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Abstract

This study compared mothers' acceptance of six parenting interventions (response cost, time out, medication, structured routines, positive attention, spanking) for noncompliance. Participants were 41 mothers from lower socioeconomic and ethnic minority backgrounds, with children diagnosed with ADHD and 50 mothers of comparison children. The results indicated that parents rated positive interventions and response cost more favorably than negative interventions, including spanking. Low-income mothers rated time out as significantly less favorable than positive interventions and response cost. Mothers of children referred for treatment of ADHD rated medication significantly more favorable than did mothers of non-clinical controls. These results demonstrate the differences between consumers and potential consumers beliefs about medication acceptability. Future investigations should evaluate the role of parent knowledge, parent training, and treatment adherence on treatment acceptability in parents of children referred for treatment of disruptive behavior problems.

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Diagnosis

Attention Deficit Hyperactivity Disorder, more commonly referred to as ADHD, is classified in the DSM-IV (American Psychiatry Association, 1994) as a disruptive behavior disorder. The three types of ADHD are predominantly inattentive, hyperactive-impulsive, or combined. Most individuals have both inattentive and hyperactive-impulsive symptoms. At least six inattentive and/or six hyperactive-impulsive symptoms must persist in a maladaptive manner that is inconsistent with the developmental level and intellectual ability (APA, 1994). These symptoms must appear before age 7 and persist for at least 6 months, in two or more settings causing impediment in social, academic or occupational functioning.

A child that has difficulty with keeping their mind deliberately focused and is easily bored with certain tasks only after a short time shows the symptoms of being inattentive (National Institute on Mental Health, 1996). Hyperactive children have difficulty moderating their activity level to situational demands. Hyperactive children often are not able to sit still in their seat and may move from one activity to the next. Impulsive children tend to act without thinking, which can result in dangerous situations (e.g. running into the street). Impulsivity in children with ADHD makes it difficult for them to wait for things and may result in aggressive acts (NIMH, 1996).

The National Institute on Mental Health (1996) reported that 3 to 5 percent of all school-aged children are affected by ADHD. In the United States at least one child in every classroom, on average, needs help for the disorder. The ratio of boys to girls in

clinical settings is typically 9:1 but in community epidemiological surveys approximates 4:1 (APA, 1994). ADHD commonly continues into adulthood with 30% to 80% of diagnosed hyperactive children having features of ADHD persist into adolescence and as much as 65% into adulthood (Barkley, 1996: Weiss & Hechtman, 1993).

Comorbidity

A difficulty confronted with when diagnosing ADHD is that it is usually accompanied by various other problems. Children with ADHD commonly experience learning disabilities and emotional disorders. As many as 30-50% of the children referred to clinics with ADHD also have Oppositional Defiant Disorder (ODD) or Conduct Disorder (CD) (APA, 1994). Some studies report as many as 54% to 67% of ADHD children also meet the diagnostic criteria for ODD (Barkley, DuPaul, & McMurray, 1990; Barkley & Biederman, 1997; Biederman, Faraone, & Lapey, 1992). A study based on pediatricians' verbal reports found that behavior problems accounted for 58% of the most common problems seen in pediatric practice (Arndorfer, Allen, & Alijazireh). ADHD was the third most common behavior problem, occurring in 30% of children with behavior problems. Oppositional behavior problems ranked first at 60% and sleep/bedtime problems ranked second in 42% of children.

ODD is a persistent pattern of negative, defiant, and noncompliant behavior lasting more than six months, which can exaggerate problems for children with ADHD. As reported by the National Institute on Mental Health (1996) children with ADHD and ODD are more likely to overreact or lash out and act belligerent or defiant. Scientists generally agree that children with ADHD display a greater degree of defiant and oppositional behavior, along with conduct problems and aggressiveness relative to their

peers (Barkley, 1998). These noncompliance issues can cause children with ADHD functional impairment at home, school or social situations. As a result, many children with ADHD and ODD also experience difficulty interacting with peers resulting in social skills deficits. In addition, a large majority of children with ADHD have comorbid learning disability. About a quarter of ADHD children experience significant symptoms of anxiety and depression (Biederman, Faraone, Mick, Moore, & Lelon, 1996; NIMH, 1996).

Interventions

The National Institute on Health, NIH, (1998) reports that a variety of treatments have been used to treat ADHD which include behavior therapy, psychotropic medications, dietary management, biofeedback, meditation, herbal and homeopathic treatments and perceptual stimulation training. Of all these treatments the main focus of research has been on behavioral interventions and stimulant medications.

The most effective stimulant medications reported include methylphenidate (Ritalin), and dextroamphetamine (Dexedrine or Dextrostat). Metadate, Adderall and Concerta are two more recent forms of methylphenidate that are also being used frequently. Many now come in extended release forms. These medications help to reduce hyperactivity and improve children's ability to focus. In addition, medications may be related to decreases in impulsive and destructive behaviors associated with ODD and conduct disorder (NIMH, 1996). These stimulant medications, however, only temporarily manage ADHD symptoms.

