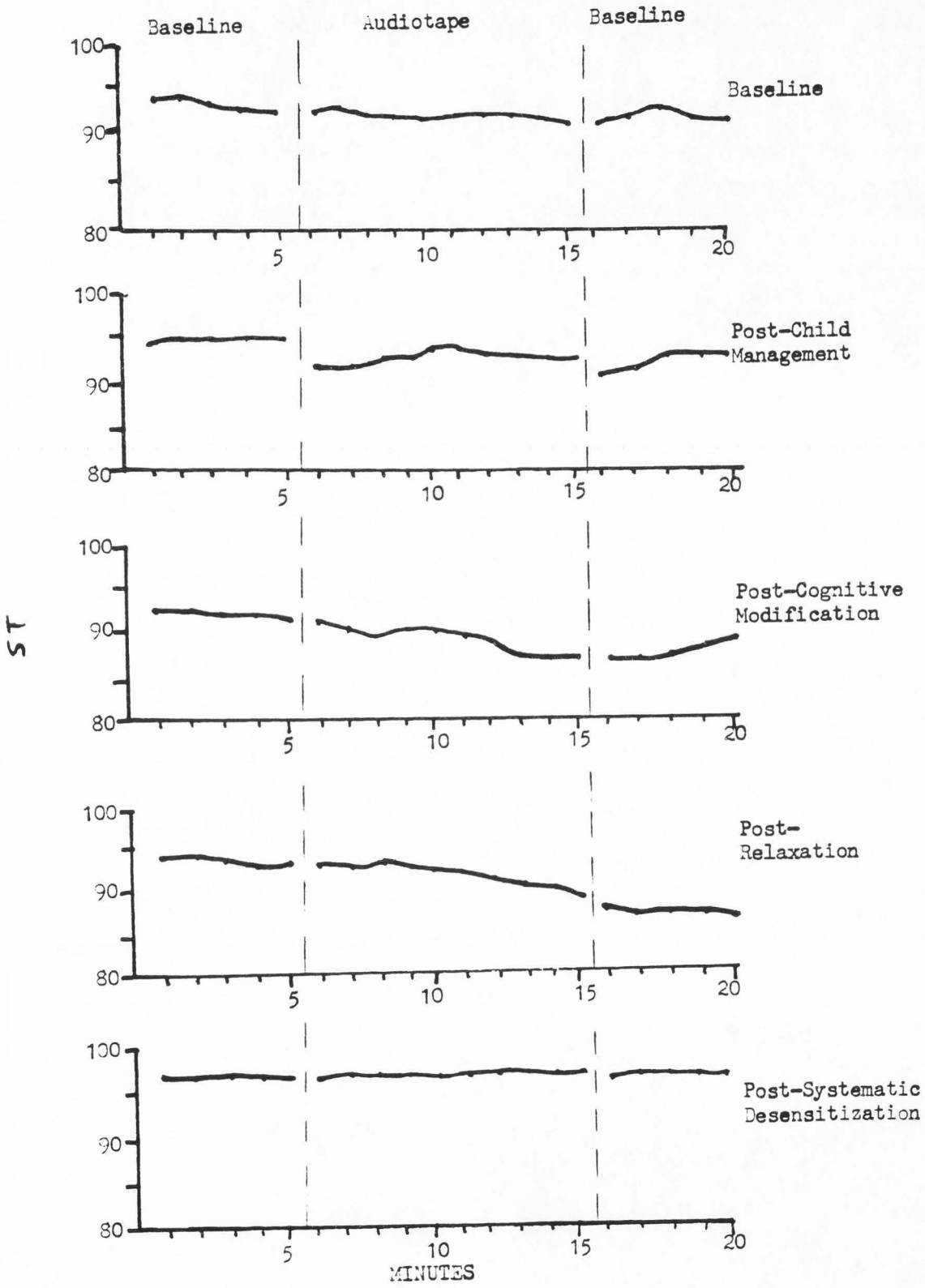


Figure 36. Skin temperature levels within and across stress profile sessions. (Subject 5)

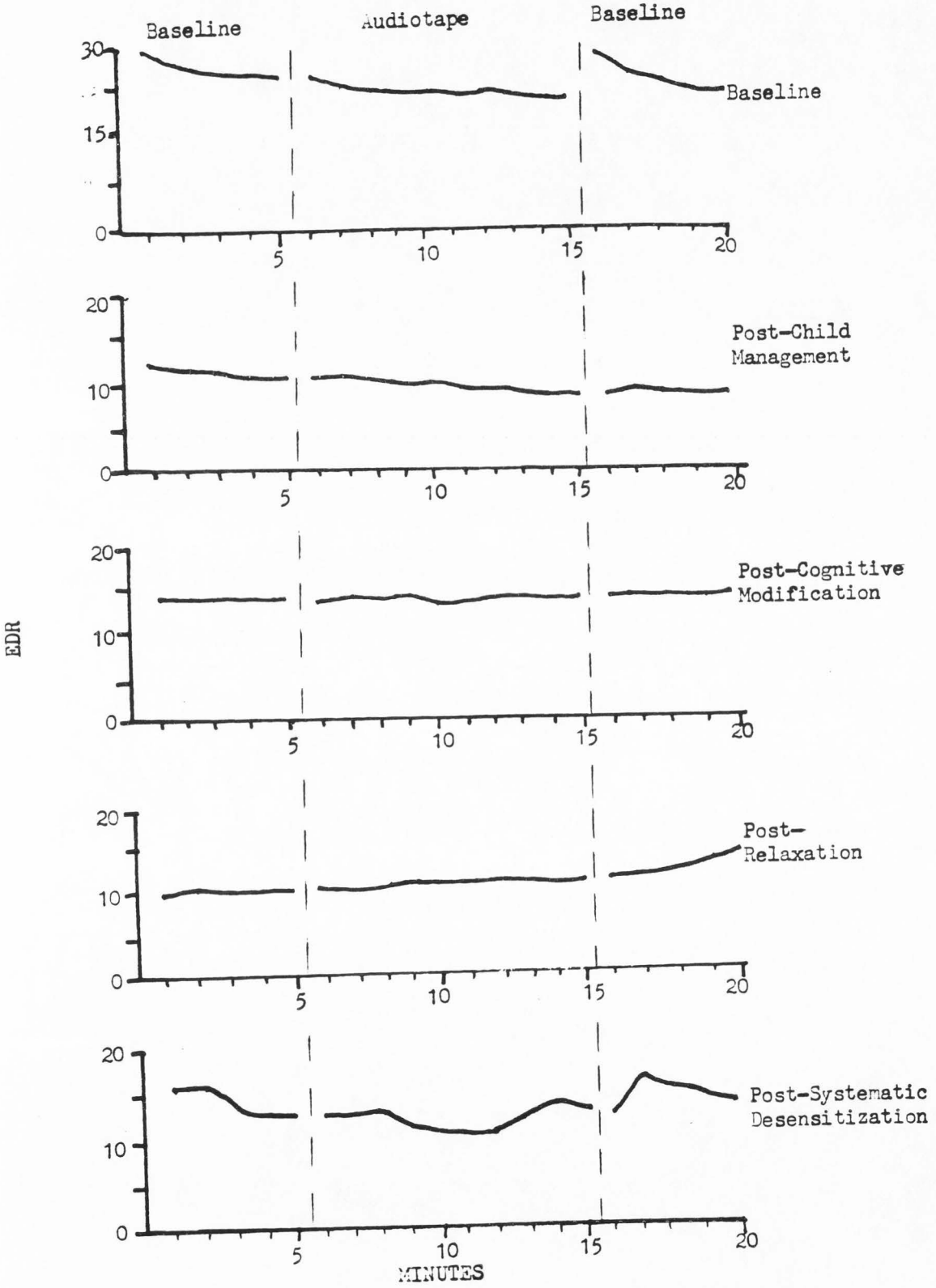


Figure 37. Electrodermal response levels within and across stress profile sessions. (Subject 6)

Table 13

Assessment of Knowledge and Skills Presented During Child Management and Cognitive Modification Training Sessions

	Child Management			Cognitive Modification	
	Correct Responses to Post-Test Items	Homework Assignments Completed	Positive Parent Statements on Audiotapes	Correct Responses to Post-Test Items	Homework Assignments Completed
Subject 1	36%	70%	No Increase	71%	33%
Subject 2	50%	29%	No Increase	100%	33%
Subject 3	86%	43%	No Increase	100%	33%
Subject 4	86%	50%	No Increase	64%	67%
Subject 5	93%	57%	No Increase	71%	67%
Subject 6	15%	28%	No Increase	71%	33%

techniques. The second potential indicator of competency was the parent's completion of the seven assigned homework tasks between training sessions. The third (and perhaps most telling) indicator of the parent's ability to apply child management skills was the frequency with which positive reinforcement was used when interacting with the child. By coding the positive parent statements from the biweekly audiotapes, a direct assessment of the parent's use of this important child management technique was possible for a selected time sample. The data show that positive parent statements did not increase for any parent during the child management component (Figure 10).

Cognitive Modification

Assessment of the parents' ability to apply cognitive modification techniques was conducted by presenting two hypothetical parent-child conflict situations during the final training session. For each scenario, the parent responded verbally to each of the seven items in the problem-solving strategy format (Appendix E), which included identification of irrational beliefs and production of appropriate alternate self-statements. As shown in Table 13, subjects 2 and 3 provided correct responses to all items. Subjects 1, 4, 5, and 6 demonstrated partial cognitive mastery of the concepts and skills presented during this phase of treatment. All subjects completed a portion of the three cognitive modification homework assignments.

Generalization and Maintenance of Skills

The final questions to be addressed are whether the parents maintained and generalized the ability to relax.

Generalization

Generalization of the relaxation skill from the laboratory to the home is apparent in the SUDS ratings from home practice sessions (Figure 16) for subjects 1 through 5. For subject 6, however, the ability to relax during home practice sessions is doubtful, based upon the one practice session reported by this parent. For most of the subjects, it is not clear if the skill generalized from training sessions to selected high-stress periods in the home (the 30-minute target periods). Figure 38 shows conflicting results for subject 1. EDR levels during home monitoring sessions (conducted during the targeted high-stress periods) actually increased between the baseline period and the relaxation phase, while SUDS ratings (taken simultaneously with EDR readings) decreased. Also, during follow-up probes, EDR levels increased while SUDS ratings decreased. For Subject 1, the trend towards decreased SUDS ratings suggest that she reported being more relaxed during high stress periods at home as treatment progressed, although EDR levels measured during follow-up probes do not support this trend. Conflicting data are also apparent for subject 2 (Figure 39). EDR data indicate that a temporary decrease in tension occurred during relaxation training, although SUDS ratings

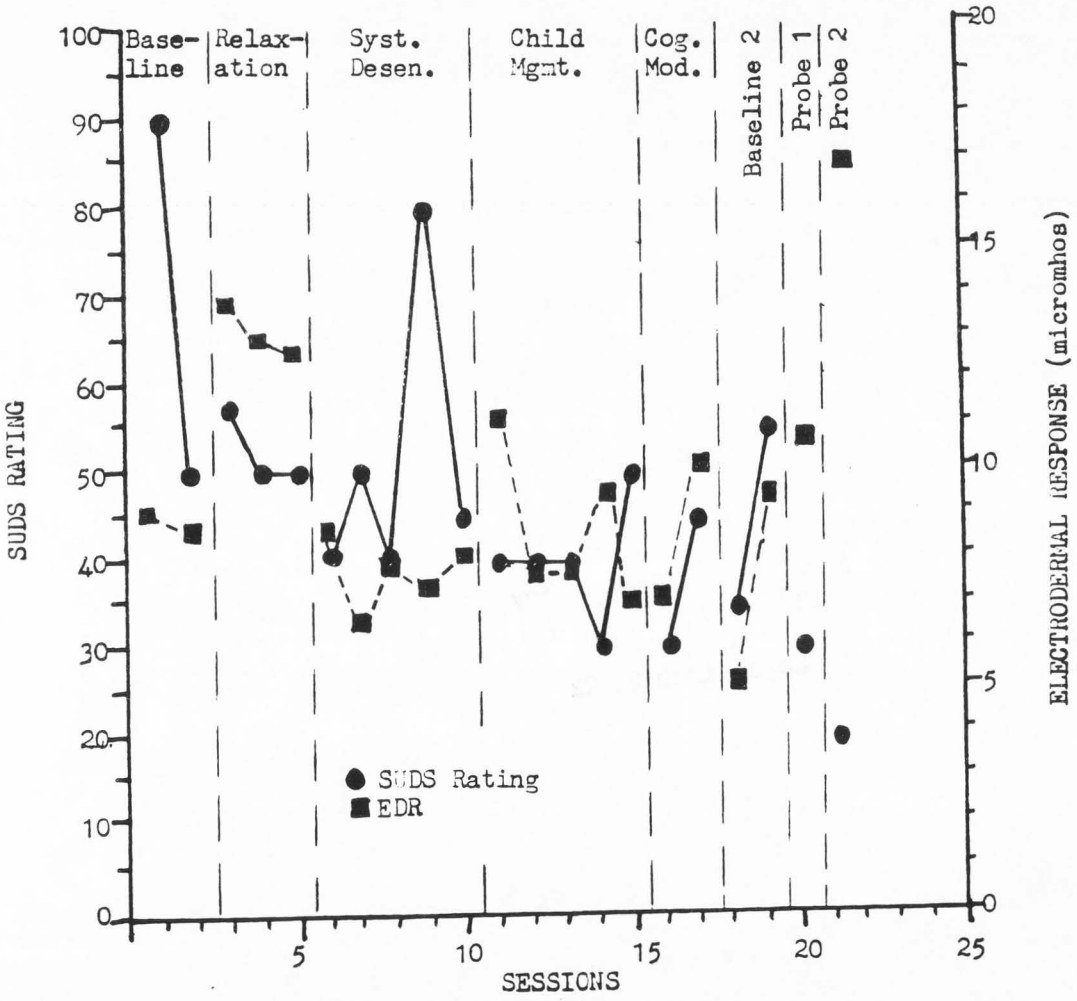


Figure 38. Comparison of average subjective units of discomfort ratings and average electrodermal response during each 30-minute home monitoring session. (Subject 1)

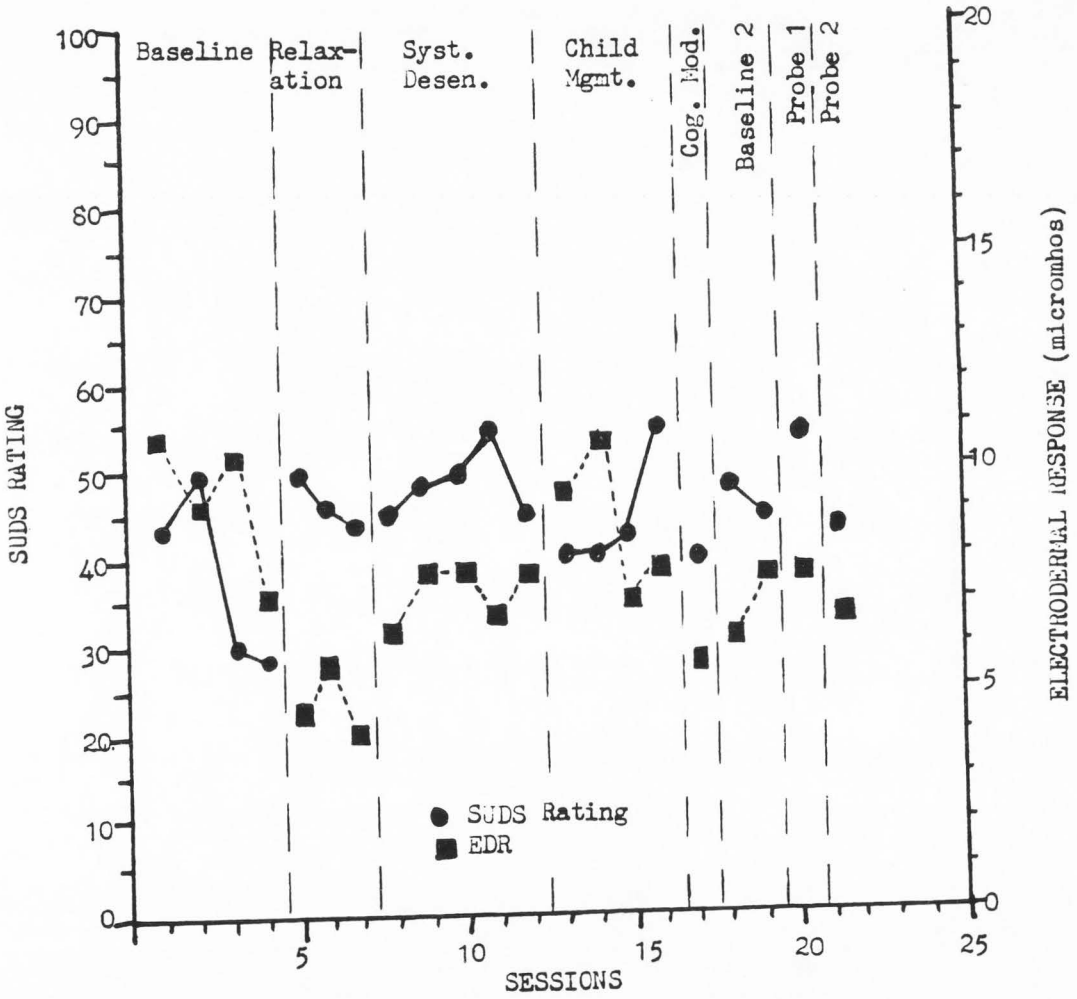


Figure 39. Comparison of average subjective units of discomfort ratings and average electrodermal response during each 30-minute home monitoring session. (Subject 2)

showed an increase during this phase in comparison to the baseline. During subsequent training phases, neither the subjective nor the physiological data collected during home monitoring sessions showed a substantial change relative to baseline values. A similar lack of evidence for generalization is observed in home monitoring data of subjects 3 and 4 (Figures 40 and 41). In fact, EDR levels indicate a trend toward increased tension as training progressed. Data from subjects 5 and 6, however, suggest that the effects of relaxation and desensitization generalized to the targeted high-stress periods. The skin temperature of subject 5 (Figure 42) during home monitoring sessions shows a general upward trend. Corresponding SUDS ratings indicate decreased tension in comparison to baseline values. A partial generalization of training effect is also suggested in the data for subject 6 (Figure 43). EDR levels measured during the stressful period appear to have stabilized during the relaxation training phase, although the fluctuation of EDR levels resumes upon the initiation of systematic desensitization training. It is noteworthy that all training sessions for subjects 5 and 6 took place in their home rather than the laboratory. In summary, for subjects 1, 2, and 3 it seems most appropriate to conclude that the relaxation skill learned by these parents in the laboratory transferred to the home during periods when the parent practiced the skill, but did not transfer reliably to high-stress periods when the children were present. For

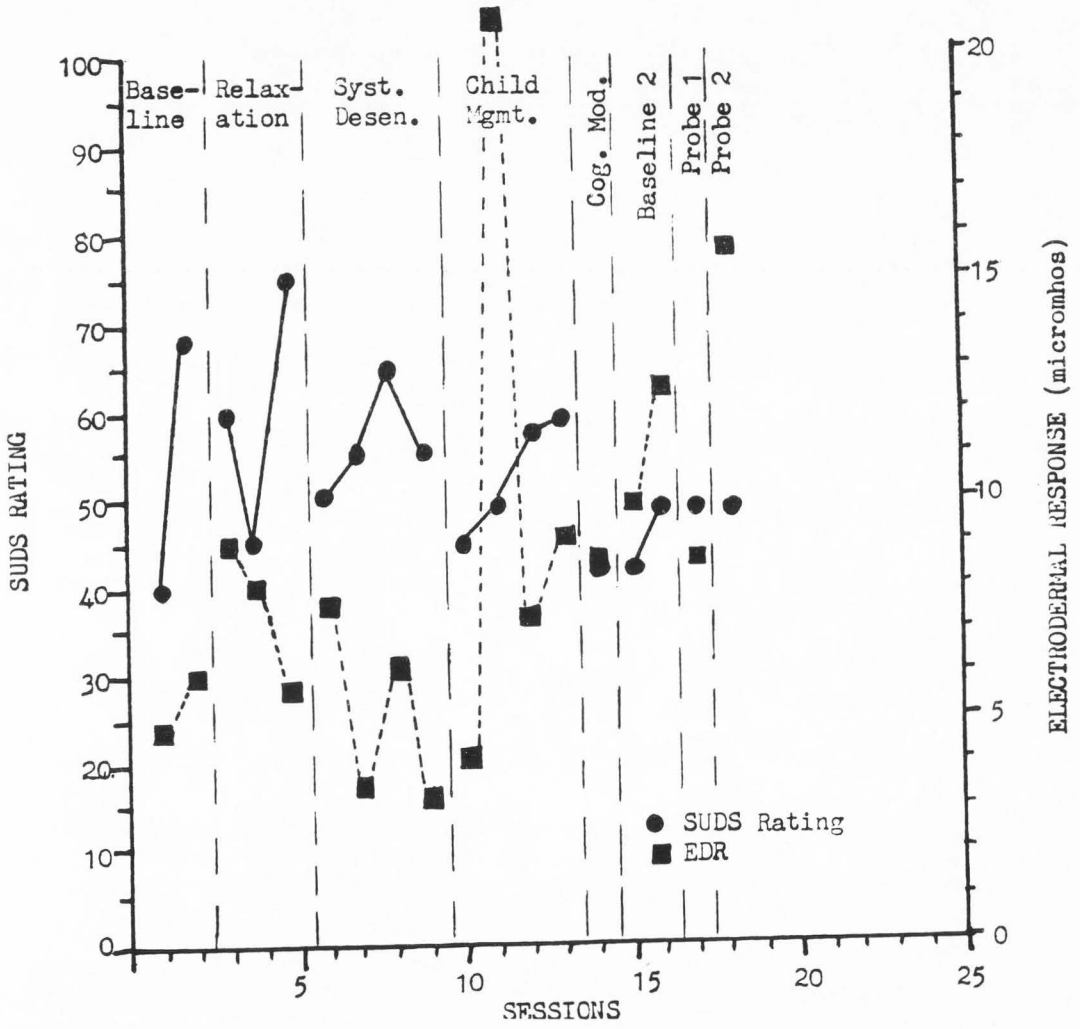


Figure 40. Comparison of average subjective units of discomfort ratings and average electrodermal response during each 30-minute home monitoring session. (Subject 3)

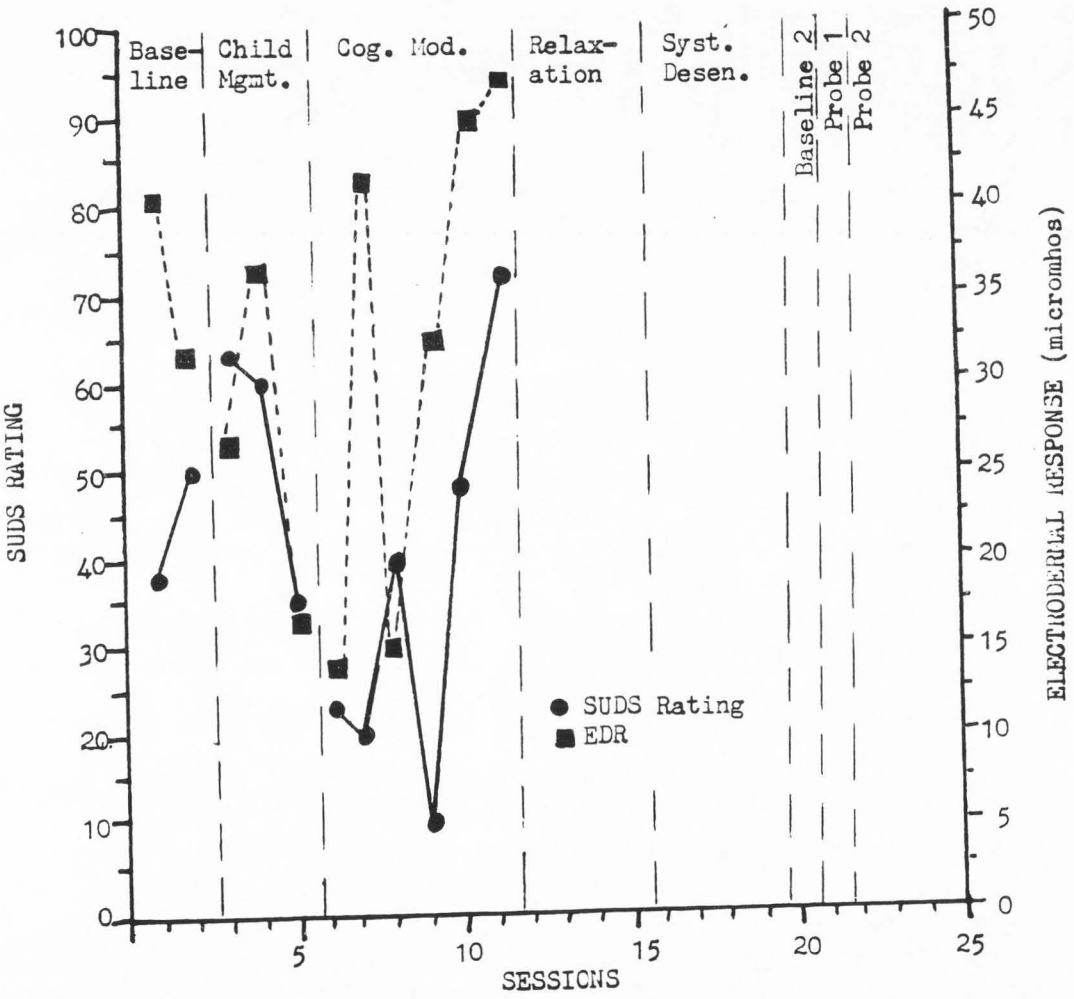


Figure 41. Comparison of average subjective units of discomfort ratings and average electrodermal response during each 30-minute home monitoring session. (Subject 4)