Behavioral interventions include parent training and cognitive–behavioral treatments (NIH, 1998). Parent training directs parents in effectively implementing

contingency management techniques that consist of systematically providing or removing access to reinforcers based on the child's behavior. Examples of these techniques include positive reinforcement, response cost, active ignoring, effective instructions, and time out (Barkley. 1998). Interventions that reinforce appropriate behavior, such as positive reinforcement, are referred to as positive interventions. Time out and response cost are designed to reduce negative behaviors and are referred to as reductive treatments The National Institute on Health (1998) has found that beneficial outcomes have been reported for behavioral therapies including parent training and contingency management. Parent training, in particular, has worked well with conduct-disordered and non-compliant populations (Forehand & McMahon, 1981; Kazdin, 1997; Patterson, 1982; Webster-Stratten, 1994).

The effectiveness of parent training has been well researched (Baum & Forehand, 1981; McMahon & Forehand, 1980; Moreland, Schwebel, Beck & Wells, 1982). While parent training has been found to be a highly effective treatment for children with ADHD and ODD, there are many factors that influence effectiveness such as, maternal depression, single parent status, life stressors and marital discord (Wahler, 1980; Webster-Stratton & Hammond, 1990). Limited success has been met when parent training was employed with socially isolated, low SES or impoverished parents (Wahler, 1980). This high failure rate may be due to parents with different income levels having varied perceptions of the social validity of treatment procedures (Heffer & Kelley, 1987).

Treatment Acceptability

In order to assure social validity, Wolf (1978) suggests that participants, consumers and caregivers need to be directly assessed by psychologists on their acceptability of treatment procedures. Evaluating acceptability is the ultimate goal of social validation. Kazdin (1981) defines treatment acceptability as "judgments by persons, clients, and others of whether treatment procedures are appropriate, fair, and reasonable for the problem or client" (p. 493). It is important to assess the acceptability of treatments by the consumers or potential consumers because if the participants don't care for the treatments they will be less likely to be open to them and use them no matter how good and potentially effective the technology might be (Wolf, 1978).

Consistent finding in the acceptability literature is that positive interventions tend to be more acceptable than negative or reductive treatments (Kazdin, 1980a; Kazdin et. al., 1981; Power, Hess & Bennett, 1995). Although many of these studies have employed undergraduates and clients, using parents to rate treatment acceptability have supported Kazdin's findings (Adams & Kelley, 1992; Calvert & McMahon, 1987; Frentz & Kelley, 1986; Heffer & Kelley, 1987; Jones, Eyberg, Adams & Boggs, 1998; Miller & Kelley, 1992). The influence of parent gender, child behavior problems, marital adjustment, parent race and income has been assessed by Kelley and colleagues (Heffer & Kelley, 1987; Miller & Kelley, 1992). Miller and Kelley (1992) used married couples, with children between the ages of 2 and 12, who had no previous experience with behavior interventions, to assess treatment acceptability for six treatments. They found that mothers and fathers without prior experience with behavioral interventions significantly differed, along with maternal adjustment and child behavior problems influencing ratings.

Mothers rated treatments consistently higher than the fathers with the exception of spanking and medication. In another study (Heffer and Kelley, 1987), mothers of children between the ages of 2 and 12 were divided into low income and middle upper income groups with about a 1:1 ratio of black to white in each group. These mothers rated the treatment acceptability for five treatments: positive reinforcement, response cost, time out, spanking, and medication. Differences between acceptability of interventions between lower and middle-income parents proved to be significant along with race differences. Specifically, low-income families rated time out as significantly less acceptable than response cost and positive reinforcement and as equally acceptable as spanking and medication. Low-income black families rated medication lower than spanking but higher than time out. Middle upper income mothers rated time out, positive reinforcement and response cost as significantly more acceptable than other treatments. This difference was accredited to time out possibly being viewed as impractical or difficult to employ due to the ecology of poverty. Impoverished families may not have a socially isolated room in which to place the child. Also, many day-to-day crises may occur that decrease the ability of low-income families to respond to behavioral problems in anything other than an immediate way.

Although studies by Kelley and colleagues have assessed treatments for disruptive behaviors none of them specifically looked at ADHD. Only a few researchers have looked at the acceptability of interventions for ADHD (Bennett, Power, Rostain & Carr, 1996; Gage & Wilson, 2000). Gage and Wilson used both mothers' and fathers' ratings to assess acceptability of medication, behavioral treatment (non-specified) and the combination of both. Ratings by fathers and mothers were used jointly therefore

differences were not assessed across parent gender. They compared parents of ADHD diagnosed children to parents of children without ADHD. A significant difference was found between the ratings of parents with children with ADHD and those without on the acceptability of medication, behavioral treatment, and the combination of both. Parents of children with ADHD rated medication significantly higher than parents of children without ADHD. This difference seemed to represent a difference between the views of actual consumers and potential consumers.

Limitations of these studies include the primary employment of white middle class parents along with utilizing both male and female reporting. Previous findings of gender, race and income influencing acceptability ratings validate this studies usage of maternal reporting in a predominantly low income, minority population.

This present study assessed mothers' acceptance of six behavioral interventions for reducing child noncompliance. The interventions were: positive reinforcement, time out, response cost, medication, spanking and structured routines. In addition, ratings by mothers who had an ADHD child versus did not were compared. In positive attention privileges are given for obeying and good behaviors. Response cost refers to privileges being taken away for disobedience and bad behaviors. Time out requires that the child be placed in isolation every time he misbehaves. Medication is given to help the child calm down, listen better, and control himself. Misbehavior is responded to with two swats on the bottom each time it occurs in the spanking treatment. Structured routines are used to improve behavior by having the child complete certain activities in the same order and at about the same time every day.

The hypotheses of this study included the following: (a) mothers of the ADHD children would have overall lower acceptability ratings then parents of the non-ADHD children, (b) positive reinforcement and response cost would be rated across both groups as more acceptable overall than the other treatments (Heffer &Kelley, 1987; Miller & Kelley, 1986; Frentz & Kelley, 1986; Jones et. al., 1998), (c) medication and spanking were hypothesized to be rated significantly less acceptable than all other treatments across groups, (d) medication was expected to be rated higher by mothers with ADHD children than the non-ADHD mothers, based on the findings of Gage and Wilson (2000), (e) time out was also hypothesized to be rated less acceptable across groups than positive attention and response cost based on the findings of Heffer and Kelley (1987), (f) the structured routines treatment was not previously assessed but was expected to be rated positively across groups because of its recent popularity in varied parents' magazines and clinical settings.

Method

Participants

Participants included 41 mothers (or other female primary caretakers, such as grandmothers, foster mothers or aunts) of children initially clinically referred for ADHD symptomatology to an ADHD clinic and 50 mothers (or other female primary caretakers) of non-clinical children were solicited from a regular pediatrics clinic, with ages ranging from 22 to 56. The age of the children ranged from 5 to 12 years of age, since it is difficult to diagnose ADHD in children younger than 4 or 5, with 67% of them at an age of 8 or younger (APA, 1994). Also, the ratio of boys to girls in the clinically referred sample was 3:1, which closely approximates the 4:1 ratio, found in community

epidemiological surveys (APA, 1994). The ratio of boys to girls in the non-clinical sample averaged 1:1. Minority mothers made up 75% of the sample and 70% of mothers lived in a one-parent household. Mothers with a total household income of $24,999 or less made up 70% of the participants. The ADHD children needed a t-score of 65 or greater on the ADHD Index scale, no recent treatment, and had to be referred to the behavior clinic to be considered part of the clinical sample. The non-clinical children needed to achieve a score less than 65, have no recent referral for behavior treatment and had to be collected in a regular pediatrics clinic to be included in the control group.

Measures

A demographic questionnaire was used to determine the child's age and sex, previous psychological help, and if the child was referred to the clinic (see Appendix A). The parents' age, race, marital status, education level, income and occupation were obtained. The education levels and occupations wee used to determine SES through use of the Hollingshead Index (Hollingshead, 1975).

The *Conners' Parent Rating Scale-Revised (Short Form) (CPRS-R (S))* is a 27-item parent report measure of ADHD symptomatology (see Appendix B). This scale is commonly used in the diagnosis of ADHD in children aged 3 to 17 years. Each item is scored on a 4-point Likert Scale ranging from 0 (not at all true) to 3 (very much true). The CPRS-R'S has four subscales, Oppositional behavior, Cognitive problems, Hyperactivity and ADHD Index (see Appendix C).

The *Treatment Evaluation Inventory-Short Form (TEI-SF)* (Kelley, Heffer, Gresham, and Elliott, 1989) was used to assess parents' acceptability of the various interventions. It has 9 items with a 5-point Likert Scale ranging from "strongly disagree"

to "strongly agree" (see Appendix D). Subjects have reported liking the TEI-SF better than the TEI and it's calculated reading level is approximately 1 year lower than the TEI (Kelley et. al., 1989). The TEI consists of a vignette describing an 8-year-old boy diagnosed with behavior difficulties and his noncompliance with his parents. The participants using the TEI-SF evaluated six behavioral interventions. The Latin square procedure was used to vary the order of treatment presentation across subjects to control for order effects. Treatments that were evaluated included positive attention, response cost, differential attention, time out, medication, spanking and structured routines (see Appendix E). All treatments had to be assessed by the participant for inclusion in the study.