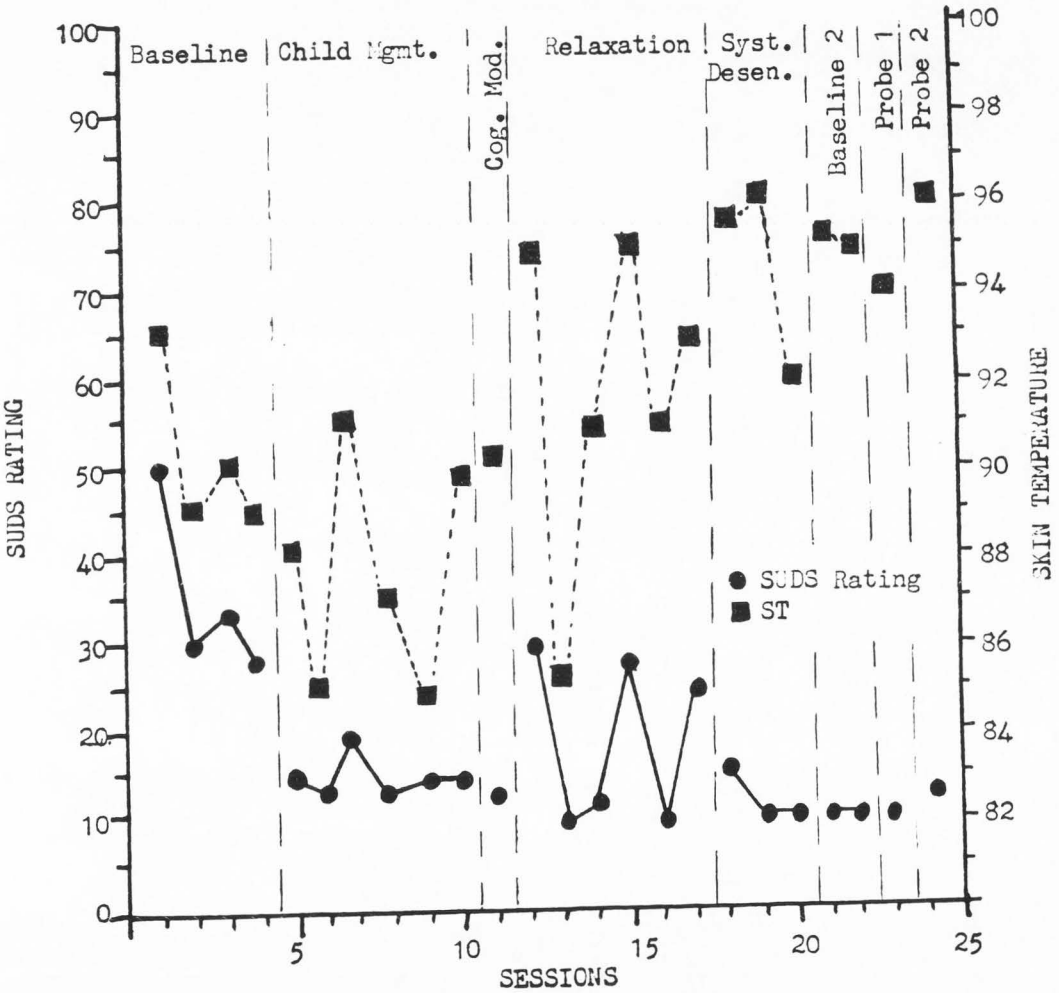


Figure 42. Comparison of average subjective units of discomfort ratings and average skin temperature during each 30-minute home monitoring session. (Subject 5)

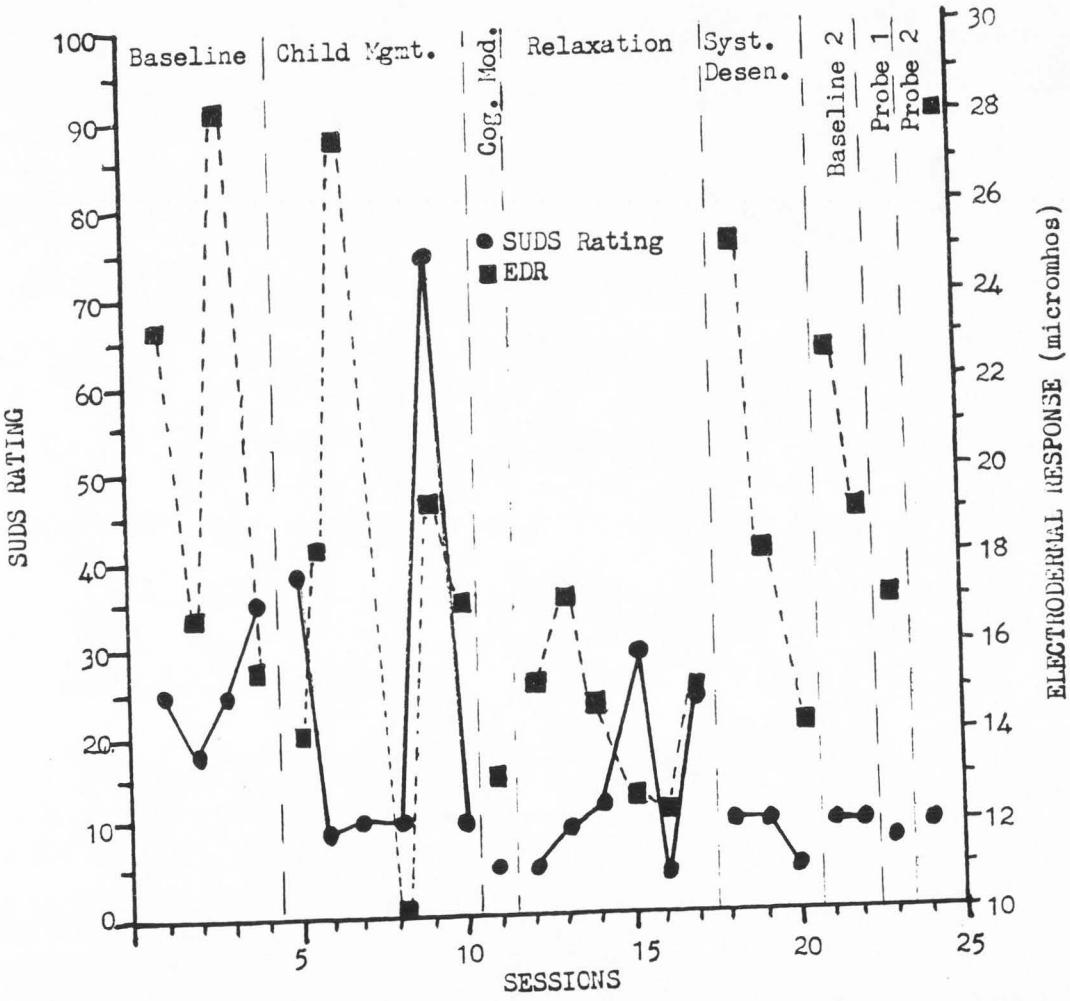


Figure 43. Comparison of average subjective units of discomfort ratings and average electrodermal response during each 30-minute home monitoring session. (Subject 6)

high-stress periods when the children were present. For subjects 5 and 6, with whom training sessions were conducted in their home, training effects appeared to have generalized more readily to high-stress periods.

Maintenance

In response to the question of maintenance of the relaxation skill, a similar mixed pattern is apparent. The majority of physiological data from the stress profiles (Figures 44-49), suggest maintenance of the ability to relax. For example, the single physiological parameter monitored during relaxation and systematic desensitization training showed a decreased level of tension (i.e., decreased EDR for subjects 1, 2, 3, 4, and 6 and increased ST for subject 5) during the final stress profile compared to the initial stress profile. Data from other parameters measured during stress profiles (e.g., EMG and HR) yielded mixed patterns, but generally indicated that subjects maintained their ability to relax. For example, the EMG level during the final stress profile was lower than the EMG levels measured during the first stress profile session for four subjects (Figures 44, 45, 47, and 48) and showed no change for two subjects (Figures 46 and 49). Also, skin temperature was maintained or showed a gradual increase by the final session for all six subjects, suggesting greater relaxation. The heart rate, on the other hand, showed more variation. This parameter eventually increased for three subjects (Figures 46, 48, and 49), suggesting greater tension. Also, subject 5

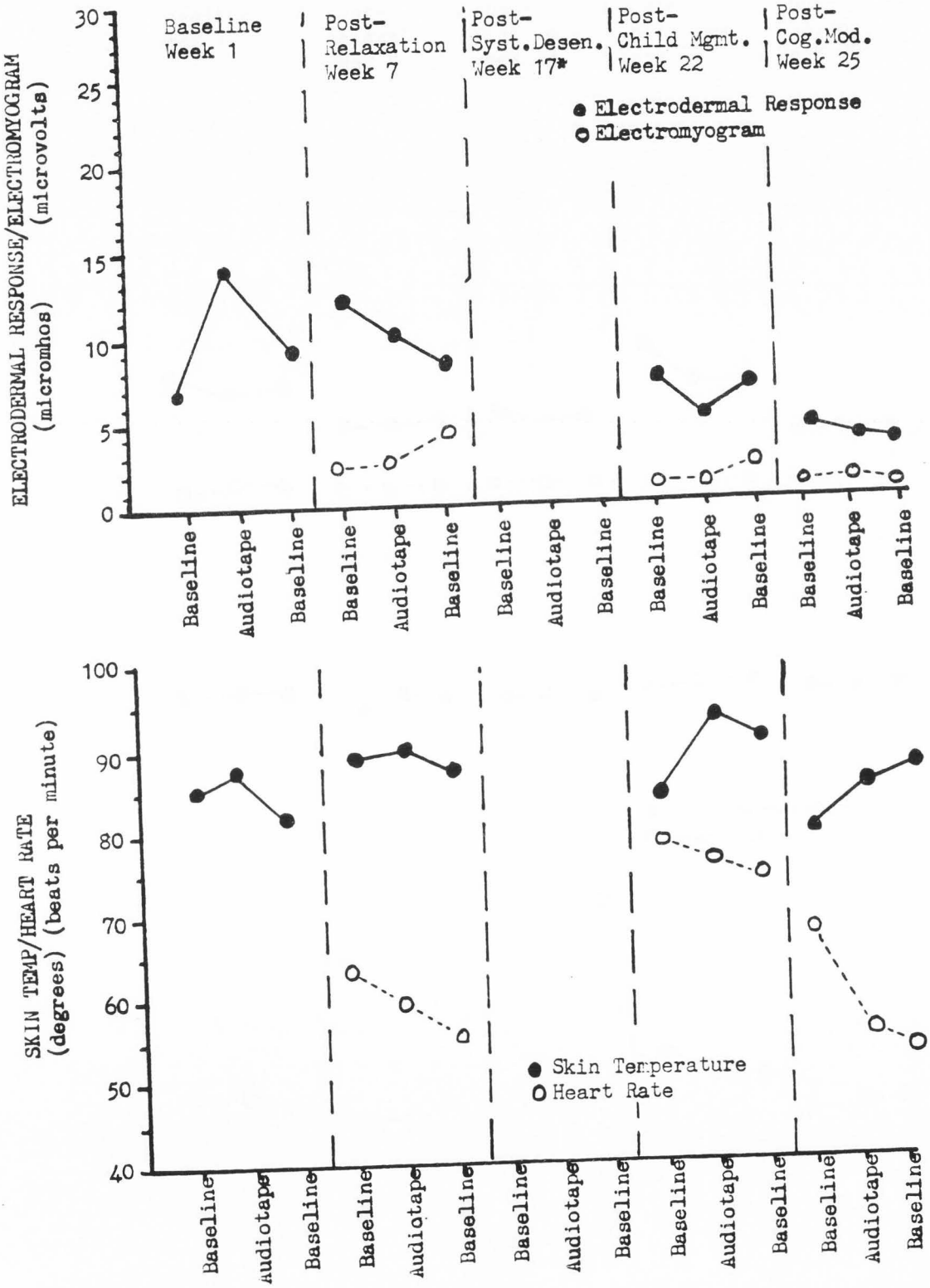


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Figure 44. Physiological response during stress profile sessions. (Subject 1)

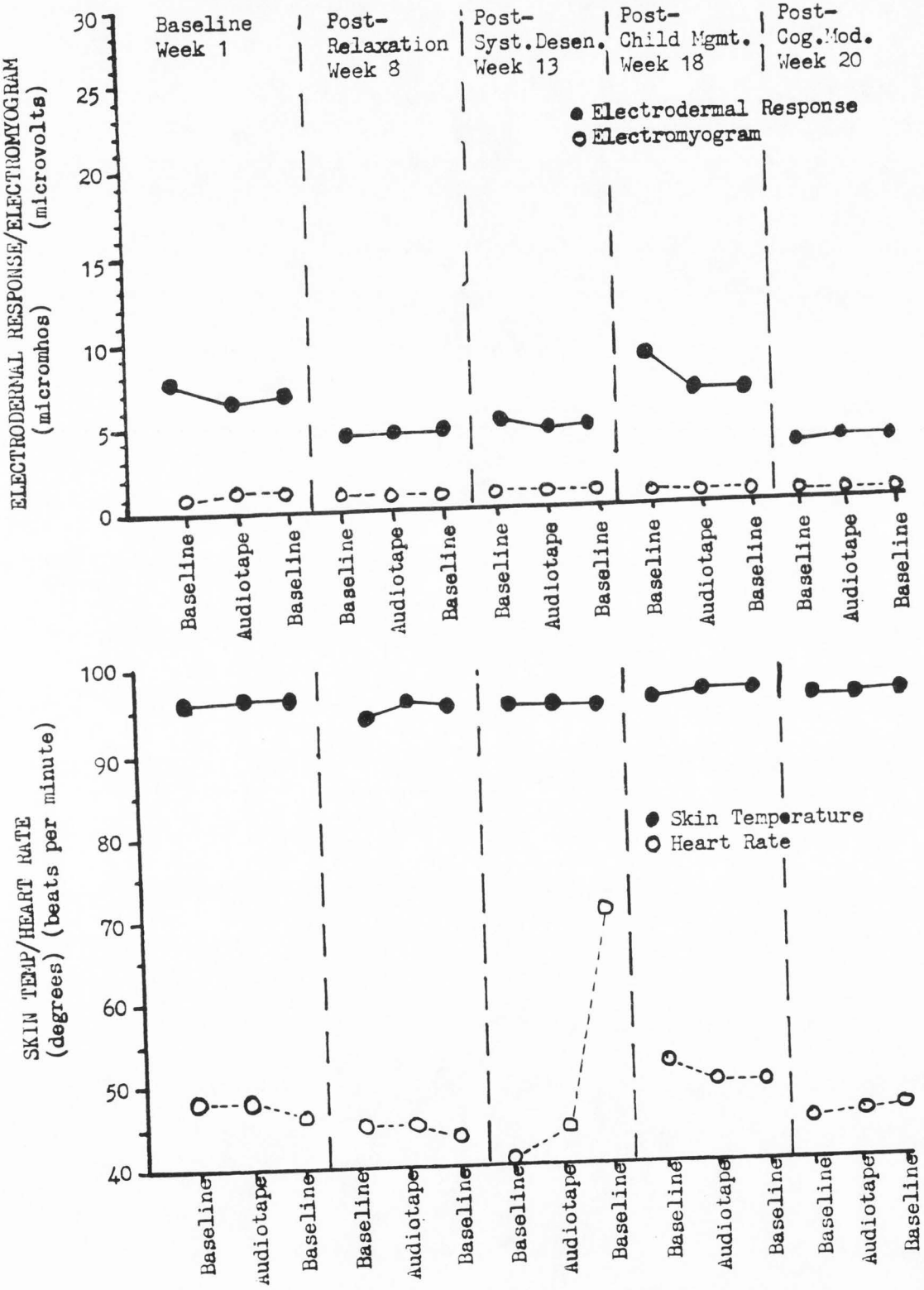


Figure 45. Physiological response during stress profile sessions. (Subject 2)

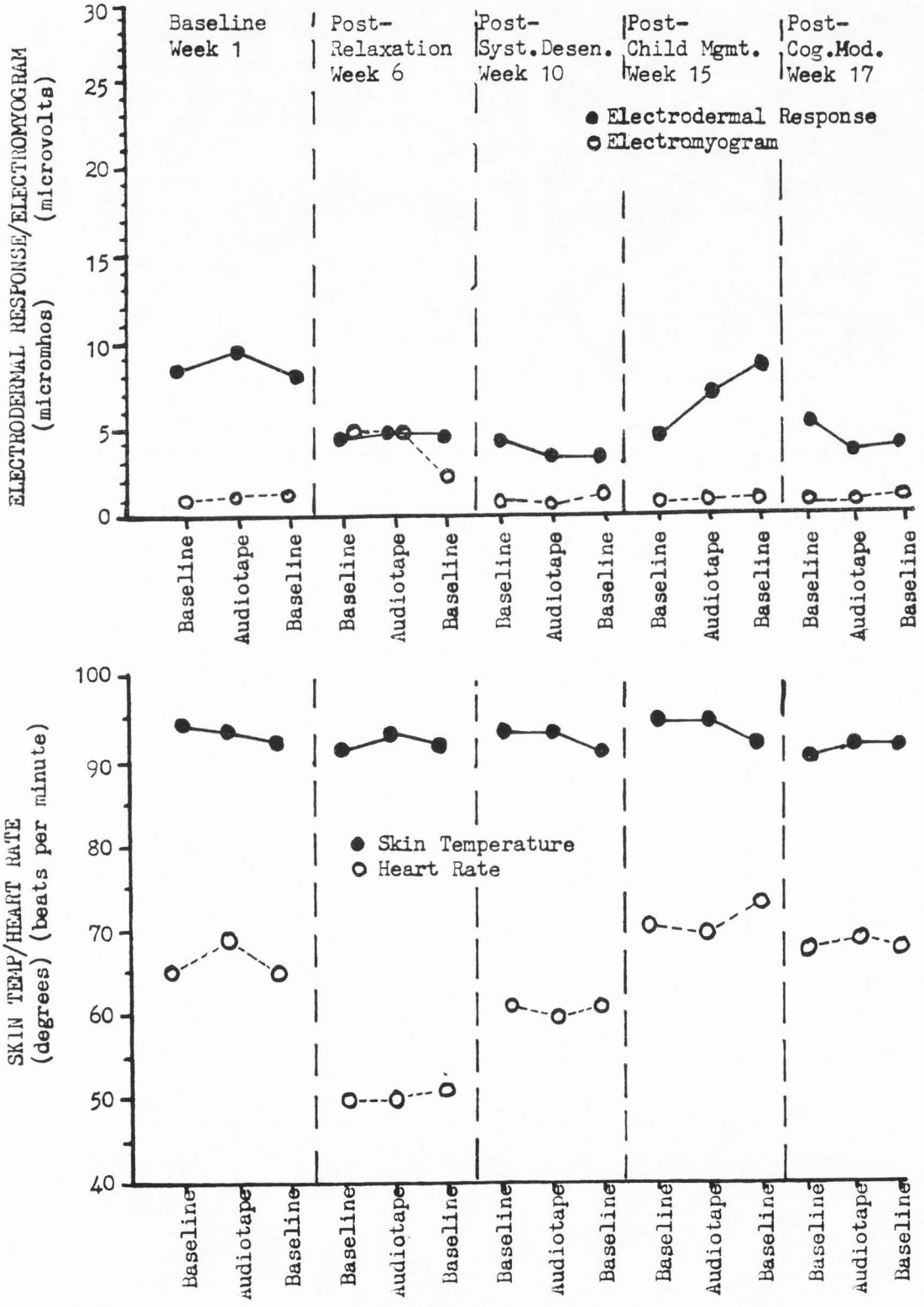
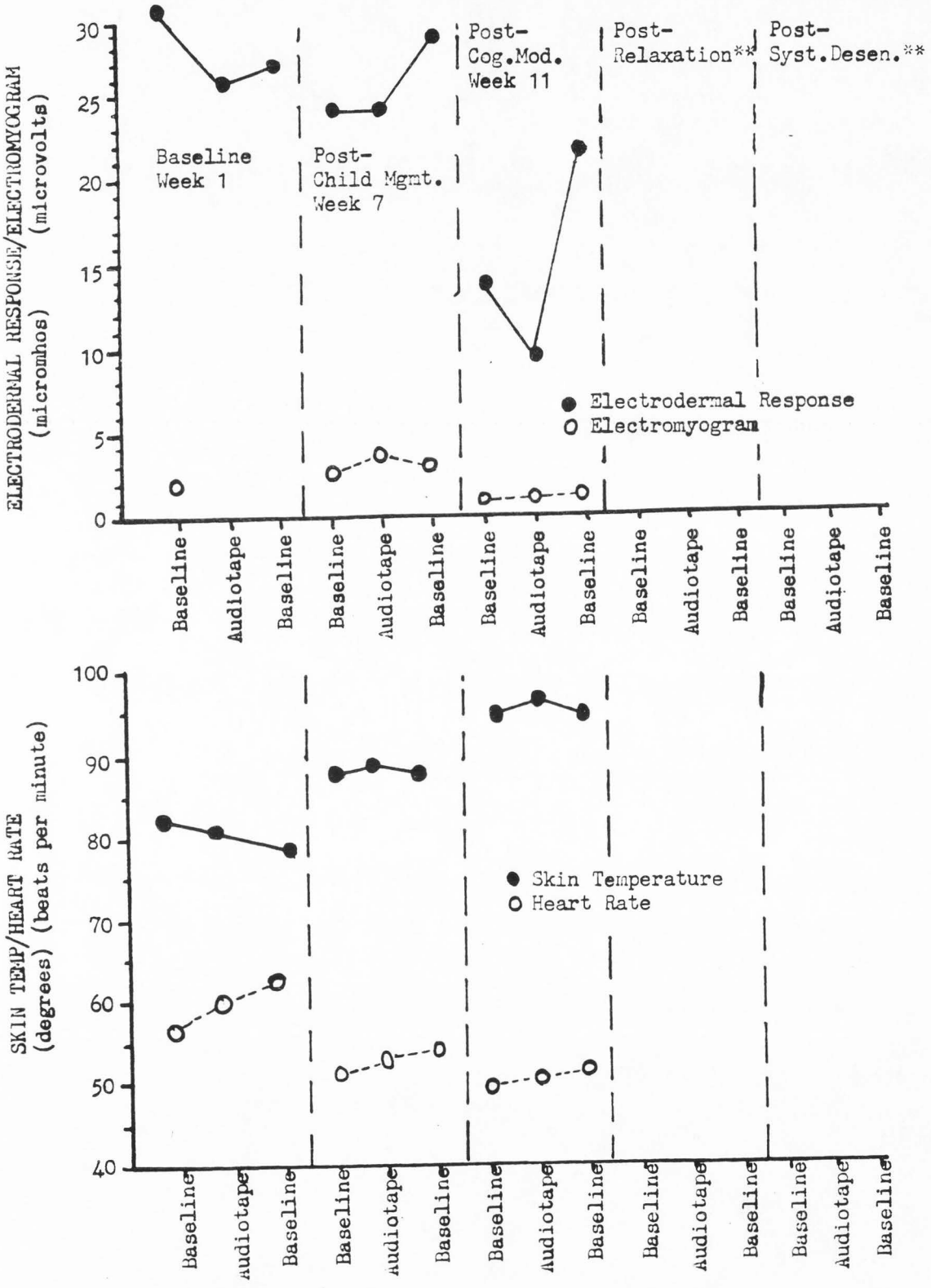


Figure 46. Physiological response during stress profile sessions. (Subject 3)



**did not complete training

Figure 47. Physiological response during stress profile sessions. (Subject 4)

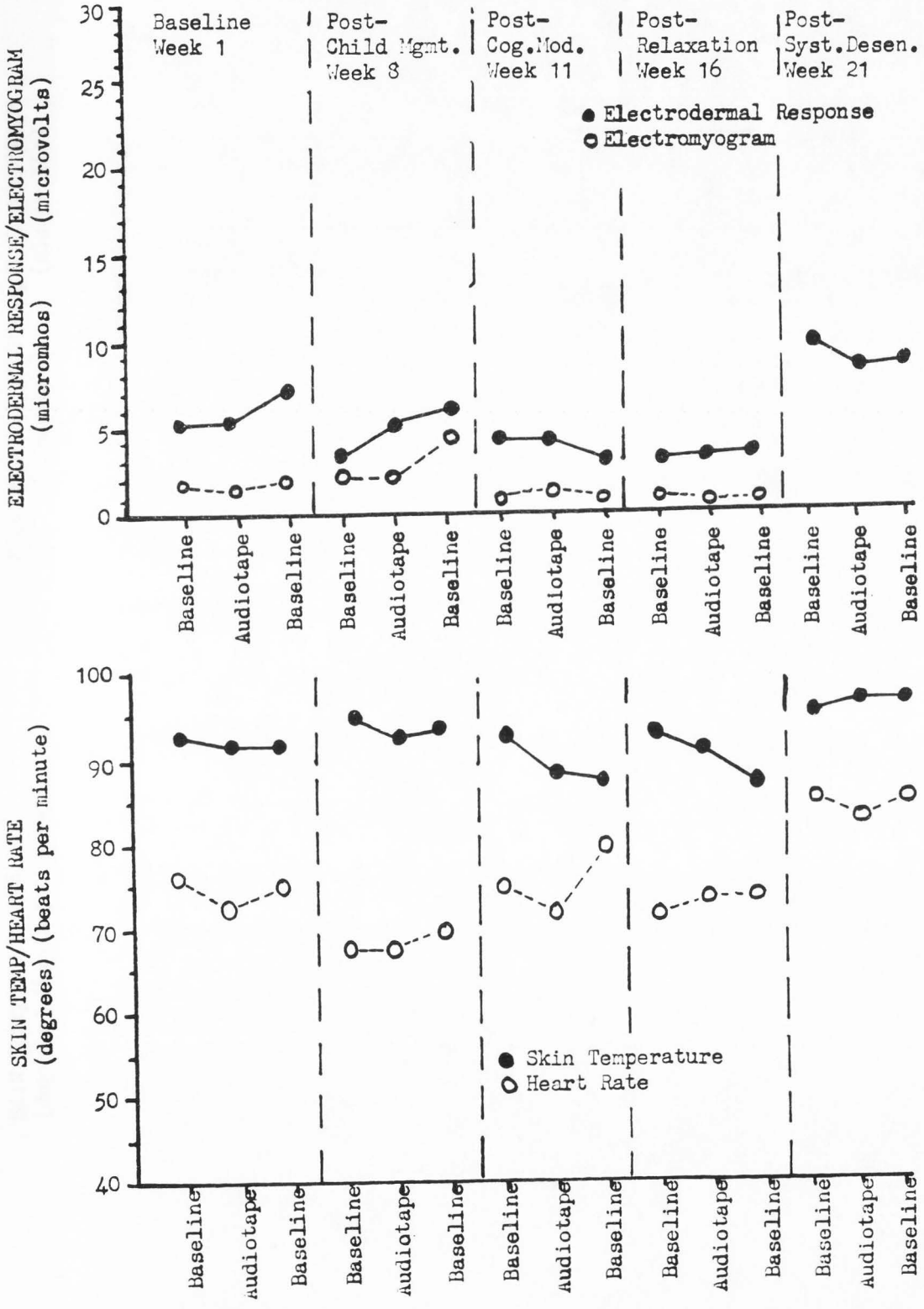


Figure 48. Physiological response during stress profile sessions. (Subject 5)