Procedure

Mothers were approached in a regular pediatric clinic and asked to volunteer to fill out a questionnaire on child routines, parenting stress and treatment acceptability. Data collection for this study was part of a larger study evaluating child routines. The mothers were then asked if they would like to participate in the experiment if they had a child between the ages of 5 and 12. Mothers expressing interest were informed that the study was completely anonymous and participation was voluntary. Mothers were asked to spend 30-40 minutes completing a demographic questionnaire and questionnaires about child behavior problems and common treatments for ADHD. Two written consent forms were included but were detached from the packet of questionnaires in order to ensure anonymity. The consent form included the study title, performance sites, a list of the investigators, the purpose of the study, inclusion criteria for subjects, number of subjects, study procedures, benefits of participation, risks/discomforts, right to

refuse and rights of privacy. After completion of the packet each mother was given a copy of the consent form. There were no direct benefits for participation in this study and no money was given for participating. There were no foreseen major physical, psychological or social risks associated with this study.

Questionnaires with items missing on the CPRS were prorated if there were no more than 2 missing on any subscale. If more than 20% of items were missing on the CPRS the packet was excluded.

Results

Demographic Characteristics

An analysis of the demographic information was analyzed to account for any possible preexisting differences between the groups. A Chi-Square analysis was performed for each of the dichotomous variables of race, SES level, child age category (8 or younger and 9 or older), child gender, marital status (single or married) and mother age category (22-30, 31-40, and 41-56). Child gender was the only variable which showed significant results, $\chi 2(1) = 5.915$, $p < .05$. An independent sample t-test was performed for the income variable. This test showed no significant results. Therefore, the subgroups of race, child age, marital status, mother's age, SES level and income level were relatively homogenous.

Group Analyses

A 2 x 2 x 6 repeated measures ANOVA was performed in order to evaluate the effects of child symptomatology and gender on maternal treatment acceptability of six different behavioral treatments. The two between groups factors included gender and diagnosis. There was one within groups factor with six levels including the six totals of

each behavioral treatment scored on the TEI. Child's gender was included as a between groups factor since it maintained significance in the Chi Square analysis. Mauchly's test of sphericity was significant, $W(14) = .201$, $p < .001$. Therefore, a corrective measure had to be used since group size differed significantly between subjects. Greenhouse-Geisser was chosen as the corrective measure. In a repeated measures ANOVA, a main effect was found for the within subjects factor of treatment, $F(3.522,306.448) = 34.935$, $p < .001$. No main effect was found for the between subjects factor of diagnosis, $F(1,87) = 3.318$, n.s. There was a significant interaction between diagnosis and TEI scores, $F(3.522,306.448) = 9.540$, $p < .001$, TEI and child gender, $F(3.522,306.445) = 3.878$, $p < .005$, and between diagnosis and gender, $F(1,87) = 5.518$, $p < .05$.

Pairwise comparisons were conducted between the means for each treatment to find where the significant differences were for the main effect of treatment. Bonferroni procedure was used to adjust for multiple comparisons. These comparisons were used to test the following hypotheses: (a) positive reinforcement and response cost were hypothesized to be rated significantly different overall than other treatments, (b) structured routines was hypothesized to be comparably rated to positive reinforcement and response cost, (c) medication and spanking were hypothesized to be rated significantly less acceptable than other treatments, and (d) time out was expected to be rated significantly less acceptable than positive attention and response cost. As seen in Table 1, response cost, positive attention, and structured routines were all rated comparably and significantly higher than time out, medication, and spanking for both parent groups. Overall, time out was rated similarly to medication but significantly less acceptable than response cost, positive attention and structured routines. Time out was

also rated significantly more acceptable than spanking. Medication and spanking were not rated significantly different with both being rated significantly less acceptable than positive attention, response cost and structured routines.

Medication was hypothesized to be rated significantly different for the ADHD sample than the non-ADHD. It was predicted that the ADHD sample would give medication a higher acceptability rating than the non-ADHD sample. This hypothesis was supported by results of the tests for interactions. The significant interaction between treatment scores and diagnosis was tested through a series of independent samples t-tests. Levene's test for equality of variances was not significant therefore no corrective statistic was needed for comparisons. Medication was the only treatment found to be rated significantly different between the groups, $t(89) = -5.175$, $p < .001$. Medication was rated significantly higher for the ADHD group than for the non-ADHD. A series of independent samples t-tests were conducted to further analyze the significant interaction between treatment means and gender. Levene's test for equality of variances was not significant. Spanking was the only treatment found to be rated significantly different across genders, $t(89) = -3.370$, $p < .005$. Spanking was rated higher for mothers of males than for mothers of females.

The significant interaction for the between groups variables of gender and diagnosis was further studied through a series of t-tests (means displayed in Table 2). Levene's test for equality of variances was not significant for any of the following analyses. Independent samples t-tests were used to examine differences between males and females for each group. Males and females in the non-ADHD group differed in treatment acceptability on response cost, $t(48) = -2.263$, $p < .05$; positive attention, t (48)

= -2.267, $p < .05$; spanking, $t(48) = -3.603$, $p < .005$; and structured routines, $t(48) = -2.121$, $p < .05$. Response cost, positive attention, spanking and structured routines had higher acceptability ratings for mothers of male than female children. In the ADHD group there were no significant differences between the ratings for males and females. An independent samples t-test was conducted for analyzing differences of mothers' ratings between the diagnosed groups for females. Significant differences were found between the groups for spanking, $t(35) = -2.359$, $p < .05$, and medication, $t(35) = -3.979$, $p < .001$. Spanking and medication were given higher ratings by mothers of females in the ADHD group than by mothers of females in the non-ADHD group. Mothers' of males ratings were compared across groups through a series of independent samples t-tests. Significant differences were found between groups for structured routines, $t(52) = 3.340$, $p < .005$, response cost, $t(52) = 2.205$, $p < .05$, and medication, $t(52) = -4.065$, $p < .001$. Response cost and structured routines were rated higher by the non-ADHD group than by the ADHD group but medication was rated higher by the mothers of males for the ADHD group than the non-ADHD group.

Differences among ratings for each gender at each group level were also assessed through one-sample t-tests. For the non-ADHD group, mothers of males rated medication significantly different from all other treatments with the lowest acceptability rating of all other treatments. Time out, medication and spanking were rated significantly different than response cost, while structured routines and positive attention were not. All treatments except spanking were rated significantly different than time out. Mothers of males in the ADHD group rated response cost, positive attention, spanking and structured routines significantly different than they rated medication with time out not

being rated significantly different. Time out was also rated significantly different from all other treatments except medication. Spanking was rated significantly different from all other treatments except medication. Response cost and positive attention were rated similarly to structured routines while medication, time out and spanking were rated significantly different from structured routines. Mothers of females in the non-ADHD group rated all treatments except medication significantly different than time out. All other treatments except time out were rated significantly different from medication. All treatments were rated significantly different from spanking. Mothers of females in the ADHD group rated all treatments except positive attention significantly different from spanking, along with spanking being rated significantly different from all other treatments except positive attention and time out.

Discussion

This study evaluated the treatment acceptability of six treatments commonly used to treat behavior problems. Ratings of low-income, predominately minority mothers of children clinically referred with ADHD symptomatology were compared with ratings of mothers of non-ADHD children. Important findings are as follows: (a) Time out was rated significantly less acceptable than positive attention, response cost and structured routines, each of which were not rated significantly different from the others for overall ratings; (b) Structured routines, response cost, and positive attention were rated across groups as significantly higher than time out, medication and spanking; (c) Medication was not rated significantly different from spanking and timeout, but time out had a rating significantly higher than spanking; and (d) Medication was rated significantly higher by the ADHD group than by the non-ADHD group, where medication was ranked fourth

among treatments for ADHD but was ranked sixth among treatments for the control group. Other important findings which had no predictive hypotheses were as follows: (a) spanking was rated significantly different between mothers of males and mothers of females with mothers of males giving it a higher rating, (b) for mothers of males in the ADHD group, medication, time out, and spanking were rated similar while positive attention, response cost and structured routines were rated similar, (c) for mothers of males in the non-ADHD group, time out and spanking were rated similarly while medication was rated differently from all treatments, (d) mothers of females in the non-ADHD group ranked spanking different from all treatments with time out and medication being rated similarly, (e) mothers of females in the ADHD group only ranked spanking differently from all other groups.

This study hypothesized that mothers of ADHD children would have an overall lower rating of treatments than the non-ADHD group. Mothers of males in the ADHD group did rate structured routines less acceptable than did mothers in the non-ADHD group but overall there was not lower ratings for all treatments in any groups. Mothers of males along with the mothers of females rated medication more favorably for the ADHD group than for the non-ADHD group. Mothers of females in the ADHD group also rated spanking more favorable than did mothers in the non-ADHD group. This could suggest that mothers of children with ADHD symptomatology prefer reductive treatments more favorably than do parents who do not deal with daily behavior problems.

It was also hypothesized that medication and spanking would be rated significantly less acceptable than all other treatments, specifically medication was predicted to be rated as more acceptable by the ADHD sample than for the non-ADHD

group. Findings supported these hypotheses except medication was rated more favorably than time out and spanking for the ADHD group but was rated less favorably than time out and spanking for the non-ADHD group. This finding is consistent with previous hypotheses along with Gage and Wilson's (2000) study of parents of children with and without ADHD. Findings that time out was rated significantly less acceptable than response cost and positive attention for a low income minority group are consistent with Heffer and Kelley's (1987) findings when they compared ratings across levels of ethnicity and income. It was hypothesized that structured routines would be rated positively. This hypothesis was also supported by this study.