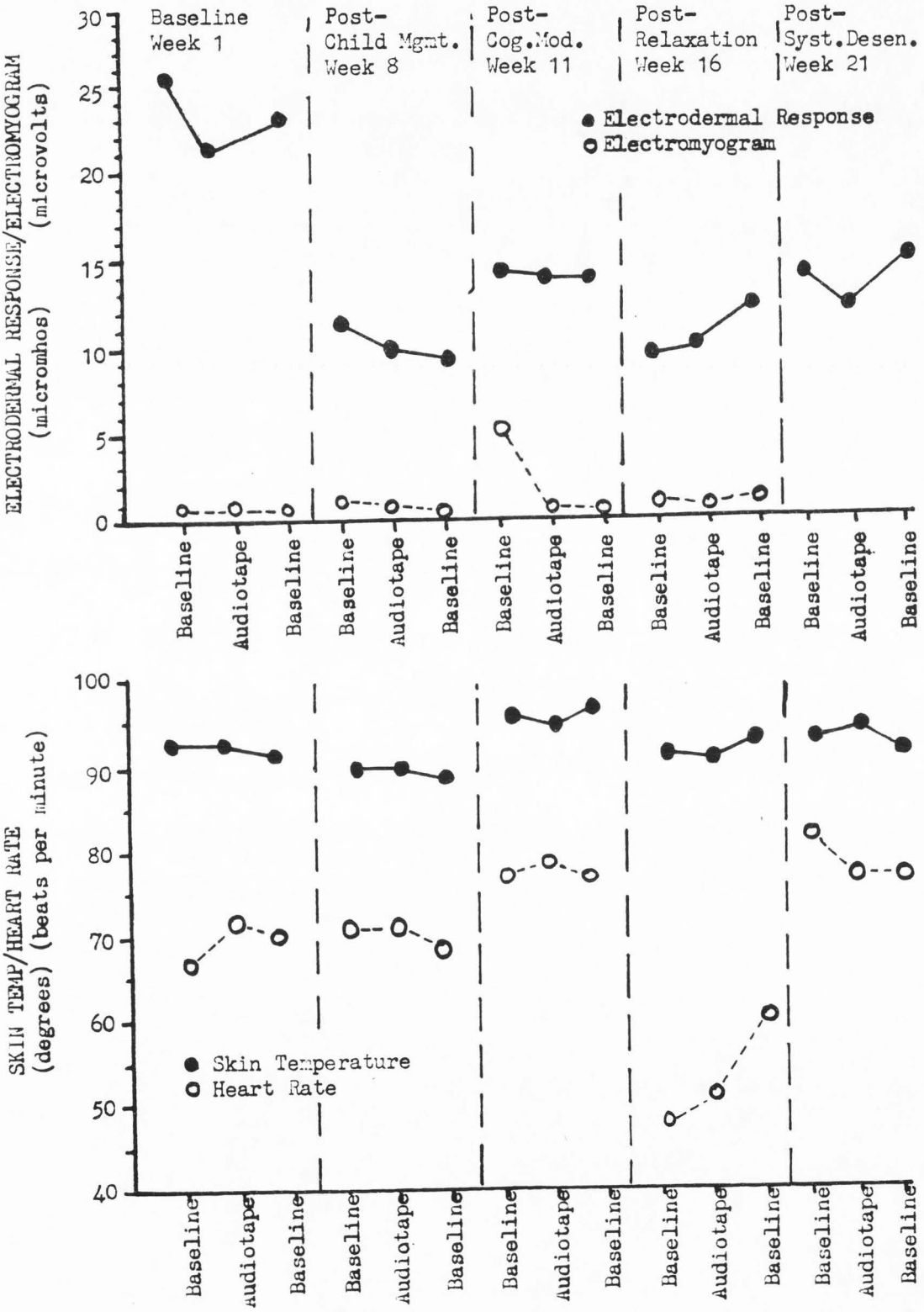


Figure 49. Physiological response during stress profile sessions. (Subject 6)

(Figure 48) showed a considerable increase in EDR levels during the final stress profile session. Despite these exceptions, however, the majority of physiological data indicate that subjects were able to relax to a greater degree during the final stress profile session compared to the initial session.

Subjective ratings of discomfort revealed mixed results. For subjects 1, 5, and 6, the summary of SUDS ratings (Figure 17, 50, and 51) indicates that the decreased level of subjective tension observed between the baseline phase and relaxation component was maintained throughout the remainder of treatment. However, for subjects 2, 3, and 4 no overall decrease in SUDS ratings is apparent (Figures 52, 53, and 54). Finally, physiological data from home monitoring sessions showed varied results. Data collected from subjects 1, 3, and 6 during the targeted high-stress periods at home (Figures 38, 40, and 43) show an increase in EDR levels in the follow-up probes. Again, it appears that the relaxation skill acquired by subjects 1, 2, 3, and 6 during the relaxation treatment phase was maintained when subjects made an attempt to apply the skill (e.g., during stress profiles). However, the ability to relax during high-stress periods at home was only partially evident. Subject 5 appeared to have the most success maintaining the relaxation skill after the termination of treatment.

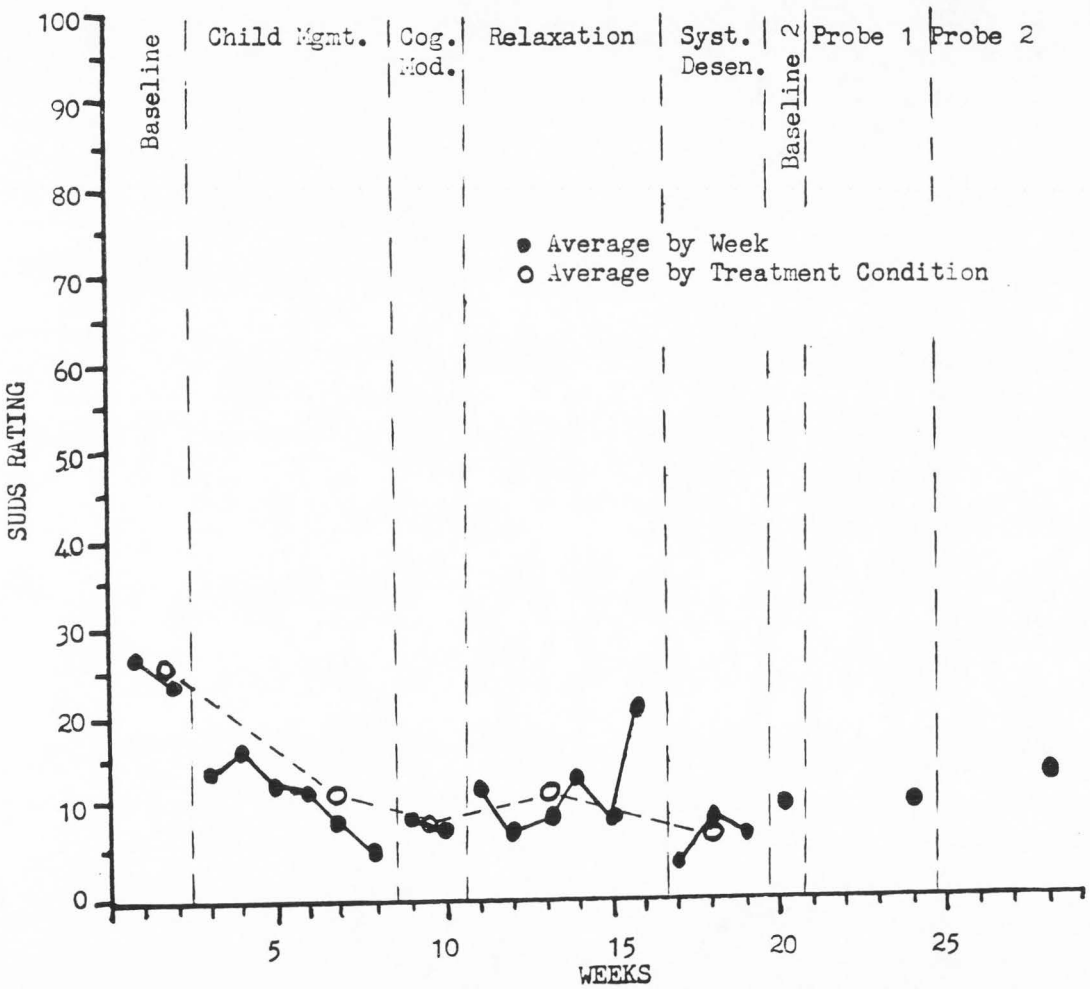


Figure 50. Summary of subjective units of discomfort ratings from self-report forms, relaxation diary, training sessions, and home monitoring sessions. (Subject 5)

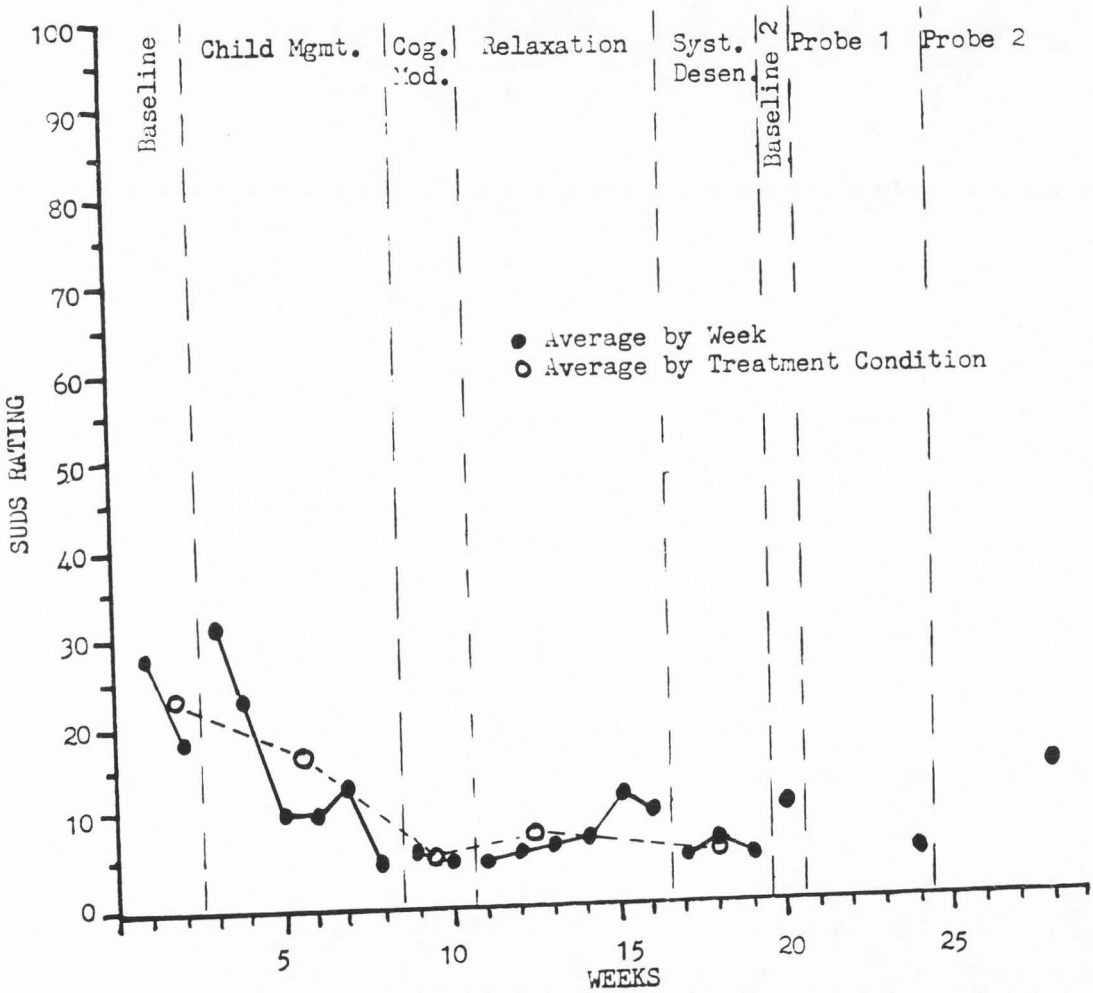


Figure 51. Summary of subjective units of discomfort ratings from self-report forms, relaxation diary, training sessions, and home monitoring sessions. (Subject 6)

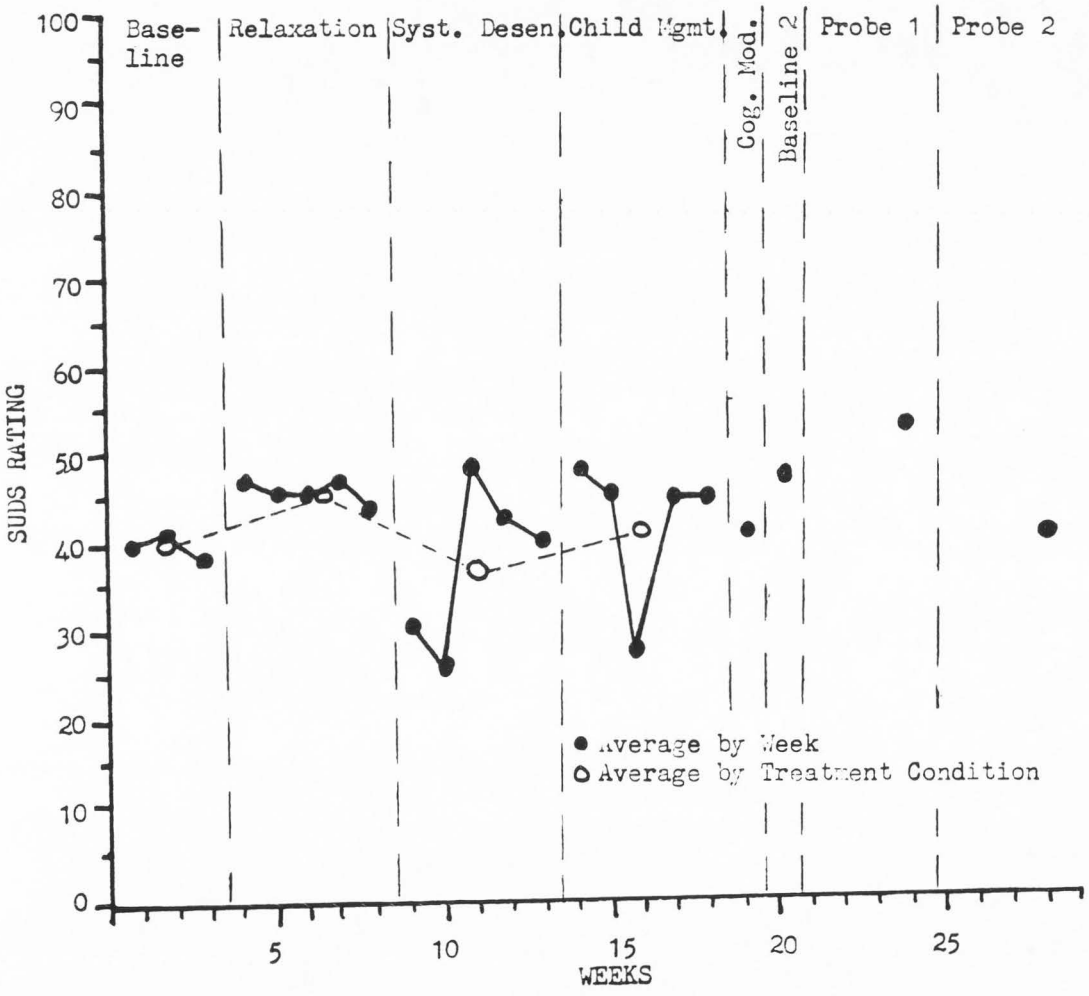


Figure 52. Summary of subjective units of discomfort ratings from self-report forms, relaxation diary, training sessions, and home monitoring sessions. (Subject 2)

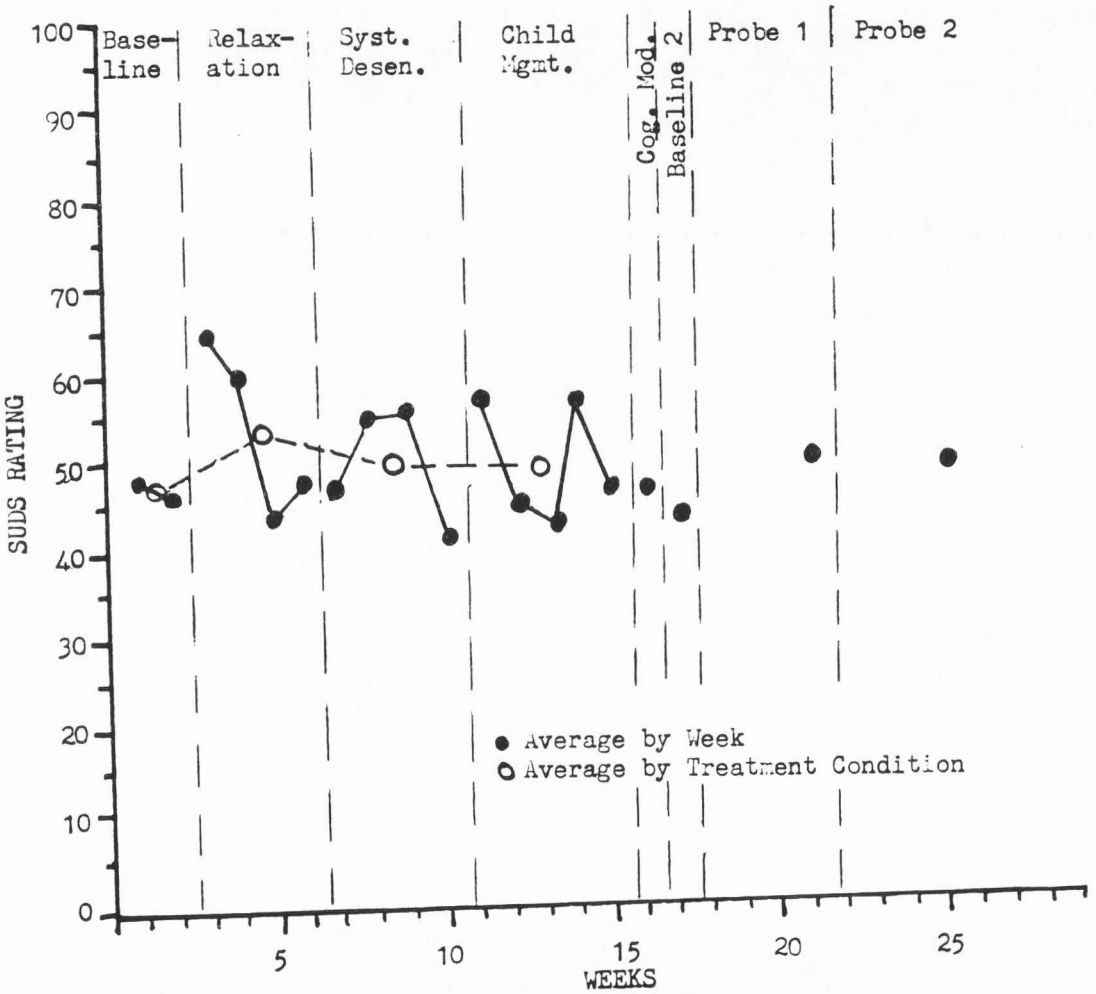


Figure 53. Summary of subjective units of discomfort ratings from self-report forms, relaxation diary, training sessions, and home monitoring sessions. (Subject 3)

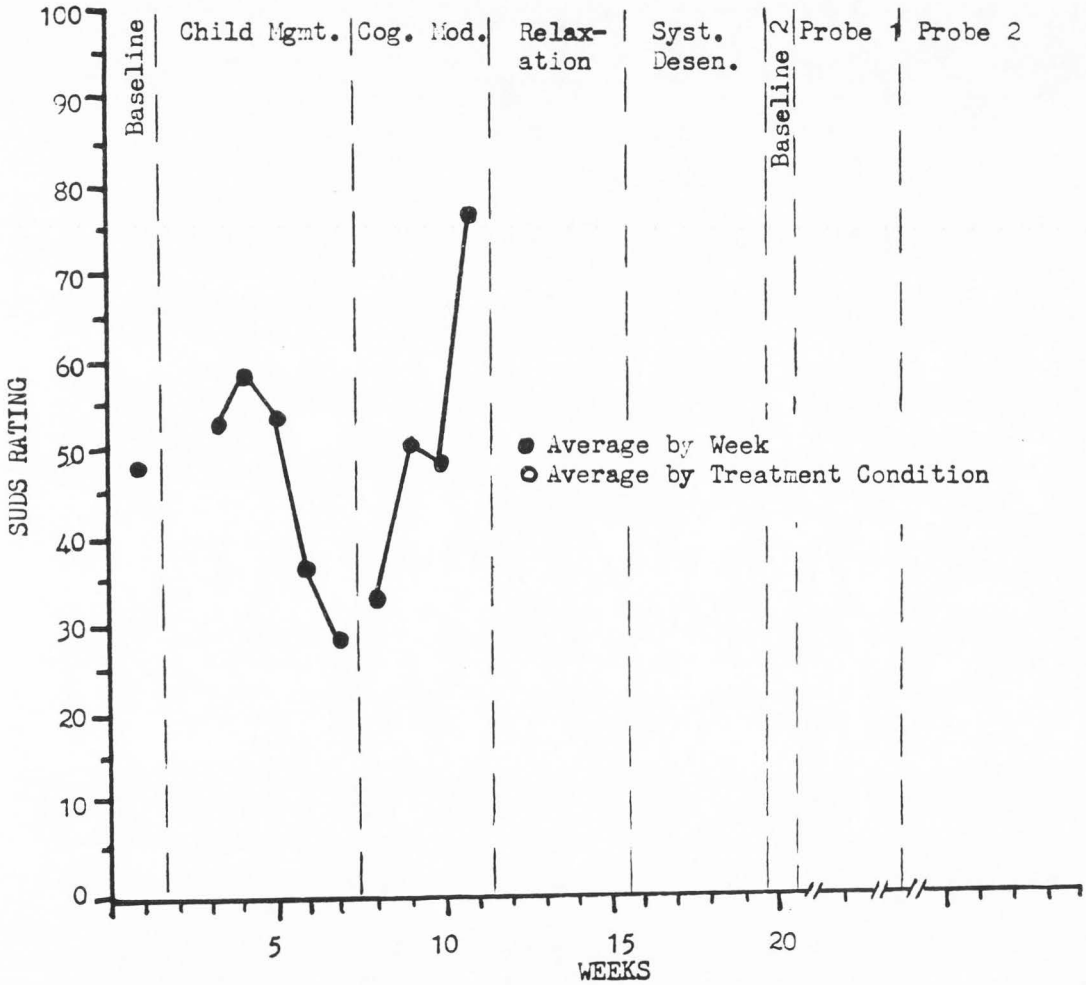


Figure 54. Summary of subjective units of discomfort ratings from self-report forms, relaxation diary, training sessions, and home monitoring sessions. (Subject 4)

MMPI Profiles

The Minnesota Multiphasic Personality Inventory was administered to Subjects 1, 2, 3, 5, and 6 after completion of treatment. Subject 4 moved before the completion of training and did not complete the MMPI. Interpretation of results was based on A Handbook of MMPI Personality Types (Caldwell & O'Hare, no date) and MMPI Interpretation Manual for Counselors and Clinicians, 2nd edition (Duckworth, 1979). Standard scores and profiles for the five subjects are presented in Figures 55-59. The validity scales indicate that the results are valid for all five subjects.

For subject 1 (Figure 55), the unusually high F scale suggests that this parent exhibits social nonconformity and/or personalized interpretations of the test items. According to Caldwell and O'Hare (n.d.), clients with the 9-8-4 pattern have been characterized by episodes in which they are demanding, hostile, confused, talkative, and high-strung. This profile is frequently associated with an identity crisis, which often includes some sort of sexual crisis. These clients tend to show intense overreaction to normal rejection, and often show conflicts around aggressiveness and assertiveness related to sexuality. A heightened susceptibility to drugs and alcohol is commonly seen. According to Duckworth (1979), among women, this pattern is characterized by delusional thinking, ruminations, anxiety, and agitation. Based on results of the MMPI, criteria presented in the Diagnostic and Statistical Manual of Mental

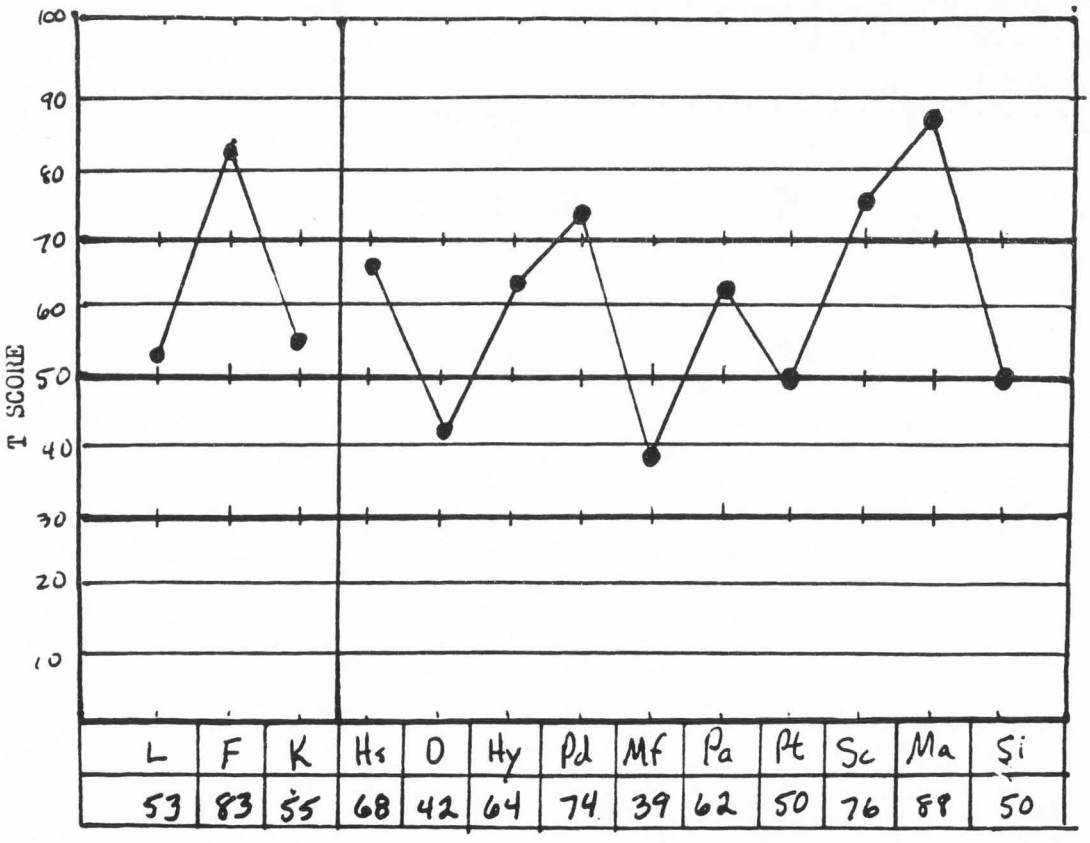


Figure 55. MMPI profile of Subject 1.

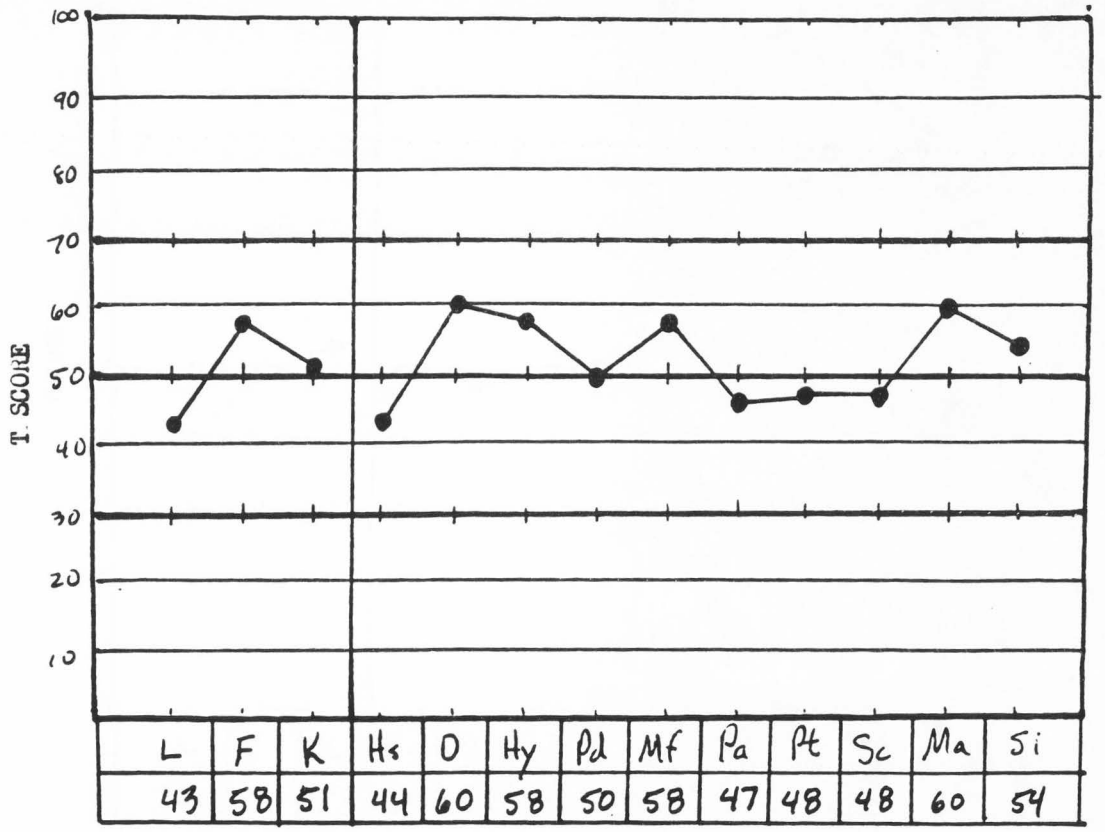


Figure 56. MMPI profile of Subject 2.

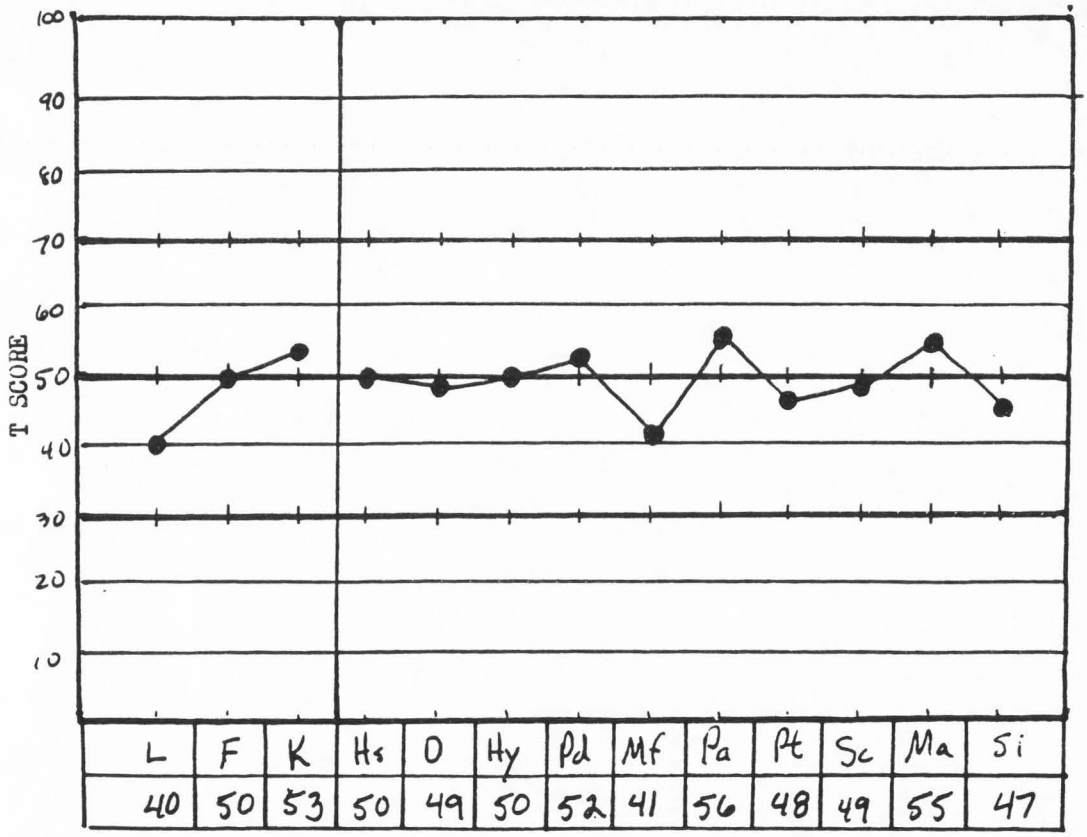


Figure 57. MMPI profile of Subject 3.

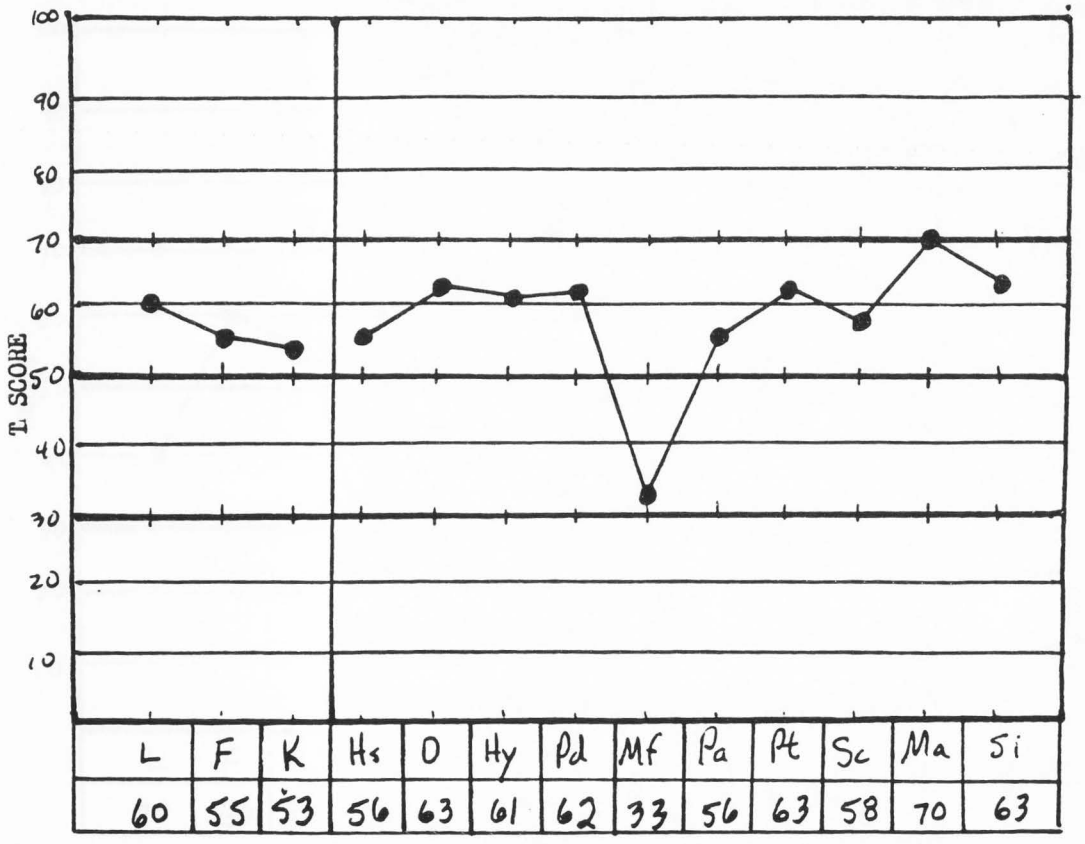


Figure 58. MMPI profile of Subject 5.

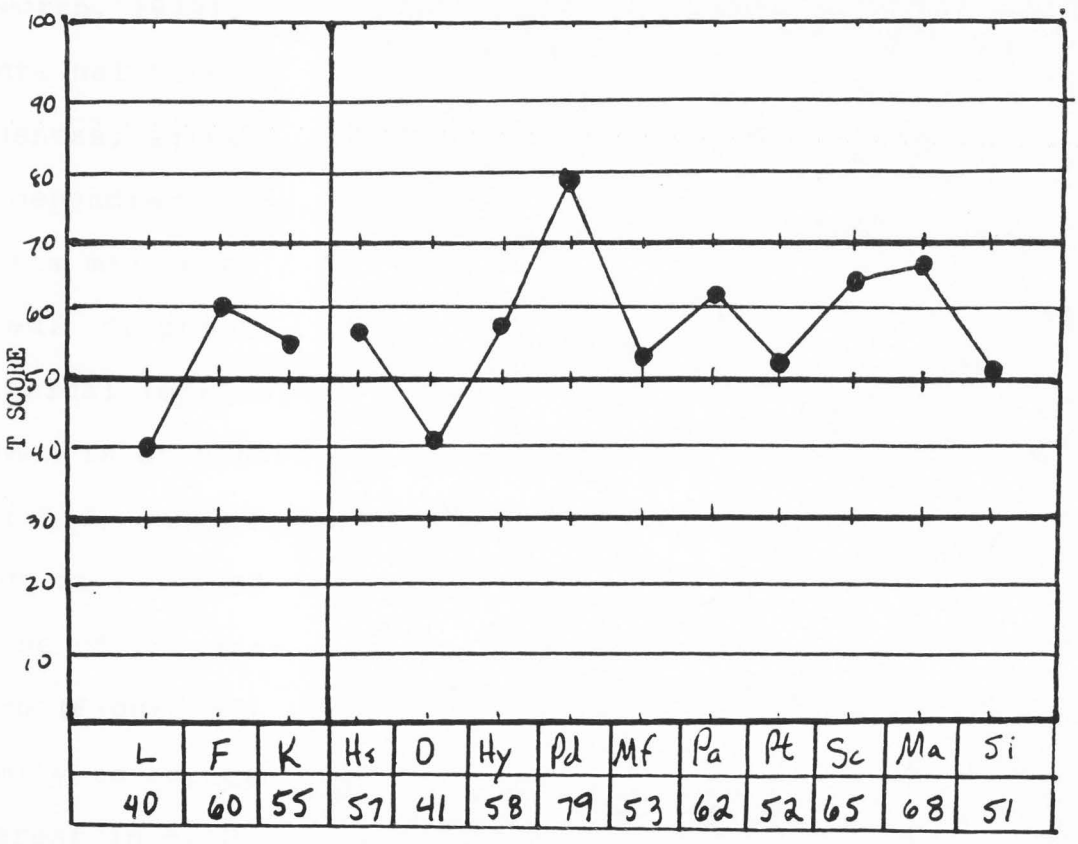


Figure 59. MMPI profile of Subject 6.

Disorders, 3rd edition (American Psychiatric Association, 1980), and from subjective clinical impressions, a tentative diagnosis of Borderline Personality Disorder with Histrionic Features appears to be appropriate.

Subject 2 (Figure 56) presents as a strongly conscientious individual prone to internal affective pressure (Duckworth, 1979). According to Caldwell and O'Hare (n.d.), the internal tension may manifest behaviorally as nervousness, agitation, irritability, and abruptly changeable moods depending on external situations. Occasional temper outbursts may occur due to a sense of being blocked or thwarted. Dysphoria may be a common mood for this parent. The clinical impressions of the researcher are that this gentleman is of above average intelligence, is emotionally constricted, and exhibits obsessive-compulsive tendencies, although no clinical diagnosis is appropriate.

None of the standard scores of subject 3 were elevated above 60 (Figure 57). This profile indicates a general conformity to expected social standards (Duckworth, 1979). An interest in traditional feminine and domestic pursuits is indicated. The profile also suggests passivity and a restricted range of emotionality. Subjective impressions of the researcher are that this female is of average intelligence and is mildly depressed. She appears to place great importance on conforming to community standards and frequently complained of being less organized that she should

have been. No clinical diagnosis is warranted, although she exhibits some tendencies of a dependent personality disorder.

Subject 4 could not be located following her termination from treatment. Therefore, no MMPI data was collected from this parent.

Subject 5 (Figure 58) presents as a naive, unsophisticated individual who is feeling bad (Duckworth, 1979). It is likely that she obsesses about conflicts in her life. Denial may be a common coping mechanism for her. According to Caldwell and O'Hare (n.d.), such an individual is likely to be overcommitted to multiple activities, inefficient at the tasks, and would not finish what she started. She appears to be experiencing mild depression related to current situational stressors. Also, it is probable that a person with this profile strongly identifies with the prescribed feminine role and exhibits passivity, submissiveness, and emotional constriction. According to Duckworth (1979), such an individual may exhibit a good-humored appearance, but on occasion can become irritable with outbursts of temper. Combined impressions from the MMPI profile and interactions during training sessions suggest that this parent exhibits aspects of a dependent personality disorder, although a diagnosis according to DSM III criteria is not warranted.

The profile (4-9-8) of subject 6 (Figure 59) is frequently associated with highly aggressive males (Caldwell & O'Hare, n.d.). Terms describing individuals exhibiting

this MMPI profile include egocentric, immature, impulsive, childish, and demanding. There is often a history of assaultive behavior. Tension often results in an immediate discharge through aggressive or destructive reactions. Family conflict is likely. Frequently, these individuals do not learn quickly from punishment or social disapproval. Based on the MMPI results, the parent's history of interpersonal maladjustment and frequent job changes, and observations during training sessions, a working diagnosis of Borderline Personality Disorder with antisocial features is suggested.

When comparing the MMPI data with other forms of data (self-report, physiological, and audiotape), one relation becomes apparent. Subjects 1 and 6 were the only parents with scores on scale 4 (Psychopathic Deviate) above 70. These subjects also were the two parents who made verbally abusive statements to their children on the audiotapes (Figure 9).

CHAPTER V

DISCUSSION

In this chapter, general findings are discussed, followed by a discussion of treatment effects for each subject. Threats to internal and external validity are then presented. The chapter is concluded with recommendations for future studies.

Summary of Findings

Results indicate that the overall treatment package reduced self-reported abusive behavior for all six subjects. Self-reported frequency of negative physical contacts decreased for all subjects (Figures 2-7), self-reported frequency of verbal abuse declined for five of the six parents (Figure 8), and audiotaped negative parent statements showed a decrease for four of the participants (Figure 10). Of the two parents who exhibited verbal abuse on audiotapes, the rate was decreased for one of them (Figure 9). Collectively, these encouraging findings are congruent with the results of other researchers who have applied a treatment package to abusive parents (e.g., Denicola & Sandler, 1980; Egan, 1983).

Although abusive behavior was decreased, audiotaped positive statements made by both the parents (Figure 10) and the children (Figure 11) remained at an extremely low level for all participants. These results are similar to other studies (e.g., Barth et al, 1983; Nomellini & Katz, 1983) in which parent coping strategies (e.g., stress management, anger control) were the exclusive focus of treatment (no child management training was involved). However, most studies in which

child management training was employed have shown at least a moderate increase in positive parent statements (e.g., Sandler et al, 1978; Egan, 1983; Denicola & Sandler, 1980). The continued low rate of positive parent statements in the present study suggest that revisions in the child management component are needed. The low child management post-test scores and lack of completion of homework assignments (Table 13) are convincing evidence that the parent training approach should be based upon skill mastery rather than the completion of a circumscribed number of lessons. This point is discussed in greater detail later in the chapter.

Components of the treatment package varied in their effectiveness for each parent (as shown in Table 11). The more effective treatments (as evidenced by decreased frequency of self-reported verbal abuse and negative physical contacts) across subjects were as follows: Subject 1: systematic desensitization; Subject 2: systematic desensitization, cognitive modification; Subject 3: relaxation, systematic desensitization, cognitive modification; Subject 4: child management and cognitive modification; Subject 5: child management; Subject 6: cognitive modification. Possible explanations for the idiosyncratic effects of the treatment are discussed in the individual analysis section below. These results, however, support the contention of researchers who have argued for a comprehensive treatment approach that addresses the multivariate nature of child abuse (e.g., Belsky, 1980; Lutzker et al, 1983; Wolfe, 1985). Also, the fact that training in relaxation, desensitization, and cognitive modification was associated with reduced abusive behavior is supportive of authors such as Wolfe (1985) and Koverola et al (1984) who advocate training of self-control

skills for abusive parents. Additionally, the present results suggest that systematic desensitization can be an effective treatment mode for child abusers, and warrants further study. The variability across subjects of treatment effects underscores the importance of developing treatment packages tailored to the unique needs of each abusive parent. An assessment procedure for designing individualized treatment programs is presented later.

Discussion of Individual Results

Subject 1

This parent was a divorced mother with an 11-year-old son living in the home. The results for this subject provide some evidence that there were differential effects among the treatment components (refer to Table 5). Results suggest that the most substantial decreases in verbal and physical abuse occurred during the systematic desensitization phase of treatment. Parental attitude toward the child became more positive during this time (Figure 12). Also, EDR levels in the home dropped significantly during the systematic desensitization phase compared to the home EDR levels measured during the relaxation training phase (Figure 38). These results suggest that systematic desensitization was a very effective intervention for this subject. It is noteworthy that this parent showed a strong physiological response to the audiotaped child stimuli during the initial stress profile session (Figure 32). These data are consistent with the results of previous studies (e.g., Donovan et al., 1978; Frodi et al., 1978; Wolfe et al., 1983) in which abusive subjects showed higher physiological responses to child-related stimuli than non-abusive subjects. The

apparent effectiveness of systematic desensitization training for this subject raises the possibility that parents showing significant physiological reactivity may benefit from this specific form of intervention. This hypothesis is further discussed later in this chapter.

Data collected during the relaxation training component reveal contradictory results. Some data indicate a reduction in tension occurred during this phase. For example, the summary value of SUDS ratings shows a decrease in subjective tension compared to baseline levels (Figure 17). EDR readings during the post-relaxation training stress profile suggest less reactivity to child-related stimuli (Figure 32). Also, parental attitude toward the child moved in a more positive direction (Figure 12). However, other data suggest that family relations deteriorated during the relaxation training phase. Self-reported verbal and physical abuse both increased (Figures 8 and 2), parent and child negative statements occurred more often (Figures 10 and 11), and EDR levels in the home increased compared to baseline levels (Figure 38). Three possible explanations for these unexpected results are offered. First, the parent was confronted with three specific stressors during this phase of treatment: hospitalization for surgery, legal proceedings in another state regarding custody of her daughter, and Christmas. These extraneous variables may have contributed to the apparent difficulties in the parent's interactions with her son. Second, baseline levels of abuse may have been lower than normal due to the parent's reactivity to the novelty of the research procedures. The placement of an audiotape recorder in the home during high-stress periods could easily have created a temporary

improvement in family interaction patterns. More negative interactions may have gradually re-emerged as the treatment procedures became routine, creating the impression in the data that relaxation training actually increased abusive behavior. A third possible reason for the apparent increase in parent-child conflict is that this parent's control of angry outbursts was decreased due to an unstressing process when she became more relaxed, resulting in increased abuse. Obviously, these explanations are speculative. A better understanding of parental reactivity could be gained by increasing the length of the baseline and by examining the data from other subjects who had different lengths of baseline and a different sequence of treatment components.

It is difficult to ascertain the specific effects of child management and cognitive modification training for this subject. The frequency of verbal and physical abuse was already at low levels when these components were applied, making it difficult to detect the treatment effects due to a floor effect. Some data, however, suggest that these treatment components were beneficial. Low levels of verbal and physical abuse were maintained during these training phases (Figures 8 and 2). A continued decrease in SUDS ratings indicates that the parent was progressively more relaxed during the third and fourth components (Figure 17), even though relaxation training had been discontinued and the parent reported that she was practicing relaxation at home only sporadically. Also, EDR levels obtained during stress profiles after completion of child management and cognitive modification revealed decreased reactivity to the audiotaped stimuli (Figure 32). Furthermore, EDR levels measured in the home were maintained at levels observed during the systematic desensitization

phase (Figure 38). Therefore, physiological and self-report data indicate that treatment gains realized in previous treatment phases were maintained and, in some cases, slightly improved (e.g., parental attitude toward the child) during the child management and cognitive modification components. One area in which child management and cognitive modification showed little effect was the composition of family interactions. Positive statements (e.g., praise) were rarely observed (Figure 10). This observation is similar to the findings of other researchers (e.g., Bousha & Twentyman, 1984) in which the interactions of abusive parents have been characterized by a lack of positive statements. A change in this variable would be expected during child management training, with the emphasis upon the use of positive reinforcement. As was reported earlier, assessment of this subject's competency revealed inadequate mastery of child management principles and skills. The reason for the lack of competency may have been due to an inadequate instructional format or to low parent motivation. This subject stated that she was "already familiar" with child management techniques and was of the opinion that she was not in need of training in that area. Motivation-enhancing tactics (e.g., providing reinforcers to the parent for increasing the frequency of positive statements) or more direct training techniques (e.g., repeated role-playing of praising the child) may be appropriate for similar parents in future treatment programs.

In summary, comparison of the effectiveness of the four treatment components suggest that a significant reduction in abusive behavior occurred during the systematic desensitization phase. The effect of relaxation training was mixed, with improvements in some areas (e.g.,

ability to relax, more positive attitude toward the child) but apparent deterioration of parent-child relations (e.g., more verbal and physical abuse). Extraneous variables were identified which may have confounded the results during this phase of treatment. The effect of the child management component was difficult to discern for two reasons. First, the parent did not attain adequate competency in child management skills. Second, the abuse rate was very low at the beginning of this treatment phase, so treatment effects could not be observed due to a floor effect. Parent-child interactions did not improve during this phase of treatment. However, treatment gains from previous components were maintained during child management training. Finally, the effect of the cognitive modification component was also difficult to detect due to the low frequency of abusive behavior. As in the child management phase, however, previously observed treatment effects were maintained (e.g., absence of verbal and physical abuse) and/or augmented (e.g., decreased SUDS ratings, more positive attitude toward the child, lower EDR during stress profile sessions). Further analysis of differential treatment effects will require a comparison with data from other subjects in the study.

In light of the predominance of negative interactions and uncertainty regarding maintenance of skills acquired during treatment, this parent must still be considered "at risk" for child abuse. Periodic booster sessions were recommended, although follow-through on this recommendation did not occur because the family moved out of the state.

Subject 2

The second subject was a 36-year-old married father of five children. He presented as a rather tense individual of above average intelligence. Two treatment components appeared to be most effective for this subject: systematic desensitization and cognitive modification. A number of positive changes in the data corresponded with his participation in these two phases of treatment. Self-reported negative physical contacts decreased with the initiation of desensitization training, partially re-emerged during child management, and decreased again during cognitive modification training (Figure 3). In fact, during desensitization training, no spanking was reported and the more severe forms of discipline (hitting and slapping) were absent for the remainder of the treatment program. Self-reported verbal abuse also showed a decreased rate during both desensitization and cognitive modification training (Figure 8). These improvements in self-report data were consistent with changes in physiological data. EDR levels showed a progressive decline from the beginning of relaxation training to the end of desensitization training sessions (Figure 20). The topography of physiological responses to child stimuli during stress profiles show that no EDR reaction occurred during the post-desensitization and post-cognitive modification sessions (Figure 33). Data from the audiotaped parent-child interactions indicates that negative parent statements decreased to zero during relaxation training (Figure 10). Due to the subsequent absence of negative parent statements and lack of abusive statements (Figure 9), the effects of the other training components on parent statements is not possible, although the continued absence of negative parent statements suggests

that none of the treatment components exacerbated negative or abusive statements. An interesting finding is the high rate of negative child statements (Figure 11). The data indicate that such statements increased dramatically when the parent started relaxation training. However, a confounding factor may explain this change in child behavior. The mother of this family (subject 3) was absent from the home during the baseline period of the father, subject 2. Her return to the home coincided with the initiation of relaxation training for subject 2. It is possible, then, that the whining and crying recorded on many of the audiotapes were a function of the mother's presence rather than the father's participation in relaxation training. The rate of negative child statements showed a decrease during desensitization training.