Treatment acceptability of structured routines has not been tested previously. This treatment consists of using daily morning, homework, and night routines for children. This treatment has been discussed in popular parents' magazines and is being explored in clinical settings. Structured routines had the highest rating across groups but was rated similarly to response cost and positive attention, two treatments which have received consistently favorable ratings in treatment acceptability literature across populations (Adams & Kelley, 1992; Calvert & McMahon, 1987; Frentz & Kelley, 1986; Heffer & Kelley, 1987; Jones et. al., 1998; Kazdin, 1980; Kazdin et. al., 1981; Miller & Kelley, 1992; Power et. al., 1995; Witt at. al., 1984).

Criteria used for group inclusion in this study created a higher degree of control for this study than previous ones. Exclusive use of maternal reports, child age restrictions (5-12), use of only initially, physician referred children with ADHD symptomatology without recent treatment, affirming group membership with strict use and application of

Conner's ADHD index, and exclusion of all incomplete questionnaires aided in maintaining internal control for this study.

Limitations of this study include questionable validity of self-report methods. All though the mothers' assessment of treatments was suppose to be based upon treatment for a fictional boy with behavior difficulties, it is clear that child gender and diagnosis affected treatment ratings. Even though there were these differences among genders and diagnosis it is unknown how parents would rate interventions for their own child, rather than a fictional, unrelated child. This study has limited external validity. Since it assessed a predominantly low income, minority sample it may not be able to be generalized to other populations. Also, there are unclear relationships with treatment adherence therefore effects of treatment use on ratings are unsure.

Future investigations should investigate the role of parent knowledge, parent training interventions, and treatment adherence on treatment acceptability in parents of children referred for treatment of disruptive behavior problems. Also, relationships between single parent families versus two parent families and treatment acceptability should be addressed because of the differences existing between the home situations and life stressors.

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Table 1

Mean Scores for each Treatment

Treatment	Mean	Standard Deviation
Response Cost	35.115	6.34
Positive Attention	34.387	6.74
Time Out	30.454	8.42
Medication	27.794	8.96
Spanking	25.706	8.65
Structured Routines	36.118	5.77

Note. Based on estimated marginal means.

Table 2

Mean Treatment Scores for each Treatment by Diagnosis and Gender

	Non-ADHD		ADHD	
Treatment	Female	Male	Female	Male
Response Cost	33.832	37.542	34.818	34.267
Positive Attention	33.192	37.208	32.727	34.420
Time Out	27.192	31.125	32.545	30.953
Medication	24.385	21.417	35.091	30.283
Spanking	[illegible]	[illegible]	[illegible]	[illegible]
Structured Routine	[illegible]	[illegible]	[illegible]	[illegible]
N	[illegible]	[illegible]	[illegible]	[illegible]