Three observations may help explain why desensitization and cognitive modification appeared to be effective for this parent. First, data from interviews, the initial stress profile, and MMPI profile suggest that this subject was a tense person who responded physiologically to stressful situations. Desensitization may have helped him to remain more relaxed when presented with negative child behaviors. Second, cognitive modification, with the emphasis upon correcting irrational thoughts, appears to have been a good match with his above-average intelligence and his employment as a computer analyst. Third, post-training assessments showed that he had only partial mastery of child management skills (Table 13). Therefore, the differential effects of treatment components may have been a function of this parent's competency with each component, rather than the content and skills of each component, per se. Although negative parent

statements and physical contacts were at low levels at the end of treatment, the continued high rate of negative child statements increases the chance that abuse could re-emerge. It was recommended to this subject that further child management training be pursued. Also, continued practice with cognitive techniques may have precluded his letting negative child statements affect him, thereby enabling him to make better use of behavioral management methods with his children.

Subject 3

This woman was a soft-spoken, 36-year-old housewife and mother of five children. She frequently complained of being disorganized and harried. Her desire to conform to stereotyped social standards of being a successful parent and competent homemaker was apparent by her statements during training sessions and her MMPI responses. Observations of research assistants in the home suggested that she was very permissive with her children, and arranged her schedule to meet their needs.

Results indicate that relaxation, desensitization, and cognitive modification were associated with decreased negative parent-child interactions. Self-reported negative physical contacts decreased gradually during relaxation training, were eventually eliminated during the second half of desensitization training, returned during child management training, and again returned to a zero level during cognitive modification (Figure 4). The quality of negative physical contacts also became less severe with the onset of relaxation training. Self-reported verbal abuse remained at high levels and showed only slight changes across treatments (Figure 8). However, mild to moderate decreases occurred during desensitization and cognitive modification

training. Audiotaped data, on the other hand, indicated an absence of abuse and a low level of negative parent statements (Figures 9 and 10). This discrepancy between parent self-report and audiotaped data suggests 1) the parent had a more sensitive standard of verbal abuse than the definitions used during audiotape coding, or 2) the parent behaved differently when her statements were being audiotaped. That is, she may have been less abusive when the tape recorder was turned on. This possibility is strengthened by the high value she placed on social conformity, as evidence by her MMPI profile and statements during training sessions. Therefore, the self-report data may be a more accurate representation of the actual occurrence of verbal abuse than audiotaped interactions. A third form of data, EDR levels, again indicates that relaxation, desensitization, and cognitive modification were the more effective treatment components. EDR levels measured at home were the lowest during the desensitization phase (Figure 40). Reactivity to child stimuli, as measured by EDR levels during stress profile sessions, was distinctly absent during post-relaxation, post-desensitization, and post-cognitive modification sessions (Figure 34).

As was observed with subject 2, child management was not associated with improved parent behavior. Yet this parent demonstrated cognitive mastery of the principles presented during child management training (Table 13). This inconsistency suggests that the parent did not apply (or did not know how to apply) the knowledge she learned during training. Observations of the research assistant during home monitoring sessions confirmed that the parent continued to be overly permissive and had difficulty enforcing household rules.

In summary, subject 3 appeared to benefit from three of the four

treatment components. It is speculated that positive effects associated with relaxation and desensitization training were related to decreased physiological reactivity in the presence of child stimuli. The apparent success of the cognitive modification treatment may be related to the unrealistically stringent standards this subject strived to attain regarding her role as a mother. She responded in a positive manner to alternate self-statements designed to increase the flexibility of her expectations. Child management was not effective with this parent, apparently because of her inability or unwillingness to apply the knowledge presented during training. As with subject 2, she was encouraged to improve her child management skills. This couple (subjects 2 and 3) indicated they were going to join a parent training group in their neighborhood following completion of the present treatment project. As of the second follow-up probe, however, they had not yet joined a parenting group.

Subject 4

This 27-year-old woman completed only two of the four treatment components because she moved out of the area. Self-reported negative physical contacts (Figure 5) and verbal abuse (Figure 8) decreased during both child management and cognitive modification training. Audiotaped parent-child interactions showed that negative parent statements (Figure 10) and negative child statements (Figure 11) decreased during cognitive modification training. No verbal abuse was recorded on the audiotapes submitted by this parent (Figure 9).

According to subjective ratings of tension (Figure 52), this subject did not feel more relaxed at the termination of treatment compared to beginning levels, although some decrease of tension was

noted during the final four sessions of child management training (Figure 24). Similarly, increased relaxation was not observed within training sessions (Figure 24) or across home monitoring sessions (Figure 41). In addition, EDR levels measured during home monitoring sessions (Figure 41) showed wide variability with no trend toward greater relaxation. Collectively, these results suggest that the parent did not become more relaxed as treatment progressed. These findings are not unexpected because the subject did not participate in relaxation or desensitization training. The highly elevated EDR levels during home monitoring sessions (Figure 41) suggest that this parent was experiencing considerable stress. These data are consistent with the findings of previous studies in which abusive parents were found to be under greater stress (Justice & Duncan, 1976) and to respond to stimuli with greater physiological tension (Frodi et al, 1978; Wolfe et al, 1983) than nonabusive parents. It is interesting to note that overall EDR levels during stress profiles (Figure 35) were lower with each subsequent session. However, readings during presentation of the audiotape were much more varied following child management training. This finding suggests that the parent was more sensitized to verbalizations of her children after the child management component, a pattern similar to that of the other subjects. Based on the results of the other parents, it is speculated that participation in relaxation and systematic desensitization would have reduced the reactivity evident in her stress profiles.

Subject 5

This parent was a 28-year-old housewife and mother of three children. Based on her self-report of negative physical contacts,

child management appeared to be an effective treatment component for reducing abuse (Figure 6). The effectiveness of child management training for this parent is similar with the majority of studies cited by Isaacs (1982) in which parent training reduced abusive behavior (e.g., Crozier & Katz, 1979). For subject 5, negative physical contacts, particularly hitting and slapping, decreased substantially mid-way through this phase of treatment. During the next three treatment phases, negative physical contacts re-emerged, although on an infrequent basis and at a rate below the baseline level. Self-reported verbal abuse showed low rates throughout treatment (Figure 8), making it impossible to detect differential treatment effects. A similarly low rate of audiotaped verbal abuse as well as negative parent statements is observed (Figures 9 and 10), although a slight increase in audiotaped negative statements is shown for this parent during desensitization training. There is no clear explanation for the increase in negative child statements during the relaxation and desensitization components (Figure 11). It is noteworthy, however, that a corresponding increase was not observed in negative parent statements (Figure 10) or verbal abuse (Figure 8). This encouraging finding suggests that the parent did not become abusive during periods of increased aversive child behavior. Other self-report data show that child management training was associated with an improved parent attitude toward the children (Figure 12) and decreased subjective tension (Figure 53).

In the case of subject 5, then, we find a different pattern of dependent variable values than was observed with subjects 1, 2, and 3. Four factors may help explain this difference. First, this parent

showed the highest level of cognitive mastery of the child management principles compared to the other parents (Table 13). Second, this parent applied selected aspects of the child management training (e.g., time-out procedures and charting techniques) even after the completion of child management training, as evidenced by her verbal reports during subsequent training sessions. Third, this subject was relatively relaxed from the onset of training (e.g., low SUDS ratings and ST well above 90 degrees). Also, she did not show a notable physiological response to the audiotaped child stimuli on her initial stress profile. Therefore, it would follow that stress management training would have a limited effect. Finally, clinical observations and the MMPI profile suggest that this parent copes in a passive-dependent style. At the onset of treatment, for example, she frequently complained of her inability to clean her house or to induce compliance among her children. The provision of specific child management techniques was necessary so she would not rely on increasingly punitive discipline methods to control her children. Follow-up child management training was suggested to this parent. She and her husband (subject 6) later re-joined an ongoing Parent's Anonymous group.

Subject 6

The final subject was a 27-year-old father of three children. As described in the previous chapter, the validity of this subject's self-report data is doubtful, based upon the lack of correspondence between SUDS ratings and EDR levels as well as the discrepancy between self-reported verbal abuse and audiotaped abuse. Despite these limitations, various sources of data indicate that the cognitive modification component was consistently associated with decreased abusive behavior

for this parent. This finding is consistent with other researchers (e.g., Nomellini & Katz, 1983; Novaco, 1976) who have applied cognitive techniques to control anger and impulsive behavior. Self-reported negative physical contacts and verbal abuse are absent during this phase (Figure 7), and audiotaped verbal abuse shows a decline in frequency (Figure 9) during this treatment phase. Also, EDR levels measured at home were lowest during cognitive modification training (Figure 43).

It is unclear why cognitive modification appeared to be the most effective treatment component for this subject. The key element for success with this client was motivating him to participate in the training sessions. His continued involvement in the treatment was largely due to the frequent encouragement of his wife and the experimenter, and, indirectly, a desire to avoid involvement with DFS. He complained of boredom during all treatment components except the four sessions of cognitive modification. His interest in this particular phase of treatment may have resulted from the experimenter's focused effort to alternately challenge the parent, then praise his contributions, regardless of their merit. A second possible reason for this subject's responsiveness to cognitive modification training is that he recognized the potential utility of these methods in his workplace where he frequently was in conflict with his supervisor. The nature of these two hypotheses suggest that this subject was highly egocentric in his interactions with others, an observation supported by his MMPI profile and other clinical observations. For example, he was observed by the research assistant on different occasions to continue watching television, ignoring his wife's appeals to decrease the volume

while she read books to the children. This subject verbally rejected the potential benefits of child management and relaxation training from the beginning of treatment, stating that he had sufficient skills in both areas. The failure of systematic desensitization to decrease either EDR levels (Figure 31) or abusive behavior (Figure 9) may be related to the absence of physiological reactivity shown during stress profiles (Figure 37) or during desensitization training sessions. This individual appeared to "tune out" auditory stimuli, including loud audiotaped yelling of his children. During the post-cognitive modification stress profile session, his EDR level (14 micromhos) remained constant despite the fact that he fell asleep midway through the session (Figure 37). These observations indicate that physiological indices were largely unaffected by immediate environmental events or, alternately, that stress was so high that the impact of treatment was lessened.

In summary, the benefit of cognitive modification training for this subject seems to have been related to three factors. First, specific efforts were made to increase the subject's level of motivation during this training phase. Second, his participation in other treatment components was minimal. Third, the lack of physiological reactivity to environmental stimuli made him a poor candidate for desensitization.

Generalization of Treatment Effects

As indicated in the previous chapter, skills learned in the laboratory setting transferred to the home setting more readily for some parents than others. In Figures 38-43, the physiological indices

of stress (EDR or ST) measured at home in the presence of children showed a gradual trend toward increased relaxation for subjects 5 and 6 only. (The trend for subject 6 is apparent until the final phase of treatment, when the EDR level increased once again). It is significant that all training sessions for these two subjects were conducted in their home. This finding suggests that conducting skills training in the home may facilitate the transfer of treatment effects to periods of parent-child interactions. This finding is consistent with other studies (e.g., Wolfe, Sandler, & Kaufman, 1981) in which home-based training of abusive parents was shown to transfer to parent-child interactions observed in the home at other times. In the present study, efforts were made to facilitate generalization of treatment. The relaxation diary was designed to encourage subjects to practice the skill at home. Parents were frequently encouraged and coached to apply the skills in the presence of their children. And homework assignments were designed to help the parents apply training principles with their child(ren). Despite these efforts, the majority of subjects did not exhibit greater relaxation in the home during the stressful target periods. Therefore, the results of subjects 5 and 6 suggest that training in the home should be considered and is deserving of further study.

Maintenance of Treatment Effects

Decreases in self-reported abusive behavior was maintained during the 30- and 60-day follow-up probes for all five subjects who completed the program. In some instances, a continued trend toward decreased abuse was observed during the follow-up sessions (e.g., the frequency

of verbal abuse reported by Subject 3 [Figure 8] and the frequency of negative physical contacts reported by Subject 5 [Figure 6]). Improvements in parental attitudes toward their children also was maintained (Figure 12). Finally, audiotaped parent-child interactions showed that both abusive statements (Figure 9) and negative parent statements (Figure 10) were maintained at a lower rate than prior to treatment, with the exception of subjects 5 and 6 who showed a slight increase in these behaviors during the second follow-up probe. In general, the maintenance of treatment effects is consistent with the results reported by other investigators (e.g., Koverola et al, 1984; Nomellini & Katz, 1983; Sandler et al, 1978).

Threats to Internal Validity

Measurement Procedures

The extensive measurement procedures alone may have been sufficient to produce a change in parent behavior. The data collection procedures were a form of repeated testing, a widely recognized threat to internal validity (Cook & Campbell, 1979; Kazdin, 1982). During a typical week, a subject completed daily self-report forms regarding abusive behavior, audiotaped family interactions two or more times, and participated in a 30-minute home monitoring session in which a research assistant was present in the home. These procedures were conducted in addition to attendance of two training sessions. One is justified in asking whether reactivity to these procedures produced, or at least augmented, the treatment effects. In response to this question, it is important to note that these measurement procedures were held constant throughout the study. Therefore, changes occurring between treatment

conditions could be attributed with more confidence to the intervention itself rather than the measurement procedures. Substantial changes in dependent variable values occurred for all subjects between conditions, strengthening the assertion that the data variations were related to treatment components rather than data collection procedures.

A related question is whether changes in parent behavior (e.g., greater relaxation) occurred as a function of the parents' gradually becoming accustomed to the data collection procedures. The systematic variation in the length of the initial baseline in the research design helps to answer this question. If the parent became progressively desensitized to the measurement procedures, one would expect to see a gradual decrease in indices of stress and, possibly, a return of pre-baseline abusive behavior. If this were the case, subjects with a longer baseline would be expected to show this trend more clearly than subjects with a shorter baseline period. Observation of the data suggest that a moderate amount of reactivity did occur for some subjects. A survey of the data from audiotapes shows that subjects 1 and 6 exhibited no verbal abuse during the baseline phase but that this behavior was recorded during the first treatment phase (Figure 9). From these data, one cannot determine if these subjects temporarily decreased abusive behavior upon entry into the treatment program or if the first treatment condition created increased abuse. This dilemma indicates that the baseline phase should have been extended for a longer period of time (e.g., three weeks) and until a degree of stability was observed in the data for each subject. Although this problem is apparent for some forms of data (e.g., audiotaped verbal abuse), it clearly does not pose a serious threat to the majority of

the data. For example, audiotaped parent statements (Figure 10) suggest that 1 and 2 week baselines were adequate to establish stability for subjects 3, 5, and 6. In fact, an upward trend in negative statements during the baseline period of subject 2 was reversed with the onset of relaxation training, giving a stronger impression that the treatment had an effect. Of the six subjects, only one (subject 2) showed a trend toward decreased physiological tension during the baseline condition (Figures 38-43). In summary, it does appear that the presence of data collection procedures was responsible for some minor variations in dependent variables. The brevity of the initial baseline condition created difficulty in distinguishing treatment effects from reactivity during the initial treatment component for some subjects. This problem could be corrected by extending the initial baseline period in future studies.

Reactivity to Measurement Procedures

A second threat to internal validity also involves the possibility of subject reactivity to measurement procedures. During stress profile sessions, subjects were exposed to the same audiotape after completion of each treatment component. Were reductions in parent responses a) due to the effect of treatment, or b) simply a function of increased familiarity with the experimental procedures and setting? A visual examination of Figures 32-37 provides some insight into this question. If repeated exposure to the procedure were the cause of decreased response to the audiotaped stimulus, a progressive decrease in physiological data would be expected. This is not observed in the data, however. For example, subjects 2, 3, 4, and 5 exhibit a greater reaction during post-child management profile sessions than during the

initial session. This suggests that specific training components were responsible for changes in the stress profile data rather than repeated exposure, per se. It is speculated that child management training made the parents more aware of their children's misbehavior, thereby increasing their physiological reaction to the audiotaped stimulus.

Additional Threats

The probability that other extraneous variables created parental changes is reduced by the nature of the multiple baseline counterbalanced research design. For example, it is inevitable that some fluctuations in data were associated with occurrences in the subjects' daily lives outside of treatment (history). An example of this was the hospitalization and child custody procedures experienced by subject 1 during relaxation training. While the influence of history likely created some changes in parent behavior, this threat is weakened by the fact that a decrease in abusive behavior was observed for all six subjects. It is unlikely that all of the participants (who underwent treatment at different times and in a different sequence) uniformly experienced special or unique events, unrelated to treatment, which could account for systematic reductions in abuse.

The effects of subject maturation must also be considered. In this case, the research design, which allows for continuous measurement of dependent variables, showed that fluctuations in parent behavior coincided, to some degree, with the onset of treatment conditions. The fact that rates of abusive behavior varied between treatments decreases the likelihood that such changes were due to maturational processes, per se.

Other threats to internal validity (e.g., statistical regression, selection biases, and attrition) are not factors in this study because a group design was not used.

In summary, the foregoing threats to internal validity (repeated testing, reactivity to measurement, history, maturation) cannot be eliminated in any single study. These extraneous factors do not appear to be major threats to the results, however, because the research design varied the sequence of treatment, avoided the simultaneous application of treatment across subjects, and allowed for the continuous measurement of dependent variables. Replication the the present procedures under similar and/or varied conditions will be the ultimate test of the validity of the current results.

Threats to External Validity

Attrition

The high attrition rate of subjects was a substantial problem which has implications for the external validity of the study and provides insight into the difficulty of providing treatment for abusive parents. Of the ten families that were initially interviewed, seven entered the study and only four completed the treatment. Social isolation, as evidenced by the unavailability of an automobile and a telephone, was greatest for those parents not entering the study and less apparent for those that completed the training (Table 2). These data suggest that socially isolated families were less likely to enter and/or complete treatment. The higher attrition rate among isolated families is not discussed in previously published literature, although a number of researchers have clearly linked social isolation with

higher rates of child abuse (e.g., Starr, 1979; Wahler, 1980). The present findings suggest that such families are also less likely to enter and/or remain in treatment. Possible approaches to remediate this problem (greater flexibility of treatment, ongoing assessment of parent needs, and use of extrinsic reinforcers) are discussed below.

One possible explanation for the higher attrition rate among isolated families is that scheduling and attendance at training sessions were more difficult for the isolated families due to the practical limitations of not owning a car or telephone. This explanation is weakened, however, by the fact that isolated parents withdrew from the study or declined to enter despite numerous visits to their homes to schedule appointments, the provision of transportation to attend training sessions, or the offer to conduct training sessions in their homes.

A second plausible reason for the lower participation rate of socially isolated families is that these families were contending with financial, legal, and health problems which demanded more effort and attention and precluded a choice to participate in a four-month treatment program to remediate abusive behavior. The rationale cited by subjects who withdrew from the study supports this notion. They complained of experiencing excessive pressure from financial problems (e.g., unpaid rent, unemployment), legal obligations (e.g., child custody, brief jail terms), and health difficulties (e.g., surgery, high blood pressure). The existence of monetary deficits and physical health problems indirectly supports the contention that a social support network is needed, but frequently absent, in the lives of abusive parents (Wahler, 1980). These findings suggest that the

provision of basic needs for socially isolated and/or lower socioeconomic status abusive families should be considered as a major intervention, along with training in specific skills designed to reduce abusive behavior.

It is also noteworthy that only one of the five families referred by the DFS completed the training. These families were required by the social agency to participate in treatment due to their documented history of abusive behavior. Compared to self-referred subjects, the agency-referred parents were less likely to complete data forms or attend scheduled sessions. The apparent lack of motivation among the agency-referred parents is not unexpected, and appears to be a third major explanation for the high attrition rate of subjects. That is, parents that sought out treatment were more likely to complete the training than those that were assigned to the research project.

It is also possible that the drop-outs exhibited more pathological personality traits and/or were more abusive than the parents completing the project. Hence, they may have declined participation due to fear of further recognition of their abnormal behavior. Unfortunately, due to the lack of cooperation from this group of parents, little data was collected with which a comparison could be made. It was the impression of the researcher that the drop-outs exhibited greater instability than those parents who entered and completed the study. For example, most were holding temporary jobs or were unemployed, changed residence frequently, and were less reliable in adhering to their verbal commitments. This factor (instability) has implications for the treatment of abusive parents. In a recent article, Koverola et al (1984) addressed this problem in a realistic and insightful manner.

They observed that the treatment of multi-stressed abusive parents was continually interrupted by personal crises. They propose that flexibility of treatment mode and continual re-evaluation of parental concerns is necessary to reduce the drop-out rates. In other words, if treatment priorities are mandated without attending to the parent's immediate and changing needs, attrition is likely. Unfortunately, such flexibility creates difficulties when one is attempting to standardize treatment modalities in a controlled experimental study. Nevertheless, the high drop-out rate in the present study does imply that ongoing assessment of and sensitivity to parental needs is a critical aspect in the treatment of abusive parents.

The pattern of subject attrition limits the generalizability of the results. Five of the six parents completing the study were self-referred and less socially isolated than those who declined to enter or withdrew from treatment. Although subject attrition poses a significant threat to the external validity of the findings, it should be recognized that these results are similar to those reported by other researchers. Kempe and Helfer (1972) observed that abusive parents attribute their difficulties to their children rather than to any shortrcoming of their own and, therefore, are less likely to enter and/or remain in treatment. Sandler et al (1978) concluded from the high attrition pattern of abusive parents that extrinsic reinforcers may be necessary for some child abusers to insure their continued involvement in treatment. Examples of incentives are movie passes or free restaurant meals (Sandler et al, 1978) or educational games (Denicola & Sandler, 1980) contingent upon the successful completion of asignments.

To summarize the discussion about attrition, it is apparent in previous studies that a high drop out rate among multi-stressed abusive parents is not uncommon. Two tactics are proposed in the existing literature. First, the treatment priorities of the parent require continuous re-evaluation and consequent adjustment of intervention strategies (e.g., stress management, financial counseling, medical intervention, child management, transportation needs, etc.). Second, in addition to frequent verbal praise of the parents' efforts, material reinforcers should be integrated into the treatment program to increase the probability the parent will remain in treatment. It is also noteworthy that attrition in the present study may have been increased due to the excessive time demands required of subjects. These demands could be reduced considerably if the treatment were conducted solely for clinical rather than research purposes. For example, some of the treatment components could be presented simultaneously (e.g., child management and desensitization) in order to shorten the overall length of training, and some forms of data collection (e.g., physiological home monitoring) could be eliminated. This reduction in time demands may increase the likelihood that socially isolated and/or less motivated abusive parents would complete the training. Therefore, although the pattern of attrition restricts generalization of the present results, the treatment package (in a revised form for clinical presentation) should be considered a possible treatment package for socially isolated and/or agency-referred abusive parents, but needs further study.

Suggestions for Future Research

Systematic Desensitization Procedures

The procedures developed for the systematic desensitization training appeared to be adequate and allowed for training sessions to be completed easily within 45 minutes. As described in Chapter 3, the criterion for relaxation for each subject during desensitization sessions was a SUDS rating equal to or lower than his or her lowest SUDS rating during the eight previous relaxation training sessions. This criterion differs from that of Wolpe (1982) who recommends that the SUDS rating remain near zero before progressing to the next heirarchy item. A potential problem with the criterion used in the present study is that a subject may not become adequately relaxed and, with repeated exposure to stressful stimuli, may actually become more sensitized to stimuli from the anxiety hierarchy or may not generalize the skill to high stress periods. Results showed that all subjects did show a progressive decline in physiological response to items in the anxiety hierarchy during training sessions. However, as discussed earlier, the desensitization training did not generalize to stressful home situations for most of the parents. This suggests that the use of Wolpe's more stringent criterion is indicated to assure mastery of the skill and to increase the likelihood that the skill will transfer from the laboratory to the home.

Were a similar study to be conducted in the future, a number of changes are suggested.

Lengthen Baseline

The pre-treatment baseline condition should be lengthened to a period of three weeks and until stability in data points is observed. This would enable the researcher to more easily detect effects of the initial treatment component.

Pre-Treatment Assessment

The variation of treatment effects among the subjects raises the issue of developing a tailored treatment package for a given parent. The problem of matching treatment methods with parent needs recently has received considerable attention in the literature (e.g., Koverola et al, 1985; Wolfe & Manion, 1984; Wolfe, 1985). These authors point out the need for assessment methods to facilitate the development of individual treatment plans for abusive parents. The present study provides some insight into this issue. The parents who reacted physiologically to audiotaped child stimuli showed significant gains from relaxation and desensitization training. Therefore, as stated above, the stress profile procedure could potentially function as a screening device, and should receive further study as a pre-treatment assessment instrument. The MMPI also warrants further attention as a screening device. Based on the results from subjects that completed this study, the MMPI is not a reliable method for distinguishing abusive from non-abusive parents, per se. (It is uncertain if the parents that dropped out or declined to enter the study would have shown a definitive profile). This result is consistent with findings of other researchers (e.g., Goldstein et al, 1985) that no consistent set or cluster of personality traits has been identified as characterizing abusive parents. Profiles of the six subjects in this

study were quite varied. However, the Psychopathic Deviate scale (scale 4) appeared to yield useful information related to treatment issues. Subjects 1 and 6 were the only parents with a standard score above 70 on this scale. These two parents also exhibited the highest rates of objectively measured verbal abuse (Figure 9). In other words, ratings of an objective judge indicated that these two parents were more verbally abusive than the other parents. Elevations on scale 4, therefore, may help identify the more extreme cases of abuse from the continuum of abusive parents. Additionally, compared to the other subjects, these two parents required much more encouragement to remain in the treatment program. This suggests that a carefully planned incentive program should be integrated into the treatment of such parents. Frequent verbal encouragement and praise, as applied in the current study, may be insufficient motivators for such parents. Specific and frequent reinforcers (e.g., movie passes, discount coupons, etc.) should be provided contingent upon completion of training phases and the demonstration of competency in specific skill areas.

To summarize this discussion of pre-treatment assessment for abusive parents, a five-step procedure is proposed which would enable treatment providers to identify treatment priorities as well as modalities. First, an interview should be conducted with the parent to gain his/her view of the problems and assess the effectiveness of his/her social support network. Second, the parent should complete a questionnaire designed to 1) assess knowledge of parenting skills and 2) identify irrational beliefs. The Parent Reaction Survey Schedule (Cautela, Cautela, & Esonis, 1983) may be appropriate because it

assesses discipline methods, problematic child behavior, and thought patterns of the parent prior to punishment. Third, spontaneous parent-child interactions should be observed. Next, after two home audiotapes are collected, a stress profile should be conducted. Finally, the parent should complete an MMPI. Administration of the MMPI is considered optional, because information regarding parent motivation and degree of abuse is often apparent from the interview. This proposed assessment process would require a one-hour home visit and a two-hour session in a clinic.

During the first meeting, an interview would be conducted. This should take place in the parent's home in order to observe parent-child interactions. After the interview, the parent would be given the questionnaires to be returned at the next session. He or she would also be given a microcassette recorder and two audiotapes for recording child interactions during stressful periods (e.g., mealtime, bedtime) prior to the next session. The second meeting would be conducted in the clinic. A stress profile, using the audiotape judged to be more stressful by the parent, would be conducted during the first 30 minutes. Then, ideally, the MMPI would be completed. This comprehensive assessment would allow the therapist to select treatment priorities and modes. Options include child management (based upon the interview, parenting knowledge assessment instrument, and observed parent-child interactions), relaxation and desensitization (based on interview and stress profile data), modification of beliefs and inappropriate self-statements (based on questionnaire responses), and implementation of a structured incentive program (based on MMPI and interview data). An important aspect of the initial interview would be

the assessment of the parent's social support network. As stated earlier, previous studies (e.g., Wahler, 1980) have indicated that social isolation is associated with child abuse. Participation in a group for abusive parents may be particularly effective for such parents. Also, social service agencies should be contacted to implement a network system for the parent.

Modification of Child Management Training

Another issue which became apparent as treatment progressed was the relative ineffectiveness of child management training for the majority of parents. With the exception of subjects 4 and 5, the parents did not show a decrease in abusive behavior or an increase in positive statements during the child management phase. The most salient factor to help explain this shortcoming is that the majority of parents did not attain an adequate level of mastery of child management principles and skills. The data displayed in Table 13 suggest that both cognitive understanding and the application of principles during homework assignments were unsatisfactory. Subject 5, who demonstrated the highest level of mastery, showed the strongest treatment effect during this phase. Presumably, a more consequential treatment effect would have occurred for all subjects had they mastered and consistently applied the principles of child management.

While these results are discouraging, similar findings have been reported on occasion by others. For example, Wahler (1980) found several studies in which parent training had no effects on the subsequent behavior of abusive parents. In discussing such findings, Koverola et al (1985) suggested that failure to benefit from child

management training is most likely due to "situational and individual characteristics of the parents" (p. 500) that limit the effectiveness of parent training. Wolfe and Manion (1984) identify a "lack of interest" among abusive parents as at least one factor which precludes benefits from child management training (p. 48). Therefore, it appears that a combination of motivation-enhancing techniques and matching of treatment to the specific needs of the parents is needed to increase the likelihood that child management training will be effective. The child management component of the present treatment package should be modified to ensure that 1) assessment of the parent's skills occurs continuously, 2) skills taught are appropriate to the parent's needs, 3) parents have attained competency in the skills presented to them before proceeding to new skills, and 4) incentives for the parent's continued involvement are included in the program.

Modification of Cognitive Modification Training

The cognitive modification component also should be modified. This component should be lengthened so parents have sufficient exposure to these skills. Also, the content of this treatment phase should be simplified to focus on 1) recognition of distorted thinking, 2) development of alternate self-statements, and 3) rehearsal and application of this skill. As with child management training, the assessment procedure should be further developed to assure that the parent acquires a satisfactory skill level in this area. Also, the 7-step problem-solving strategy should be presented after completion of all treatment components so that the parents learn to combine elements of the program in a functional way. For example, when presented with a

problematic parent-child situation, the subject should use deep breathing and create a sensation of physical heaviness (relaxation), use self-statements, such as "He's not doing this to get to me, remain calm, you can handle this" (cognitive modification), and apply an appropriate child management technique, such as differential attention.

Additional Validity Measure of Self-Report Data

In this study, audiotapes of parent-child interactions were coded in order to validate each parent's self-report data. However, verbal abuse was detected on the audiotapes from only two of the parents: subjects 1 and 6. Additional objective measures of abuse, such as ratings by observers present in the subject's home, would likely be a more sensitive objective measure of both the frequency and severity of abuse. Clearly, the presence of an observer may modify parent behavior. However, such reactivity may be reduced by the routine presence of an observer, such as one hour a week. A coding system, such as the one used in this study, could be used by the observers. Behavioral observation has been used by other researchers (e.g., Koverola et al, 1985; Nomellini & Katz, 1983; Sandler et al, 1978) and should be considered in addition to audiotapes in the home setting.

In addition to self-reported frequency of abuse, the parents provided other self-report data: subjective levels of tension (SUDS ratings). The validity and reliability of such self-report data in the home is difficult to measure without accompanying physiological data. However, the positive relationship of SUDS ratings and physiological data measured in the laboratory (i.e., as electrodermal response levels decreased, so did SUDS ratings, as shown in Figures 16, 20, 23, 25, 28,

appropriate during relaxation training to ensure that parents attained a functional skill in this area before proceeding to systematic desensitization training. A more rigorous criterion of relaxation, such as a zero SUDS rating, may have assured that the subjects had mastered this skill.

Strengths

Two strengths of this study deserve comment. First, dependent variables were assessed with a variety of data collection methods. This allowed for a more comprehensive assessment of treatment effects as well as the validation of self-report data by comparisons with physiological and behavioral data. The methodology, then, made possible more definitive statements about treatment effects and avoided the problem of previous studies which relied exclusively upon self-reported data. Second, an effort was made to assess the subjects' level of competency in each of the training areas. Again, this allowed for more precise conclusions regarding the reasons for the presence or absence of treatment effects.

Conclusions

From the foregoing discussion, it is apparent that aspects of the treatment package were effective for different parents. This finding is not surprising, given the heterogeneity of abusive parents (Koverola et al, 1985). A promising finding is that systematic desensitization appears to be a viable treatment mode for some abusive parents, specifically those who exhibit physiological reaction to audiotaped

child stimuli during the initial stress profile. This treatment modality warrants further research.

Further research also should be directed toward the development of comprehensive treatment programs for abusive parents. Along these lines, there is a pressing need to develop and test a comprehensive pre-treatment assessment procedure, such as the one suggested above. Also, further development of methods to keep multi-stressed and/or isolated abusive parents in treatment is needed. Finally, the differential effects of home training vs. laboratory training on the transfer of skills taught to abusive parents deserves additional research.

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APPENDICES

Appendix A

Consent and Agreement for

Participation in a Research Project

Purpose: The purpose of the research project is to reduce or eliminate verbal and/or physical child abuse among parents with a history of abusive behavior.

Research Procedures: The length of your involvement in the project is expected to be between 16 and 17 weeks. The following activities are required of parents who participate in the research project:

A. Attendance at two sessions a week at the Utah State University campus or the Child and Family Support Center. Each session will be 30 to 45 minutes in length. Four areas of training will be provided.

1. Relaxation Training. Eight sessions will be conducted each lasting from 30 to 45 minutes. Verbal instructions will be provided. Instruments will be used to measure your degree of relaxation.

2. Systematic Desensitization. Approximately 8 sessions will be held, each of approximately 45 minutes in duration. This procedure involves relaxation while listening to audiotapes of your own child(ren).

3. Child Management Training. Eight 30-minute sessions will be conducted in which specific methods of managing children will be presented and discussed. A small book will be provided, which you will be able to keep. Modeling, rehearsal, and role-playing will be a part of this phase of training.

4. Cognitive Modification Training. Four 30-minute sessions will be provided and will involve examination of you "self-talk". Alternate self-statements will be provided for you and you will be asked to practice them. You will also be asked to complete a questionnaire which will help identify your pattern of self-statements.

B. Participation in activities at home during the week, including:

1. Practicing of relaxation training for 15 to 20 minutes twice a day and recording your experiences in a relaxation diary.

2. Audiotaping interactions with your child(ren) for 30 minutes a day. (This can be done while arrying out

routine home activities).

3. Completing a daily rating sheet (requiring 1 to 2 minutes).

4. Wearing a small instrument to measure your physiological activity at home. This will be done one time each week for 30 minutes. A research assistant will bring the instrument to your home and will be responsible for monitoring. During this period, you will be free to interact with other family members.

Potential Benefits: Potential benefits for participating in all phases of this study include reduced frequency of child abuse and improved family interactions, relaxation ability, and anger control.

Risks and Inconveniences: Although the personal risk involved in this project are minimal, there may be some risk involved as with any research study. Trained personnel will take reasonable precautions to reduce risk and prevent harm to participants. This research project is being conducted under the auspices of Utah State University. The research institution is legally liable for research-related injury due to obviously negligent conduct of this research or for any acts intentionally done to harm the participant. The University does not assume liability for harm that may occur in the absence of any clear negligence by research personnel. You should be aware of the following risks and inconveniences:

a. Relaxation training is not recommended for some individuals with a medical condition such as abnormal blood pressure, a heart condition, diabetes, and ulcers. Participation in relaxation training under these conditions may jeopardize your health.

b. The confidentiality of information obtained during the course of the project cannot be guaranteed under certain circumstances, which are specified below.

c. Your participation in the research project will require a considerable amount of time.

Protection of Participants: All information collected will be treated as confidential. No information will be communicated to other individuals or agencies unless authorized by your signature in a written letter or release-of-records form. However, it is important to note that the researcher is legally and ethically required to disclose confidential information in the following instances:

a. A clear emergency exists where there may be danger to the participant or others.

b. Child abuse or neglect is suspected or reported.

c. The researcher is under court subpoena to surrender records and/or give testimony.

Under these conditions, absolute confidentiality cannot be guaranteed because information may have to be disclosed as required by state law. Additionally, if you were referred to this project by the Division of Family Services, you should be aware that information regarding your progress in treatment will be provided to that agency upon their request.

Medical clearance: Relaxation training produces changes in physiological functioning and is therefore not recommended for some individuals with a medical condition (especially a heart condition, diabetes, ulcers, and abnormal blood pressure). To assure that you are not experiencing any of these disorders, a written medical clearance must be signed by a physician prior to your participation in the research project.

Statement of Consent and Agreement: The purpose and procedures of this research have been explained to me so that I understand them. I understand that my participation in this sutdy is entirely voluntary and that I may decline to enter this study or may withdraw from it at any time without negative consequences to me by the research personnel. I also understand that I may be referred back to the Division of Family Services for placement in an alternate treatment program as long as it is not detrimental to me to discontinue participation in this project. I understand that the research institution is released from liability except in the case of a clearly negligent or intentionally harmful act. If I have further questions concerning this research or the procedures at any time, I can contact Kim Marvel at 750-1986 for information. I authorize the investigator to keep, publish, use, or dispose of the information and results of this research so long as condifentiality is maintained.

THE STUDY HAS BEEN FULLY EXPLAINED TO ME AND I HAVE READ AND UNDERSTOOD THE AGREEMENT. THEREFORE, I VOLUNTARILY CONSENT AND AGREE TO PARTICIPATE IN THIS STUDY.

Participant's name: _____

Participant's signature: _____

Witness signature: _____

Date: _____

Appendix B

Relaxation Training Procedures

I. Session #1: Introduce autogenic exercises

A. General description of the technique:

1. This method entails the regular practice of standard exercises designed to produce subjective sensations of relaxation, such as heaviness and warmth.

2. Visual imagery and self-statements are components of the exercises.

B. Passive concentration:

1. Relaxation occurs more readily when one "lets it happen" rather than actively tries to relax.

C. Postures:

1. Model three positions (sitting upright, reclining, lying down).

2. Describe the importance of providing support for all parts of the body.

D. Describe components of the exercises:

1. Body check - a 30-60 second survey of the body to identify and release excess tension or discomfort.

2. Breathing - take three deep, slow breaths (breathing from the stomach). For each breath, inhale and exhale to the count of four.

3. Peace scene - a relaxing mental image; suggest possible scenes which are tranquil and foster a sense of relaxation. This scene is maintained for approximately

one minute.

4. Formula - these will be modified or combined during each training session. Give an example (e.g., "My right arm is heavy"). Each formula is repeated five or six times.
5. Terminating the exercise - flex and stretch arms, breath deeply, and open eyes.

E. Conduct the excercises, using the first formula.

1. Set #1
   a. Lead participant through the five components by narrating each step, including repetition of the formula.
   b. After terminating the set, allow the participant to ask questions and/or describe sensations.
2. Set #2
   a. Participant proceeds through the steps without narration unless he/she has had difficulty with the sequence during the first set.
   b. After the participant terminates the set, ask for questions/experiences.
3. Set #3
   a. Participant proceeds without narration, again followed by a brief discussion of his/her experiences.

F. Discuss relaxation as a new skill which will require practice. Encourage the participant to practice twice a day. Provide the relaxation diary and describe how to complete it.

II. Procedures for sessions 2 through 8:

A. Review the relaxation diary with the participant. Discuss problems that were encountered. If needed, provide options to deal with problems (see Aids for Relaxation Training below).

B. Review the five steps of the exercises.

C. The participant proceeds through set #1 with the formulas from the previous session. Ask for the articipant's sensations including whether he/she is experiencing a sense of heaviness or warmth.

D. Present the new formula(s) to the subject (see sequence of formulas below).

E. Lead the participant through the set #2 with the new formulas (narrate the steps, including the new formula). Inquire about the participant's sensations.

F. For set #3, have the participant proceed through the sequence without assistance. Inquire about the subject's sensation and problems.

G. Provide "summary" feedback for the subject. Describe any changes in the physiological parameter which was recorded during the session.

H. Review the participant's typical daily schedule and determine occasions when brief relaxation sessions or parts of the procedure can be practiced and integrated into his/her daily routine.

I. Encourage the participant to continue practicing. Provide new relaxation diary forms.

III. Sequence of formulas:

Session #1: "My right arm is heavy" (RAH)

#2: RAH + "My left arm is heavy" (LAH) + "Both arms are heavy" (BAH)

#3: BAH + "My right leg is heavy" + "My left leg is heavy" + "Both legs are heavy"

#4: "My arms and legs are heavy" (A & LH)

#5: A & LH + "My right arm is warm" + "My left arm is warm" + "Both arms are warm" (BAW)

#6: A & LH + BAW + "My right leg is warm" + "My left leg is warm" + "Both legs are warm"

#7: A & LH + "My arms and legs are warm"

#8: "My arms and legs are heavy and warm"

IV. Aids for relaxation training:

A. Interfering thoughts:

1. Review the concept of passive concentration. Suggest to the client that when the interfering thoughts occur, state to him/herself, "That's interesting", then return to the formula.

2. Check how long the participant is remaining on each formula. If the formula is longer than 60 seconds, reduce the length.

3. Use imagery. For example, imagine that the interfering thoughts are streaming into the right and left sides of the head from above, and are being released through an opening in the forehead.

B. Difficulty maintaining a peace scene:

1. Try to use an alternate modality (e.g., auditory,

visual, kinesthetic) when imagining the scene.

2. Focus on breathing rather than a peace scene.

C. Somatic complaints (e.g., pain, dizziness, swelling):

1. Alter the formula so it is more moderate (e.g., from "My right arm is heavy" to "My right arm is comfortably heavy").

2. Shorten the practice time.

3. Alter the posture, assure that the body is well supported.

D. Unable to sense heaviness:

1. Suggest imagery-enhancing techniques (e.g., sand on arms).

2. If tightening is in specific muscle groups, tense and relax the muscles before beginning the formula.

3. Practice in the bathtub, lift arm out of the water when beginning the heaviness formula.

4. Focus on heaviness during each exhalation.

E. Unable to sense warmth:

1. Suggest imagery-enhancing techniques (e.g., sun shining on the arm, warm fluid flowing through the arm).

2. Lay a blanket on the arms.

3. Bathe the hands and feet in warm water before starting.

4. Place a hand on a warm body region (e.g., chest or abdomen) and imagine warmth is flowing into the hand).

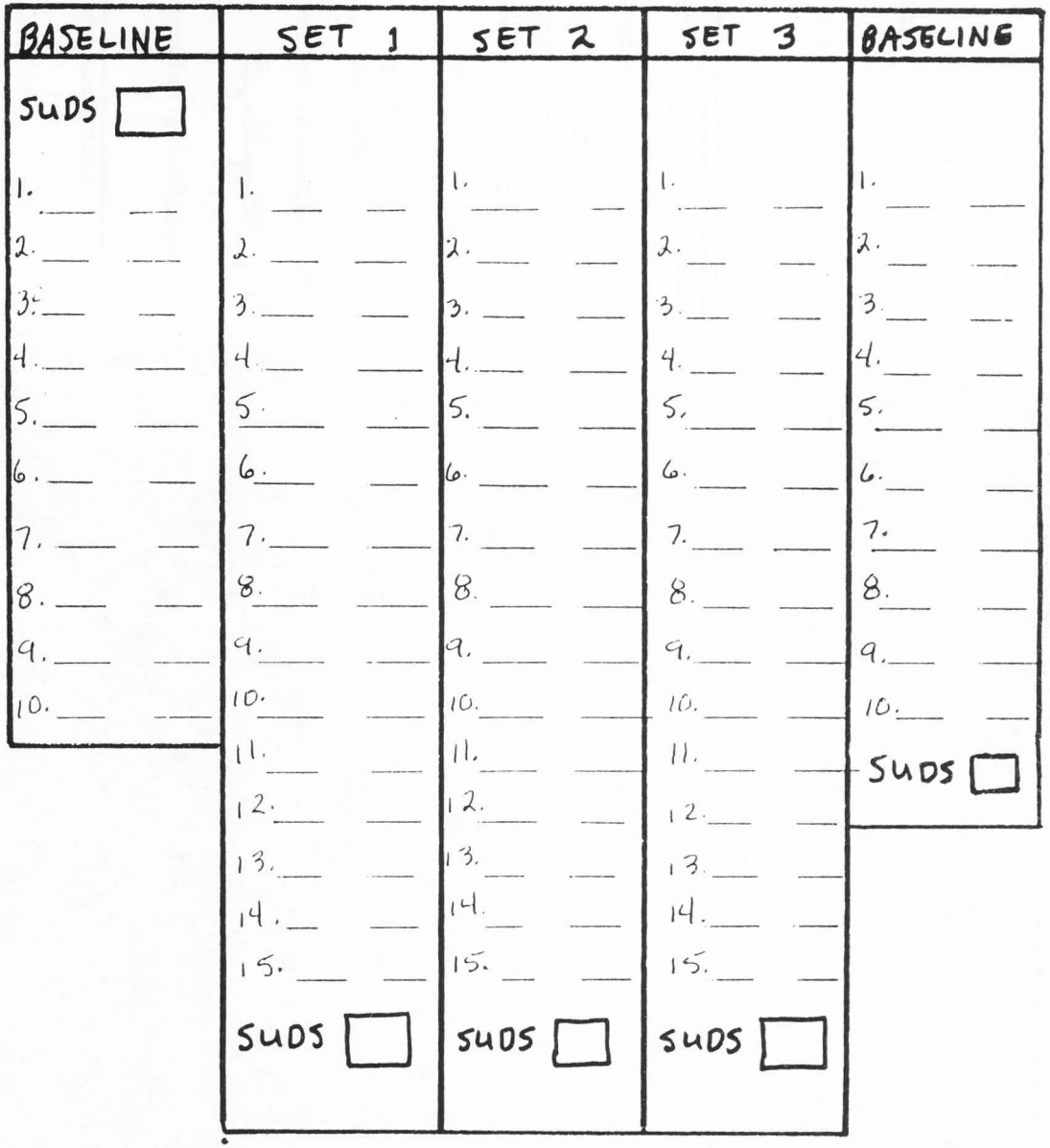
F. Subject reports that no progress is being made:

1. Assure that the person is practicing regularly.

2. Inquire about the participant's environment for

practicing relaxation.

3. Observe the participant's posture for support and comfort.
4. Discuss the concept of a passive attitude.
5. Make an audiotape with which the participant can practice at home.
6. Try a different formula, then return to the original formula at a later time.



SUBJECT: _____

DATE: _____

TIME: _____

ROOM TEMP: ___

SESSION # ___

PARAMETER:

$\bar{X}$ SETS 1, 2, 3 = ___

FORMULAS:

Relaxation Diary

Date_____ Time: begin_____ end_____ Initials_____

Location of training session: _____

Position during session: _____

Muscle group(s) with the most tension: _____

Level of relaxation at the beginning of the session:

0 10 20 30 40 50 60 70 80 90 100
5 15 25 35 45 55 65 75 85 95

Very Relaxed ... Very Tense

Level of relaxation at the end of the session:

0 10 20 30 40 50 60 70 80 90 100
5 15 25 35 45 55 65 75 85 95

Very Relaxed ... Very Tense

Sensations, feelings, thoughts during the session: _____

_____

Other comments:

Date_____ Time: begin_____ end_____

Location of training session: _____

Position during session: _____

Muscle group(s) with the most tension: _____

Level of relaxation at the beginning of the session:

0 10 20 30 40 50 60 70 80 90 100
5 15 25 35 45 55 65 75 85 95

Very Relaxed ... Very Tense

Level of relaxation at the end of the session:

0 10 20 30 40 50 60 70 80 90 100
5 15 25 35 45 55 65 75 85 95

Sensation , feelings, thoughts during session: _____

_____

Other comments:

Appendix C

Anxiety Hierarchy Procedures

Obtaining a sample pool. By this phase in the treatment, the participant has recorded a number of 30-minute home interactions. These audiotapes were sorted into three groups based upon the ending SUDS rating on a self-report form corresponding to each audiotape. That is, each time the parent had recorded interactions at home, he/she also had written SUDS ratings at the beginning and end of the taping session. The ending ratings were used as the criteria for grouping tapes because it was assumed that higher ending ratings would be associated with audiotapes in which more stressful audio stimuli had occurred. Likewise, lower ending ratings likely would be indicative of audiotapes with fewer stressful stimuli. Before grouping the tapes, the range of the ending SUDS ratings were determined by reviewing the subject's self-report forms. Once the range was determined, it was divided into thirds for purposes of sorting audiotapes. For example, if the parent's highest and lowest SUDS ratings were 85 and 10, respectively, then the range would be 75. By dividing the range into thirds, SUDS groupings would be 10 to 35, 36 to 60, and 61 to 86. Audiotapes corresponding to each ending SUDS rating would then be sorted into these three groups. From each group, one audiotape was selected randomly. The purpose of this sorting procedure was to increase the likelihood that a representative range of home interactions would be placed into the sample pool.

After the three audiotapes had been selected, thirty 10-second segments were extracted, 10 from each tape. For each audiotape, eight

of the segments were selected by a systematic sampling technique (Borg & Gall, 1979), A 10-second interval was taken at the beginning of the following minutes: 1, 5, 9, 13, 17, 21, 25, and 29. The ninth and tenth segments selected were based upon the experimenter's judgement. That is, two segments which appeared to be potentially stress-producing were selected from each tape. By repeating this process for each of the three audiotapes, a sample pool of 30 items was generated.

Each segment was transferred from the audiotape to a Language Master card. Because single cards used in this study provided a recording of only five seconds in duration, two cards were attached together with transparent tape in order to record the selected 10-second intervals. After each of the 30 samples had been transferred to the Language Master cards, the cards were mixed together randomly.

Ranking the sample pool items. To complete the anxiety rierarchy, the subject rated each of the stimulus items according to the SUDS rating scale. Prior to the session, the cards, in random order, were numbered from 1 to 30. A form (Appendix C, Hierarchy Contruction Form) was used to record the subject's ratings for each card. At the beginning of the session, the subject was connected to a biofeedback instrument to monitor the physiological parameter that was targeted at the beginning of relaxation training. The subject received instructions similar to the following.

> I am going to play some parts of audiotapes that you have recorded at home. As you listen to each one try to visualize the scene as clearly as you can. After each one, I will ask you to provide a SUDS rating to let me know how you responded to the tape.

The first sample was played 30 seconds after the instructions were finished. The SUDS rating was recorded on the data sheet. Subsequent

amples were presented every 30 seconds until all cards had been played. In addition to SUDS ratings, physiological data were recorded immediately before and after each stimulus presentation. Although these data were not used in the heirarchy construction, they provided information regarding the degree of relation between the subject's verbal report and physiological variations.

After all cards had been presented, the SUDS ratings were examined to identify tied ratings. The cards with tied SUDS ratings were then re-played and the subject asked to re-rank them. Instructions given to the subject were similar to the following:

> These three segments were all rated as 40. I am going to play them again so you can tell me if they are really equal or if they produce slightly different reactions when you listen to them. Again, try to visualize each scene as clearly as you can while you listen.

After each set of tied ratings had been re-ranked, the session was terminated. From the 30 samples, 10 were selected for the final anxiety hierarchy. The selected items were of approximate equal spacing along the continuum of SUDS ratings. Items 1 and 10 were segments with the lowest and highest ratings, respectively. To select the remaining eight items, the range of SUDS ratings was divided by nine to obtain equally spaced intervals. Next, actual ratings that most closely approximated each of these equal intervals were selected from the sample pool. These 10 cards were then re-numbered from 1 to 10. They constituted the anxiety hierarchy which was used during the systematic desensitization procedure.