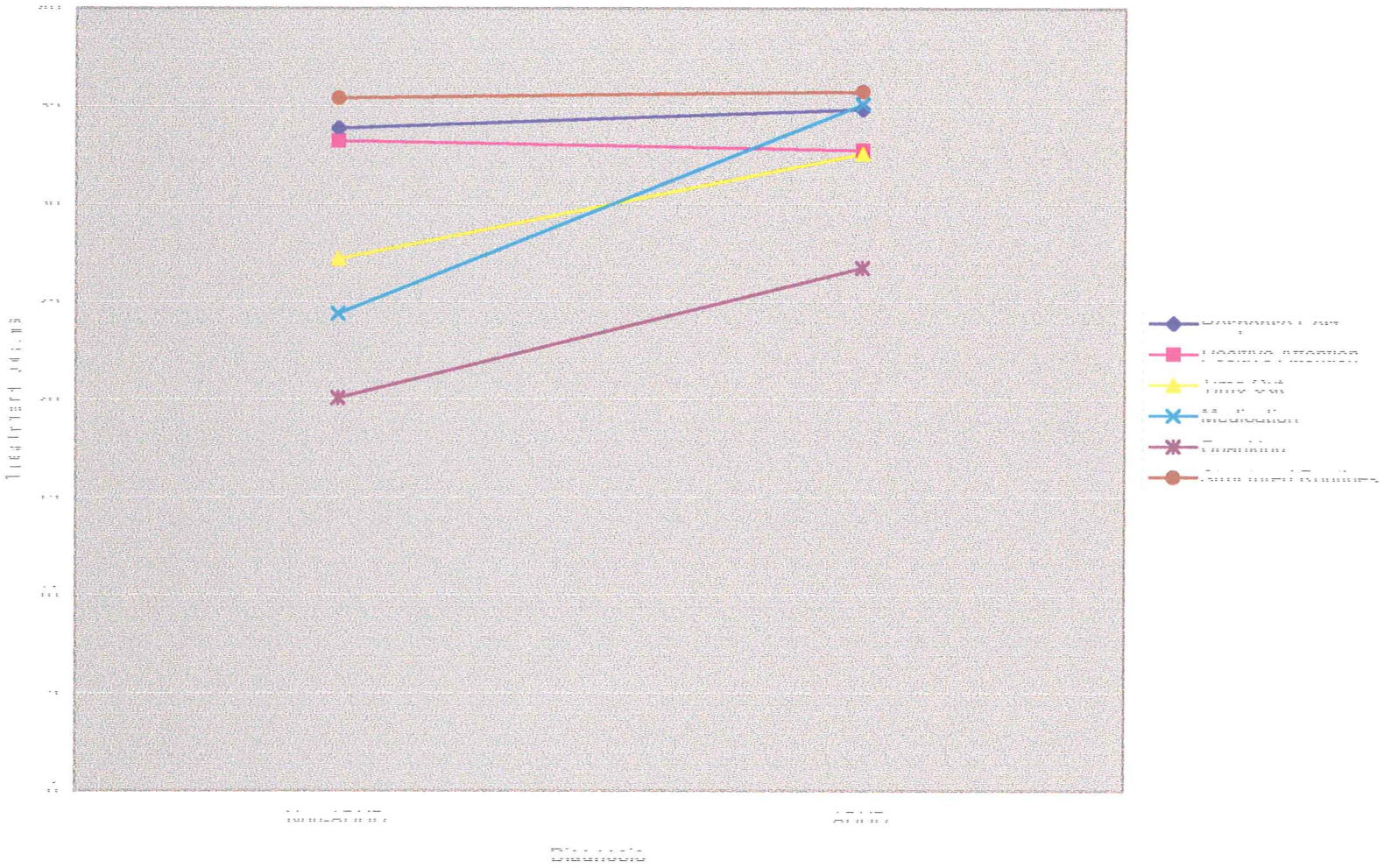
Figure Caption

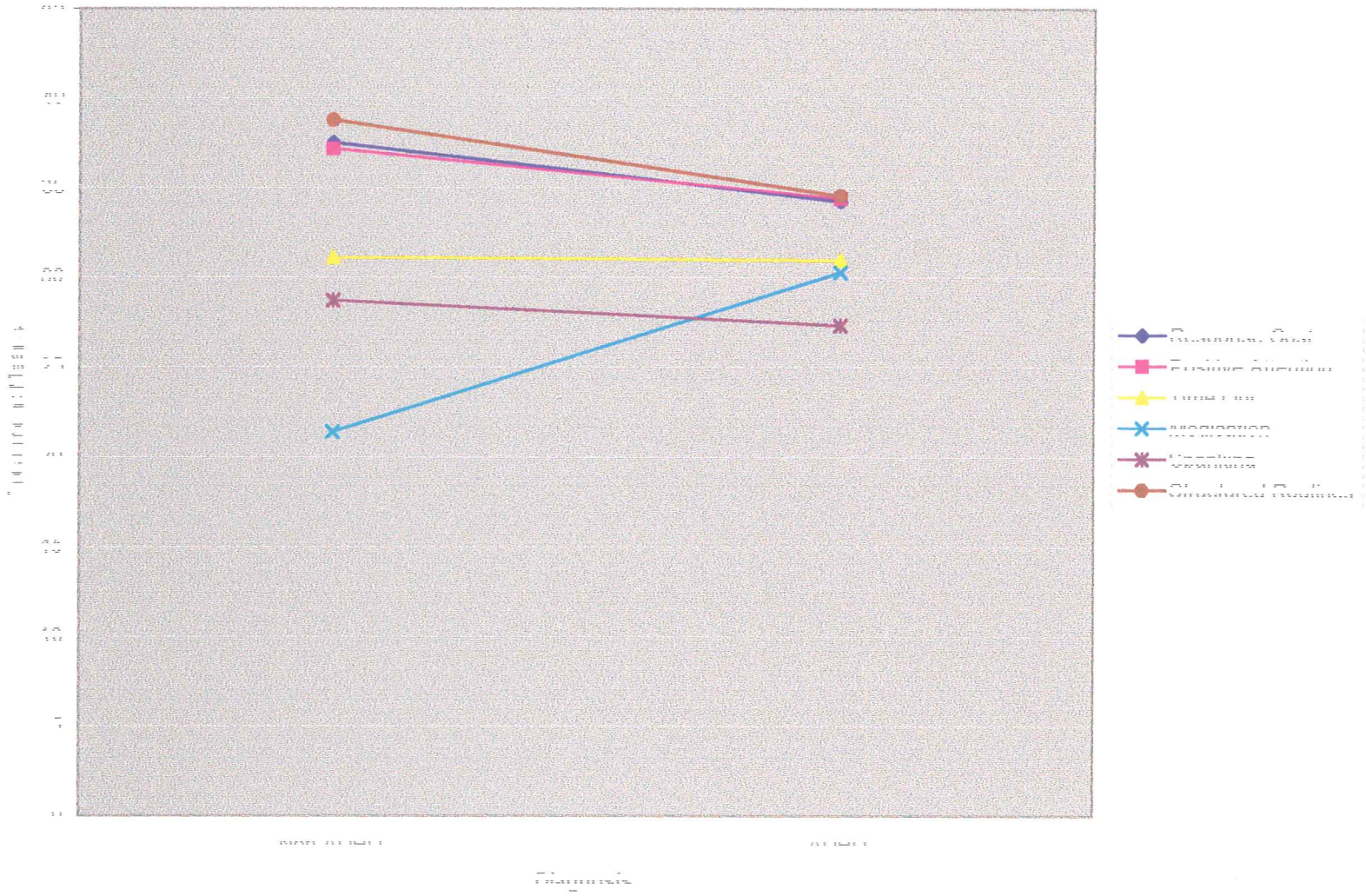
Figure 1. Mean treatment scores as a function of diagnosis group for females.