SUBJECT: _____

SESSION # _____

DATE: _____

TIME: _____

SET 1	SET 2	SET 3	SET 4
SUDS ☐	1 ___	1 ___	1 ___
1 ___	2 ___	2 ___	2 ___
2 ___	3 ___	3 ___	3 ___
3 ___	4 ___	4 ___	4 ___
4 ___	5 ___	5 ___	5 ___
5 ___	6 ___	6 ___	6 ___
6 ___	7 ___	7 ___	7 ___
7 ___	8 ___	8 ___	8 ___
8 ___	9 ___	9 ___	9 ___
9 ___	10 ___	10 ___	10 ___
10 ___	11 ___	11 ___	11 ___
11 ___	12 ___	12 ___	12 ___
12 ___			
SUDS ☐	SUDS ☐	SUDS ☐	SUDS ☐
			$\bar{X}$ =

MINUTES	PRE-STIMULUS			CARD #	POST-STIMULUS		
	TRIAL	SUDS	PHYSIO		SUDS	PHYSIO	PH-30
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Systematic Desensitization Data Form

Hierarchy Construction Form

Subject _____ Data _____

Card	Physiological Pre	Physiological Post	SUDS	Card	Physiological Pre	Physiological Post	SUDS
1.	—	—	—	16.	—	—	—
2.	—	—	—	17.	—	—	—
3.	—	—	—	18.	—	—	—
4.	—	—	—	19.	—	—	—
5.	—	—	—	20.	—	—	—
6.	—	—	—	21.	—	—	—
7.	—	—	—	22.	—	—	—
8.	—	—	—	23.	—	—	—
9.	—	—	—	24.	—	—	—
10.	—	—	—	25.	—	—	—
11.	—	—	—	26.	—	—	—
12.	—	—	—	27.	—	—	—
13.	—	—	—	28.	—	—	—
14.	—	—	—	29.	—	—	—
15.	—	—	—	30.	—	—	—

Appendix D

Child Management Procedures

Session #1:

- A. Learning and behavior change
- B. Focusing on strengths
- C. Setting objectives
- D. Collecting data
- E. Homework:
  1. "Come Here" program baseline data sheet
  2. Reinforcer menu

Session #2:

- A. Review homework
- B. Reinforcement techniques
- C. Homework:
  1. "Come Here" program reinforcement sheet

Session #3:

- A. Review homework
- B. Differential attention
- C. "Extinction burst"
- D. Homework:
  1. Differential attention data sheet

Session #4:

- A. Review homework
- B. Changing the antecedents of behavior
- C. Precision Commands

Hierarchy Construction Form

Subject _____ Data _____

Card	Physiological Pre	Physiological Post	SUDS	Card	Physiological Pre	Physiological Post	SUDS
1.	—	—	—	16.	—	—	—
2.	—	—	—	17.	—	—	—
3.	—	—	—	18.	—	—	—
4.	—	—	—	19.	—	—	—
5.	—	—	—	20.	—	—	—
6.	—	—	—	21.	—	—	—
7.	—	—	—	22.	—	—	—
8.	—	—	—	23.	—	—	—
9.	—	—	—	24.	—	—	—
10.	—	—	—	25.	—	—	—
11.	—	—	—	26.	—	—	—
12.	—	—	—	27.	—	—	—
13.	—	—	—	28.	—	—	—
14.	—	—	—	29.	—	—	—
15.	—	—	—	30.	—	—	—

Appendix D

Child Management Procedures

Session #1:

- A. Learning and behavior change
- B. Focusing on strengths
- C. Setting objectives
- D. Collecting data
- E. Homework:
  1. "Come Here" program baseline data sheet
  2. Reinforcer menu

Session #2:

- A. Review homework
- B. Reinforcement techniques
- C. Homework:
  1. "Come Here" program reinforcement sheet

Session #3:

- A. Review homework
- B. Differential attention
- C. "Extinction burst"
- D. Homework:
  1. Differential attention data sheet

Session #4:

- A. Review homework
- B. Changing the antecedents of behavior
- C. Precision Commands

D. Time out techniques

E. Homework:

1. Precision commands data sheet

Session #5:

A. Review homework

B. Chart systems

C. Spinners

D. Homework:

1. Begin a chart system

Session #6:

A. Review homework

B. Contracting

C. Response cost

D. Overcorrection

E. Homework:

1. Develop a contract

Session #7:

A. Review homework

B. Shaping

C. Prompting

D. Fading

E. Homework:

1. Plan for the future worksheet

Session #8:

A. Review homework

B. Twenty-item verbal assessment of principles of child management

Checklist for Child Management Sessions

Parent _____

Date	Session	Completed
____	Review Questions 1:	
	1. What does it mean that behavior is learned?	___
	2. In selecting behavior change goals for your child, what are two important things to remember?	___
	Homework:	
	"Come Here" Program Baseline Data Sheet	___
	Reinforcer Menu	___
____	Review Questions 2:	
	1. What are five things to remember in responding to your child's behavior with a reinforcer?	
	a. reinforce immediately	___
	b. reinforce frequently	___
	c. be enthusiastic	___
	d. make eye contact	___
	e. describe the behavior you like	___
	2. How can you tell if a reinforcer is working?	___
	Homework:	
	"Come Here" Program Reinforcement Sheet	___
____	Review Questions 3:	
	1. What is differential attention?	___
	2. Why are reinforcing and ignoring, used together, effective with children?	___
	3. What is an extinction burst?	___
	Homework:	
	Differential Attention Worksheet	___
____	Review Questions 4:	
	1. What does it mean to change the antecedents to behavior?	___
	2. Describe precision commands.	___
	3. What is "time out"?	___
	Homework:	
	Precision Commands Data Sheet	___
____	Review Questions 5:	
	1. What is a chart?	___
	2. What is a spinner?	___
	3. How do charts and spinners work together?	___
	Homework:	
	Completed chart and spinner	___

___ Review Questions 6:
1. What is contracting? ___
2. What is response cost? ___
3. What is overcorrection? ___

Homework:
Completed short-term contract with child ___

___ Review Questions 7:
1. What is shaping? ___
2. What is prompting? ___
3. What is fading? ___

Homework:
Plan for the Future ___

Child Management Review Session

1. In determining behavior goals for your child, what are the two conditions to remember? (Being positive and specific.)

2. Give an example of a behavior change goal using these two conditions.

3. What is the effect of providing a reinforcer on your child's behavior? (Maintains or increases behavior.)

4. Give an example of when you would provide your child with a reinforcer.

5. What are the IPEED rules of reinforcement? (Immediately, frequent, be enthusiastic, make eye contact, describe the behavior you like.)

6. What is differential attention? (reinforcement and ignoring). Give an example of when you can use ignoring with your child.

7. What is an extinction burst, and what should you do when it occurs?

8. Give an example of changing an antecedent to your child's behavior.

9. Describe the precision commands process using a behavior of your child's.

10. Give an example of how you would use time-out with your child.

11. How are charts and spinners used together to change behavior? (The child's compliance to tasks is recorded in a chart. Child spins the spinner to see what reinforcer he/she will receive.)

12. Give an example of how you and your child could develop a contract.

13. How might you use overcorrection with your child?

14. Give an example of how each of the following may be used with your child:
    a. shaping
    b. prompting
    c. fading

Appendix E

Cognitive Modification Procedures

Session #1:

A. SUDS rating

B. Describe the problem-solving strategy. Provide a written format with examples for each step (Form #1: Problem-Solving Strategies).

C. Describe irrational beliefs (step 4 on the Problem-Solving Strategies form).

1. Present the following concepts regarding the impact of cognitive processes upon behavior and emotions (from Davis, McKay, & Eshelman, 1981; McKay, Davis, & Fanning, 1981):

   a. One's beliefs and constructions about events create stress/anger rather than the events themselves.

   b. Distorted beliefs can trigger further negative feelings and behavior.

   c. Our beliefs about an event are manifested in self-statements, of which we may be unaware.

2. Present the "A-B-C" sequence (Ellis, 1984) and provide examples (see Form #2: A-B-C Model and Examples).

D. Homework assignment: Complete the 21-item questionnaire (Davis, McKay, & Eshelman, 1981, p. 106-109) containing common irrational beliefs (see Form #3: Irrational Beliefs Questionnaire). Present this assignment as an aid in helping him/her identify irrational thoughts.

E. SUDS rating

Session #2:

A. SUDS rating

B. Review the Questionnaire; identify the irrational beliefs.

C. Provide a format for challenging the irrational beliefs (see Form #4: Challenging Irrational Beliefs) (Davis, McKay, & Eshelman, 1981, p. 110-111).

1. Model the process of challenging the beliefs by taking an example of an irrational belief and following the steps on the form.

2. Parent selects one of his/her irrational beliefs and challenges it by following the same format.

D. Identify specific anger- and stress-producing self-statements made by the parent.

1. Provide examples of dysfunctional self-statements in an "A-B-C" format (see Form #5: Examples of Self-Statements).

2. Instruct the parent to recall a recent anger experience involving a child, describe the activating event (A), subsequent behaviors and emotional reactions (C), and his/her self-statements (B). The parent is encouraged to verbalize his/her thoughts while narrating the sequence step-by-step to help identify self-statements. The self-statements are written down for future use.

E. Homework assignment: Provide an "A-B-C" blank form (see Form #6: A-B-C Worksheet) and instruct the parent to complete steps A, B, C, and D before the next session. This exercise is to help identify the parent's self-statements in an actual

situation.

F. SUDS rating

Session #3:

A. SUDS rating

B. Review the "A-B-C" worksheet homework assignment. If the parent had difficulty identifying inappropriate self-statements, review the situation again and help identify self-statements.

C. Generate alternate self-statements.

1. Provide a list of coping statements (Novaco, 1976) (see Form #7: Coping Self-Statements).

2. Request the parent to modify or replace the inappropriate self-statement and to record it on the "A-B-C" worksheet.

D. Role-play the situation with the parent using the new self-statement.

E. Homework assignment: the parent is to apply the seven steps of the problem-solving strategy (see Form #8: Problem Solving Strategies Worksheet) to one situation recently experienced with his/her own child, including refuting irrational beliefs (step #4) and generating appropriate alternate self-statements (step #5).

F. SUDS rating

Session #4:

A. SUDS rating

B. Review the homework; provide suggestions for steps that were

problematic for the parent.

C. Assess the parent's ability to apply the problem solving strategy (see Form: Assessment of Cognitive Modification Procedures).

D. SUDS rating

Cognitive Modification Training Packet

Problem Solving Strategies

1. Define the problem situation.

   Example: Billy doesn't go to bed when I tell him to; I get angry and yell at him; he cries; afterward I feel guilty.

2. Can elements of the setting be modified?

   Example: Start the bedtime routine 1/2 hour earlier; bedtime preparation is done only in the bathroom where there are no distractions, such as T.V.

3. What child management techniques can be used to reduce or eliminate the problem?

   Example: Begin recording data; provide reinforcers (e.g., reading a book to him) when he goes to bed at the proper time.

4. Do I have irrational beliefs about the situation? Identify them (review the list, if necessary), write them out, and challenge them.

   Example: Children should obey every request of a parent. If my child does not obey me every time, then he is a bad child and I am a failure as a parent.

   Challenge: What evidence is there that a child should obey <u>every</u> time? Is the child "bad" in all ways because of this one incident? To expect perfection of myself or my child is setting myself up for failure and frustration; do I need that?

5. What are my self-statements in this situation? What alternate self-statements would reduce my anger and stress?

   Example: "He never obeys me!" (Overgeneralization)
   "Now my evening is ruined and I'll not get enough sleep, and I'll be tired, and I'll be cranky tomorrow..." (Catastrophizing)

   Alternates: "This is frustrating, but I can be patient"
   "As long as I stay relaxed and in control, this will be worked out"
   "I'm reaching my limits, its time to step out of the room and relax a few minutes"

6. Am I tense during the situation? What can I do to be more relaxed?

   Example: Take three deep breaths when I start to feel angry; Take a moment to produce heaviness and warmth in my arms and legs.

7. (A) If I handled the situation well, did I pat myself on the back?

   Example: It didn't turn out perfect, but I stayed in control and didn't get angry; good for me!

   (B) If the problem still exists, what step needs to be revised? Do I need to practice the situation more before it happens again? If so, plan how I will handle it next time and imagine or role-play the incident with someone other than the child.

This is to verify that Marvin Kim Marvel has permission to reproduce the following material for inclusion in the appendix of the dissertation entitled A Comprehensive Treatment Program for Abusive Parents: An Exploratory Study.

Davis, M., McKay, M., and Eshelman, E.R. (1981). The Relaxation and Stress Management Workbook. Pp. 106-113.

McKay, M., Davis, M., and Fanning, P. (1981). Thoughts and Feelings: The Art of Cognitive Stress Intervention. Pp. 26, 104-106.

New Harbinger Publishers

Date

Summary

15 Styles of Distorted Thinking

1. **Filtering:** You take the negative details and magnify them while filtering out all positive aspects of a situation.
2. **Polarized Thinking:** Things are black or white, good or bad. You have to be perfect or you're a failure. There is no middle ground.
3. **Overgeneralization:** You come to a general conclusion based on a single incident or piece of evidence. If something bad happens once you expect it to happen over and over again.
4. **Mind Reading:** Without their saying so, you know what people are feeling and why they act the way they do. In particular, you are able to divine how people are feeling toward you.
5. **Catastrophizing:** You expect disaster. You notice or hear about a problem and start "what if's:" What if tragedy strikes? What if it happens to you?"
6. **Personalization:** Thinking that everything people do or say is some kind of reaction to you. You also compare yourself to others, trying to determine who's smarter, better looking, etc.
7. **Control Fallacies:** If you feel externally controlled, you see yourself as helpless, a victim of fate. The fallacy of internal control has you responsible for the pain and happiness of everyone around you.
8. **Fallacy of Fairness:** You feel resentful because you think you know what's fair but other people won't agree with you.
9. **Blaming:** You hold other people responsible for your pain, or take the other tack and blame yourself for every problem or reversal.
10. **Shoulds:** You have a list of ironclad rules about how you and other people should act. People who break the rules anger you and you feel guilty if you violate the rules.
11. **Emotional Reasoning:** You believe that what you feel must be true—automatically. If you *feel* stupid and boring, then you must *be* stupid and boring.
12. **Fallacy of Change:** You expect that other people will change to suit you if you just pressure or cajole them enough. You need to change people because your hopes for happiness seem to depend entirely on them.
13. **Global Labeling:** You generalize one or two qualities into a negative global judgment.
14. **Being Right:** You are continually on trial to prove that your opinions and actions are correct. Being wrong is unthinkable and you will go to any length to demonstrate your rightness.
15. **Heaven's Reward Fallacy:** You expect all your sacrifice and self-denial to pay off, as if there were someone keeping score. You feel bitter when the reward doesn't come.

Cognitive Modification Questionnaire

☐ **1. It is an absolute necessity for an adult to have love and approval from peers, family and friends.**

In fact, it is impossible to please all the people in your life. Even those who basically like and approve of you will be turned off by some behaviors and qualities. This irrational belief is probably the single greatest cause of unhappiness.

☐ **2. You must be unfailingly competent and almost perfect in all you undertake.**

The results of believing you must behave perfectly are self blame for inevitable failure, lowered self esteem, perfectionistic standards applied to mate and friends, and paralysis and fear at attempting anything.

☐ **3. Certain people are evil, wicked and villainous, and should be punished.**

A more realistic position is that they are behaving in ways which are antisocial or inappropriate. They are perhaps stupid, ignorant or neurotic, and it would be well if their behavior could be changed.

☐ **4. It is horrible when people and things are not the way you would like them to be.**

This might be described as the spoiled child syndrome. As soon as the tire goes flat the self-talk starts: "Why does this happen to me? Damn, I can't take this. It's awful, I'll get all filthy." Any inconvenience, problem or failure to get your way is likely to be met with such awfulizing self statements. The result is intense irritation and stress.

☐ **5. External events cause most human misery — people simply react as events trigger their emotions.**

A logical extension of this belief is that you must control the external events in order to create happiness or avoid sorrow. Since such control has limitations and we are at a loss to completely manipulate the wills of others, there results a sense of helplessness and chronic anxiety. Ascribing unhappiness to events is a way of avoiding reality. Self state ments *interpreting* the event caused the unhappiness. While you may have only limited control over others, you have enormous control over your emotions.

☐ **6. You should feel fear or anxiety about anything that is unknown, uncertain or potentially dangerous.**

Many describe this as, " a little bell that goes off and I think I ought to start worrying." They begin to rehearse their scenarios of catastrophy. Increasing the fear or anxiety in the face of uncertainty makes coping more difficult and adds to stress. Saving the fear response for actual, perceived danger allows you to enjoy uncertainty as a novel and exciting experience.

☐ **7. It is easier to avoid than to face life difficulties and responsibilities.**
There are many ways of ducking responsibilities: "I should tell him/her I'm no longer interested—but not tonight . . . I'd like to get another job, but I'm just too tired on my days off to look . . . A leaky faucet won't hurt anything . . . We could shop today, but the car is making a sort of funny sound."

If you have checked this idea, please add your standard excuses to avoid responsibility here:

Area of responsibility *Method of Avoidance*

_____ _____
_____ _____
_____ _____
_____ _____
_____ _____
_____ _____

☐ **8. You need something other or stronger or greater than yourself to rely on.**
This belief becomes a psychological trap in which your independent judgement, and the awareness of your particular needs are undermined by a reliance on higher authority.

☐ **9. The past has a lot to do with determining the present.**
Just because you were once strongly affected by something, that does not mean that you must continue the habits you formed to cope with the original situation. Those old patterns and ways of responding are just decisions made so many times they have become nearly automatic. You can identify those old decisions and start changing them *right now.* You can learn from past experience, but you don't have to be overly attached to it.

☐ **10. Happiness can be achieved by inaction, passivity and endless leisure.**
This is called the Elysian Fields syndrome. There is more to happiness than perfect relaxation.

Other irrational ideas

☐ **11. You are helpless and have no control over what you experience or feel.**
This belief is at the heart of much depression and anxiety. The truth is we not only exercise considerable control over interpersonal situations, we control how we interpret and emotionally respond to each life event.

☐ 12. **People are fragile and should never be hurt.** (Farquhar and Lowe)
This irrational belief results in failure to openly communicate important feelings, and in self sacrifice that gives up what is nourishing and pleasurable. Since everything you need or want seems to hurt or deprive someone else, you feel frustratioin, helplessness and depression. Relationships become full of dead space where conflicts developed and nothing was said.

☐ 13. **Good relationships are *based* on mutual sacrifice and a focus on giving.**
This belief rests on the assumption that it is better to give than to receive. It is expressed in a reluctance to ask for things, and the anticipation that your hidden needs will be divined and provided for. Unfortunately, constant self denial usually results in bitterness and withdrawal.

☐ 14. **If you don't go to great lengths to please others, they will abandon or reject you.**
This belief is a by-product of low self esteem. You usually run less risk of rejection if you offer others your true unembellished self. They can take it or leave it. But if they respond to the real you, you don't have to worry about slacking off, letting down your guard, and being rejected later.

☐ 15. **When people disapprove of you, it invariably means you are wrong or bad.** (Farquhar and Lowe)
This extremely crippling belief sparks chronic anxiety in most interpersonal situations. The irrationality is contained in the generalization of one specific fault or unattractive feature to a total indictment of the self.

☐ 16. **Happiness, pleasure and fulfillment can only occur in the presence of others, and being alone is horrible.** (Farquhar and Lowe)
Pleasure, self worth and fulfillment can be experienced alone as well as with others. Being alone is growth-producing and desirable at times.

☐ 17. **There is a perfect love, and a perfect relationship.**
Subscribers to this belief often feel resentful of one close relationship after another. Nothing is quite right because they are waiting for the perfect fit. It never comes.

☐ 18. **You shouldn't have to feel pain, you are entitled to a good life.**
The realistic position is that pain is an inevitable part of human life. It frequently accompanies tough, healthy decisions and the process of growth. Life is not fair, and sometimes you will suffer no matter what you do.

☐ 19. **Your worth as a person depends on how much you achieve and produce.** (Farquhar and Lowe, 1974)
A more rational assessment of your real worth would depend on such things as your capacity to be fully alive, feeling everything it means to be human.

☐ 20. **Anger is automatically bad and destructive.** (Farquhar and Lowe) Anger is frequently cleansing. It can be an honest communication of current feelings, without attacking the personal worth and security of others.

☐ 21. **It is bad or wrong to be selfish**
The truth is that no one knows your needs and wants better than you, and no one else has as great an interest in seeing them fulfilled. Your happiness is your responsibility. Being selfish means you are accepting that responsibility.

It is quite probable that you could add other irrational ideas to this list. Please do. The best way to uncover your own irrational ideas is to think of situations in which you experience anxiety, depression, anger, guilt or a sense of worthlessness. Behind each of these emotions, particularly if they are chronic, is irrational self-talk.

Your other irrational ideas: _____

_____

_____

Much of the difficulty in uncovering irrational self-talk results from the speed and invisibility of thoughts. They may be lightning quick and barely on the edge of awareness. You will rarely be conscious of a complete sentence, as in the irrational statements above. Because self-talk has a reflexive, automatic quality, it is easy to keep the illusion that feelings arise spontaneously from events. However, once the thoughts are slowed down like a slow motion film, frame by frame, the millisecond it takes to say, "I'm falling apart" is exposed for its malignant influence. The thoughts that create your emotions may frequently appear in a kind of shorthand: "no good . . . crazy . . . feeling sick . . . dumb," etc. That shorthand has to be stretched out into the original sentence from which it was extracted. The sentence can then be challenged with methods you'll learn in the section on refuting irrational ideas.

Refuting Irrational Ideas

There are five steps (A through E) to disputing and eliminating irrational ideas. Start by selecting a situation that consistently generates stressful emotions in you.

A. **Write down the facts** of the event as they occured at the time you were upset. Be certain to include only the *objective* facts, not conjecture, subjective impressions or value judgements.

B. **Write down your self-talk** about the event. State all your subjective value judgements, assumptions, beliefs, predictions and worries. Note which self statements have been previously described as irrational ideas.

C. **Focus on your emotional response.** Make a clear one or two word label such as angry, depressed, felt worthless, afraid, etc.

D. **Dispute and change the irrational self-talk** identified at step B. Here's how it is done, according to Ellis:

1. **Select the irrational idea** that you wish to dispute. As an illustration, we will use the irrational idea, "It's not fair that I have to suffer with such a problem."

2. **Is there any rational support for this idea?** Since everything is as it should be, given long chains of cause and effect, the answer is no. The problem must be endured and dealt with because it happened.

3. **What evidence exists for the falseness of this idea?**
   a. There are no laws of the universe that say I shouldn't have pain or problems. I can experience any problem for which the necessary conditions exist.
   b. Life is not fair. Life is just a sequence of events, some of which bring pleasure and some of which are inconvenient and painful.
   c. If problems occur, it is up to me to solve them.
   d. Trying to keep a problem from developing is adaptive, but resenting and not facing it once it exists is a dangerous strategy.
   e. No one is special. Some go through life with relatively less pain than I do. This is due to one of two things: Luck of the draw, or decisions I have made that contributed to the necessary conditions for my problems.
   f. Just because I have a problem doesn't mean I have to suffer. I can take pride in the challenge of a creative solution. This may be an opportunity to increase my self esteem.

4. **Does any evidence exist for the truth of this idea?**
   No, my suffering is due to my self-talk, how I have interpreted this event. I have convinced myself that I should be unhappy.

5. **What is the worst thing that could happen to me** if what I want to happen doesn't, or what I don't want to happen does?
   a. I could be deprived of various pleasures while I deal with the problem.
   b. I might feel inconvenienced.
   c. I might never solve the problem, and experience myself as ineffective in this particular area.
   d. I might have to accept the consequences of failure.
   e. Others might not approve of how I am behaving, I might be rejected as incompetent.
   f. I might feel more stress, tension and a sense of being up against it.
6. **What good things might occur** if what you want to happen doesn't, or what you don't want to happen does?
   a. I might learn to tolerate frustration better.
   b. I might improve my coping skills.
   c. I might become more responsible.

E. **Substitute alternative self-talk,** now that you have clearly examined the irrational idea and compared it with rational thinking.
   1. There's nothing special about me. I can accept painful situations when they emerge.
   2. Facing the problem is more adaptive than resenting it or running away from it.
   3. I feel what I think. If I don't think negative thoughts, I won't feel stressful emotions. At worst I will experience inconvenience, regret and annoyance — not anxiety, depression and rage.

EXAMPLE OF REFUTING AN IRRATIONAL BELIEF

A. Activating Event:

A friend cancelled a date with me.

B. Rational Ideas:

I know he's under a lot of time pressure right now. . I'll do something by myself.

Irrational Ideas:

I'll feel terribly alone tonight . . . The emptiness is setting in . . . He doesn't really care for me . . . No one really wants to spend time with me . . . I'm falling apart.

C. Consequences of the irrational ideas:

I was depressed . . . I was moderately anxious.

D. Disputing and challenging the irrational ideas:

1. Select the irrational idea:

I'll feel terribly alone tonight . . . I'm falling apart.

2. Is there any rational support for this idea?

No.

3. What evidence exists for the falseness of the idea?

Being alone is not as pleasurable as having a date, but I can find pleasure in an alternate activity.

I usually enjoy being alone, and I will tonight as soon as I face the disappointment.

I'm mislabelling frustration and disappointment as "falling apart."

4. Does any evidence exist for the truth of the idea?

No, only that I've talked myself into feeling depressed.

5. What is the worst thing that could happen to me?

I could continue to feel disappointed and not find anything really pleasurable to do tonight.

6. What good things might occur?

I might feel more self-reliant, and realize that I do have inner resources.

E. Alternative thoughts:

I'm OK. I'll get out my detective novel. I'll treat myself to a good Chinese dinner. I'm good at being alone.

Alternative emotions:

I feel quiet, a little disappointed, but I'm anticipating a good meal and a good book.

Rules to Promote Rational Thinking

Evaluate your self statements against these six rules or guidelines for rational thinking (from David Goodman's **Emotional Well Being Through Rational Behavior Training**).

It doesn't do anything to me.
The situation doesn't make me anxious or afraid. I say things to myself that produce anxiety and fear.

Everything is exactly the way it should be.
The conditions for things or people to be otherwise don't exist. To say things should be other than what they are is to believe in magic. They are what they are because of a long series of causal events, including interpretations, responses from irrational self-talk, etc. To say things should be different is to throw out causality.

All humans are fallible creatures.
This is inescapable. If you haven't set reasonable quotas of failure for yourself and others, you increase the prospects for disappointment and unhappiness. It becomes all too easy to attack yourself and others as worthless, bad, etc.

It takes two to have conflict.
Before beginning a course of accusation and blame, consider the 30 percent rule. Any party to a conflict is contributing at least 30 percent of the fuel to keep it going.

The original cause is lost in antiquity.
It is a waste of time to try to discover who did what first. The search for the original cause of chronic painful emotions is extremely difficult. The best strategy is to make decisions to change your behavior *now*.

We feel the way we think.
This is the positively stated principle behind the first statement in this list. It reinforces the idea that events don't cause emotions — our interpretation of events causes emotions.

Coping Self-Statements

1. **Preparing for provocation**

This is going to upset me, but I know how to deal with it.
What is it that I have to do?
I can work out a plan to handle this.
I can manage the situation, I know how to regulate my anger.
If I find myself getting upset, I'll know what to do.
There won't be any need for an argument.
Try not to take this too seriously.
This could be a testy situation, but I believe in myself.
Time for a few deep breaths of relaxation. Feel comfortable, relaxed, and at ease.
Easy does it, remember to keep your sense of humor.

2. **Impact and confrontation**

Stay calm. Just continue to relax.
Just as long as I keep my cool, I'm in control.
Just roll with the punches. Don't get bent out of shape.
Think of what you want to get out of this.
You don't need to prove yourself.
There is no point in getting mad.
Don't make more out of this than you have to.
I'm not going to let him get to me.
Look for positives. Don't assume the worst or jump to conclusions.
It's really a shame that he has to act like this.
For someone to be that irritable, he must be awfully unhappy.
If I start to get mad, I'll just be banging my head against the wall. So I might as well just relax.
There is no need to doubt myself. What he says doesn't matter.
I can't change him with anger, I'll just upset myself.
I'm on top of this situation, and it's under control.

3. **Coping with arousal**

My muscles are starting to feel tight. Time to relax and slow things down.
Getting upset won't help.
It's just not worth it to get so angry.
I'll let him make a fool of himself.
I have a right to be annoyed, but let's keep the lid on.
Time to take a deep breath.
Let's take the issue point by point.
I'll stay rational, anger won't solve anything.
My anger is a signal of what I need to do. Time to cope.
I'm not going to get pushed around, but I'm not going haywire either.
Try to reason it out. Treat each other with respect.
Let's try a cooperative approach. Maybe we are both right.
Negatives lead to more negatives. Work constructively.
He'd probably like me to get really angry. Well, I'm going to disappoint him.
I can't expect people to act the way I want them to.
Take it easy, don't get pushy.

4. **Reflecting on the provocation**

a) when the problem is unresolved

Forget about the aggravation. Thinking about it only makes you upset.
These are difficult situations, and they take time to straighten out.
Try to shake it off. Don't let it interfere.
I'll get better at this as I get more practice.
Remember relaxation. It's a lot better than anger.
Can you laugh about it? It's probably not so serious.
Don't take it personally.
Take a deep breath.

b) when the conflict is resolved or coping is successful

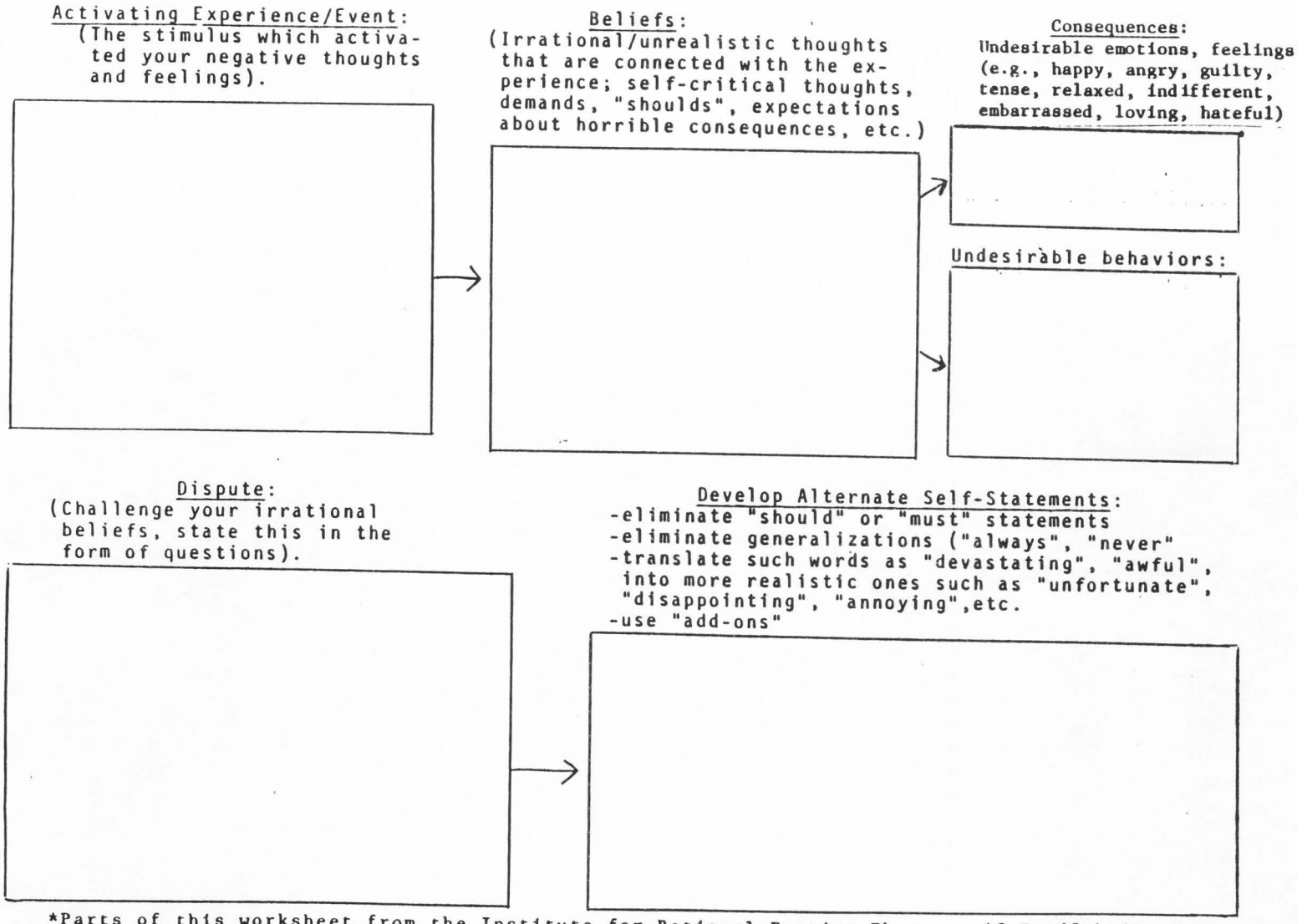
I handled that one pretty well. It worked!
That wasn't as hard as I thought.
It could have been a lot worse.
I could have gotten more upset than it was worth.
I actually got through that without getting angry.
My pride can sure get me into trouble, but when I don't take things too seriously I'm better off.
I guess I've been getting upset for too long when it wasn't even necessary.
I'm doing better at this all the time.

(from Novaco, 1975)

"A-B-C" EXAMPLES

	Activating Event	Belief	Consequence
#1	Child is whining while waiting for supper.	"She is trying to make me mad" (Mind Reading) "She deserves a good, hard spanking!"	Emotion: Irritation, then anger Behavior: "Stop whining!"... Finally, "Shut up!" Child cries and parent feels guilty.
	Alternate:	"Its really a shame she has to act like this, but my muscles are starting to feel tight. Time to relax and slow things down."	Emotion: Slight irritation Behavior: Ignores the child's whining; compliments the child who is not whining; continues to prepare the meal.
#2	Child is told to pick up her toys. Whe says "No!" and runs away from parent.	"She never listens to me" (Overgeneralization)	Emotion: Anger Behavior: Runs after the girl, grabs her by the arm, spanks her, and leads her back to pick up the toys.
	Alternate:	"Be patient. She doesn't have to comply immediately. Take a deep breath and think of a calm way to handle this."	Emotion: Mild tension; satisfied with self for not getting angry. Behavior: Repeats request to child; withholds snack time until the toys are put away. Reviews the child management manual that night and develops a plan to increase child's compliance.
#3	In supermarket, child fusses when candy is not purchased. Cries "I want candy...I want candy..."	"I'm a terrible parent and my child is absolutely horrible! Other parents don't have this problem."	Emotion: Embarrassed, angry, anxious Behavior: Slaps child, scolds him, threatens to take him to the car.
	Alternate:	"This is irritating, but I don't have to prove myself to others. I have a right to be annoyed, but lets keep the lid on."	Emotion: Slight emparrassment, stays calm. Behavior: Firmly states, "We are not getting candy" and continues to shop.

	Activating Event	Belief	Consequence
#4	Child swears at the parent.	"Children should never swear at their parents! He is just an evil child!" (Overgeneralization)	Emotion: Anger Behavior: "Don't ever use that word again! You're gonna learn your lesson". Uses a belt to punish the child.
	Alternate:	"Its really a shame that he has to act like this. He'd probably like to get me really angry. Well, I'm going to disappoint him."	Emotion: Calm, business-like attitude Behavior: Reminds the child that swearing is not allowed. $1 is subtracted from his weekly allowance, as was previously agreed in the behavioral contract.
#5	Child asks to stay up late. Parent says "No". Child replies, "You're a mean mom (dad), I like daddy (mommy) better than you!"	"Its not fair that I work so hard and yet I am not appreciated." (Fallacy of Fairness) "If it weren't for him, I'd be much happier." (Blaming)	Emotion: Hurt, sad, angry at the child Behavior: Parent thinks about child's comment during the night; can't concentrate on other tasks. Sits and dwells on the child's statement.
	Alternate:	"Stay calm, he's trying to manipulate the situation. Don't take it personally. Forget about the aggravation. Remember relaxation.	Emotion: Indifference to the child's comment Behavior: Parent ignores the comment and procedes with the regular nighttime routine.



*Parts of this worksheet from the Institute for Rational-Emotive Therapy, 45 E. 65th St, N.Y.

Problem Solving Strategies

1. Define the problem situation.

2. Can elements of the setting be modified?

3. What child management techniques can be used to reduce or eliminate the problem?

4. Do I have irrational beliefs about the situation? Identify them (review the list, if necessary), write them out, and challenge them.

5. What are my self-statements in this situation? What alternate self-statements would reduce my anger and stress?

   Alternates:

6. Am I tense during the situation? What can I do to be more relaxed?

7. (A) If I handled the situation well, did I pat myself on the back?

   (B) If the problem still exists, what step needs to be revised? Do I need to practice the situation more before it happens again? If so, plan how I will handle it next time and imagine or role-play the incident with someone other than the child.

Assessment of Cognitive Modification

Procedures

Situation I:

1. Your child refuses to finish his supper. You instruct him to finish. He yells "No" and intentionally spills his milk. You respond by yelling "How dare you!", spanking him, and telling him to get out of the room.

2. Change in setting? Yes___ No___

3. Child management techniques? Yes___No___

4. & 5. Self-statements:

"I spent a lot of time preparing this meal, so he damn well better eat it!"

"This is terrible, he is disobeying me again! I've had it with his bad attitude!"

Afterwards: "Boy, I blew it again, I should have controlled myself better"

Identified irrational belief? Yes___ No___

Can he/she challenge the belief? Yes___ No___

Generated alternate self-statements? Yes___ No___

6. Strategy for relaxing? Yes___ No___

7. Self-reinforcement? Yes___ No___

Situation II:

1. Your child wants a friend to spend the night. You say no. She whimpers and whines for 10 minutes. You shout "Cut that out, thats enough!". She continues. You grab her arm forcefully, lead her to her room, and slam the door shut.

2. Change the setting? Yes___ No___

3. Child management techniques? Yes___ No___

4. & 5. Self-statements:

"She is a spoiled brat and deserves what she got!"

"Every time I say no, she whines like a baby"

"If her mother/father hadn't spoiled her when she was a baby, this wouldn't be happening now".

Identified irrational belief? Yes___ No___

Can he/she challenge the belief? Yes___ No___

Generated alternate self-statements? Yes___ No___

6. Strategy for relaxing? Yes___ No___

7. Self-reinforcement? Yes___ No___

Appendix F

Self-Report Data Collection Form

Date_____ Time_____ Initials_____

Before starting the tape recorder:

1. At this time, I feel:

0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Very Relaxed																			Very Tense	

After the tape is finished:

2. During the last 30 minutes I felt:

0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Very Relaxed																			Very Tense	

3. My attitude toward my children during the last 30 minutes was:

0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Very Positive																	Very Negative			

4. The number of negative statements (e.g., criticizing, name calling, yelling, swearing at, etc.) made to your child(ren) during the last 24 hours:

_____

5. The number of negative physical contacts made with your child(ren) during the last 24 hours:

hit_____

slap_____

grab_____

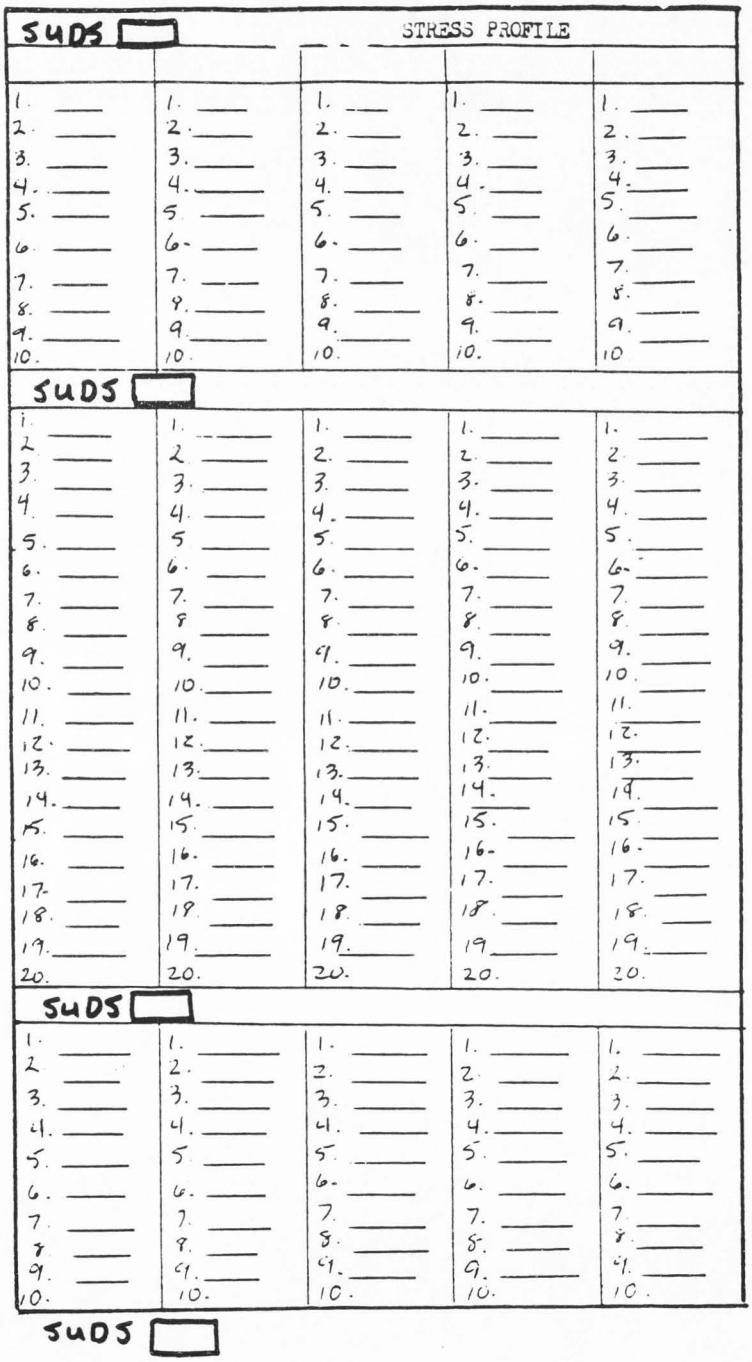
shake_____

spank_____

other_____ (describe)

Appendix G

Physiological Data Collection Forms



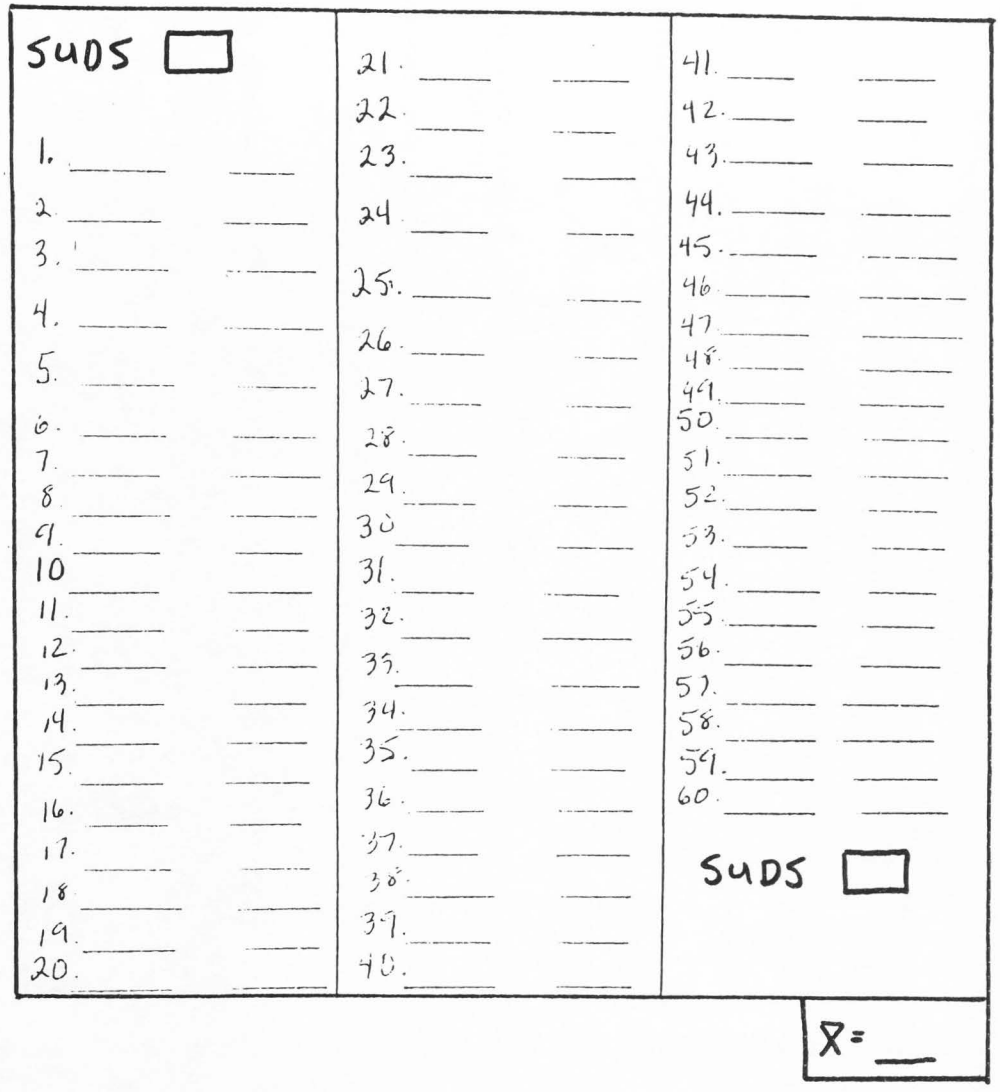
SUBJECT _____

DATE _____

TIME _____

ROOM TEMP ____

COMMENTS:



SUBJECT _____

YOUR NAME _____

DATE _____

TIME _____

PARAMETER _____

ROOM TEMP _____

CLOTHING:

LIGHT ___

MEDIUM ___

HEAVY: ___

PARENT-CHILD INTERACTIONS:

ADDITIONAL OBSERVATIONS:

NUMBER OF CHILDREN PRESENT ___

Appendix H

Audiotape Coding Categories

and Data Collection Form

PARENT STATEMENTS:

Critical statement (CS): A statement that finds fault with the activities, products, or attributes of the child. Includes a negatively evaluative adjective or adverb that refers to the child (e.g., naughty, bad, sloppy, etc.). Tells the child what not to do. A statement of disapproval. Includes obvious parental sarcasm. A statement can be coded as critical if either the content or the tone of voice conveys a negative evaluation.

Examples:

You're being naughty.	Don't tear the book.
That's a sloppy picture.	Stop hitting me.
That's awful.	You're not trying.
That's stupid.	I don't like your attitude.

Guidelines:

1. A negatively evaluative adjective or adverb that refers to an action, product, or attribute of the child makes a comment a critical statement.

Examples:

How inferior.	That's naughty.
That's a lousy drawing.	You're sloppy.
You are foul today.	You're lazy.
You behaved badly.	You're not trying.

2. A critical statement refers to a activity, product, or attribute of the child.

Examples:
You didn't do a very good job on that house.
You put the doll in a stupid place.
That's not a nice thing to do.
You're being very careless today.

3. A statement that negatively evaluates or finds fault with objects in the environment or the activities or products of others is not a critical statement.

Examples:
The truck is too small.
I don't like these curtains.
That doll is broken.
That house is going to fall over.

4. A negative command tells the child what not to do and is a critical statement.

Examples: Stop shouting.
Don't put the gun in the toy box.
Cut that out.
You shouldn't stand on the furniture.
I told you not to write on the wall.
I don't want you to do that again.

5. A statement of disapproval is a critical statement.

Examples: That's not very funny.
I don't like it when you talk back.
I don't like you to throw things.
I don't like you picture.

Praise (PR): A statement that expresses a favorable judgement on an activity, product, or attribute of the child. May be stated in question form (e.g., "That's great, isn't it?").

Examples:

Terrific.	Swell.	Perfect.
Great.	Marvelous.	Excellent.
Nice.	Fine job.	First-rate.

That's a terrific house you made.
You did a great job of building the tower.
Your picture is very pretty.
You have a beautiful smile.
Isn't that a lovely picture that you drew?
You're my little helper for making the bed.

Guidelines:

1. Praise must refer to a product, activity, or attribute of the child. Statements indicating approval of an object in the room, or activity or product of others is not praise.

Examples: (The following are considered praise)

You're thoughtful.	You're so polite.
You're considerate.	You're so patient.
You're bright.	

2. Praise must include a clear verbal picture of positive evaluation. Implied approval through enthusiasm alone is not defined as praise.

Examples: Wonderful! (Praise)
Wow! (Not coded)
That's mommy's little helper. (Praise)

3. Statements of positive evaluation which positively evaluate the child's activity are praise even if they are stated in question form.

Examples: That's terrific, isn't it?
I think that's beautiful, don't you?
You did that just right, didn't you?

4. A positive metaphor that refers to the child is praise.

Examples: You're my little helper.
Here comes daddy's little princess.
What a sweetheart.

Verbal abuse (A): Yelling, screaming, name calling, threatening, or harshly criticizing the child beyond the degree necessary to correct the child's behavior and/or is belittling to the child.

Examples: You disgust me. You are a dumb kid!
I hate you. Shut up!

Guidelines:

1. The statement must be clearly directed at the child.

2. Either the content of the statement or the tone of voice can make a statement abusive.

3. The statement more than corrects the child's behavior. It is overly harsh or belittles the child beyond the degree necessary to correct the behavior.

CHILD STATEMENTS:

Child negative (CN): Includes any of the following verbalizations:

1. Cry - Audible weeping at or below the loudness of normal conversation. Fake crying and sniffling are coded as crying.

2. Yell - A loud screech, scream, shout, or loud crying. The sound must be loud enough so that it is clearly above the intensity of normal indoor conversation.

3. Whine - A whine consists of words uttered by the child in a slurring, nasal, high-pitched, falsetto voice.

4. Smart Talk - Impudent or disrespectful speech. Arguing, refusing, or counter-commanding, in response to a parental command, is a smart talk. Criticism of the parent is a smart talk. Swearing, cursing, or using off-color language is smart talk. Sarcasm toward the parent is smart talk. Excuses, clarifying questions, statements of preference, or postponements in response to parental commands are not coded smart talk. A verbal threat to a parent is a smart talk.

Child positive (CP): Child positive is a verbalization by the child that expresses a favorable judgement on an activity, product, or attribute of the parent. See the guidelines for parental praise for more specific examples.

Audiotape Coding Form

Subject: Coder: Date:

A 1 CS CN PR CP	A 2 CS CN PR CP	A 3 CS CN PR CP	A 4 CS CN PR CP	A 5 CS CN PR CP	A 6 CS CN PR CP	A 7 CS CN PR CP	A 8 CS CN PR CP	A 9 CS CN PR CP
A 10 CS CN PR CP	A 11 CS CN PR CP	A 12 CS CN PR CP	A 13 CS CN PR CP	A 14 CS CN PR CP	A 15 CS CN PR CP	A 16 CS CN PR CP	A 17 CS CN PR CP	A 18 CS CN PR CP
A 19 CS CN PR CP	A 20 CS CN PR CP	A 21 CS CN PR CP	A 22 CS CN PR CP	A 23 CS CN PR CP	A 24 CS CN PR CP	A 25 CS CN PR CP	A 26 CS CN PR CP	A 27 CS CN PR CP
A 28 CS CN PR CP	A 29 CS CN PR CP	A 30 CS CN PR CP	A 31 CS CN PR CP	A 32 CS CN PR CP	A 33 CS CN PR CP	A 34 CS CN PR CP	A 35 CS CN PR CP	A 36 CS CN PR CP
A 37 CS CN PR CP	A 38 CS CN PR CP	A 39 CS CN PR CP	A 40 CS CN PR CP	A 41 CS CN PR CP	A 42 CS CN PR CP	A 43 CS CN PR CP	A 44 CS CN PR CP	A 45 CS CN PR CP
A 46 CS CN PR CP	A 47 CS CN PR CP	A 48 CS CN PR CP	A 49 CS CN PR CP	A 50 CS CN PR CP	A 51 CS CN PR CP	A 52 CS CN PR CP	A 53 CS CN PR CP	A 54 CS CN PR CP
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A 73 CS CN PR CP	A 74 CS CN PR CP	A 75 CS CN PR CP	A 76 CS CN PR CP	A 77 CS CN PR CP	A 78 CS CN PR CP	A 79 CS CN PR CP	A 80 CS CN PR CP	A 81 CS CN PR CP
A 82 CS CN PR CP	A 83 CS CN PR CP	A 84 CS CN PR CP	A 85 CS CN PR CP	A 86 CS CN PR CP	A 87 CS CN PR CP	A 88 CS CN PR CP	A 89 CS CN PR CP	A 90 CS CN PR CP

VITA

Marvin Kim Marvel

Candidate for the Degree of

Doctor of Philosophy

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Major Field: Psychology

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Grants: Marvel, M. Kim, and Striefel, Sebastian, "A comprehensive treatment program for abusive parents: An exploratory study." Funded by the Harry Frank Guggenheim Foundation, December, 1985, $10,687.

Presentations: "A comprehensive treatment program for abusive parents". Poster presentation at the Biofeedback Society of America National Conference, March, 1986, San Francisco.

"An exploratory study on the treatment of abusive parents". Invited participant to the conference on Female Aggression sponsored by the H. F. Guggenheim Foundation, November, 1985, New York University.