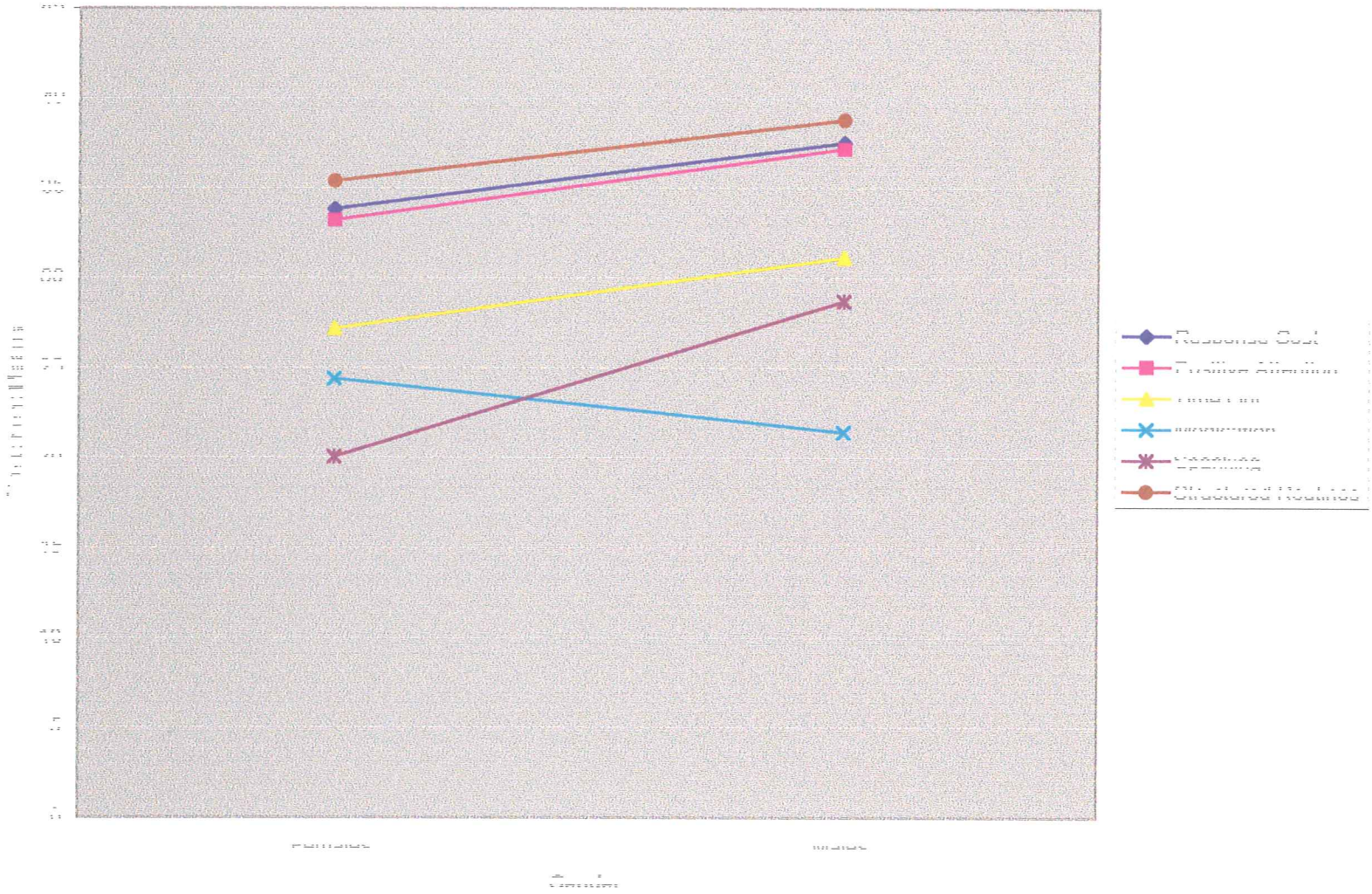
Figure 2. Mean treatment scores as a function of diagnosis group for males.

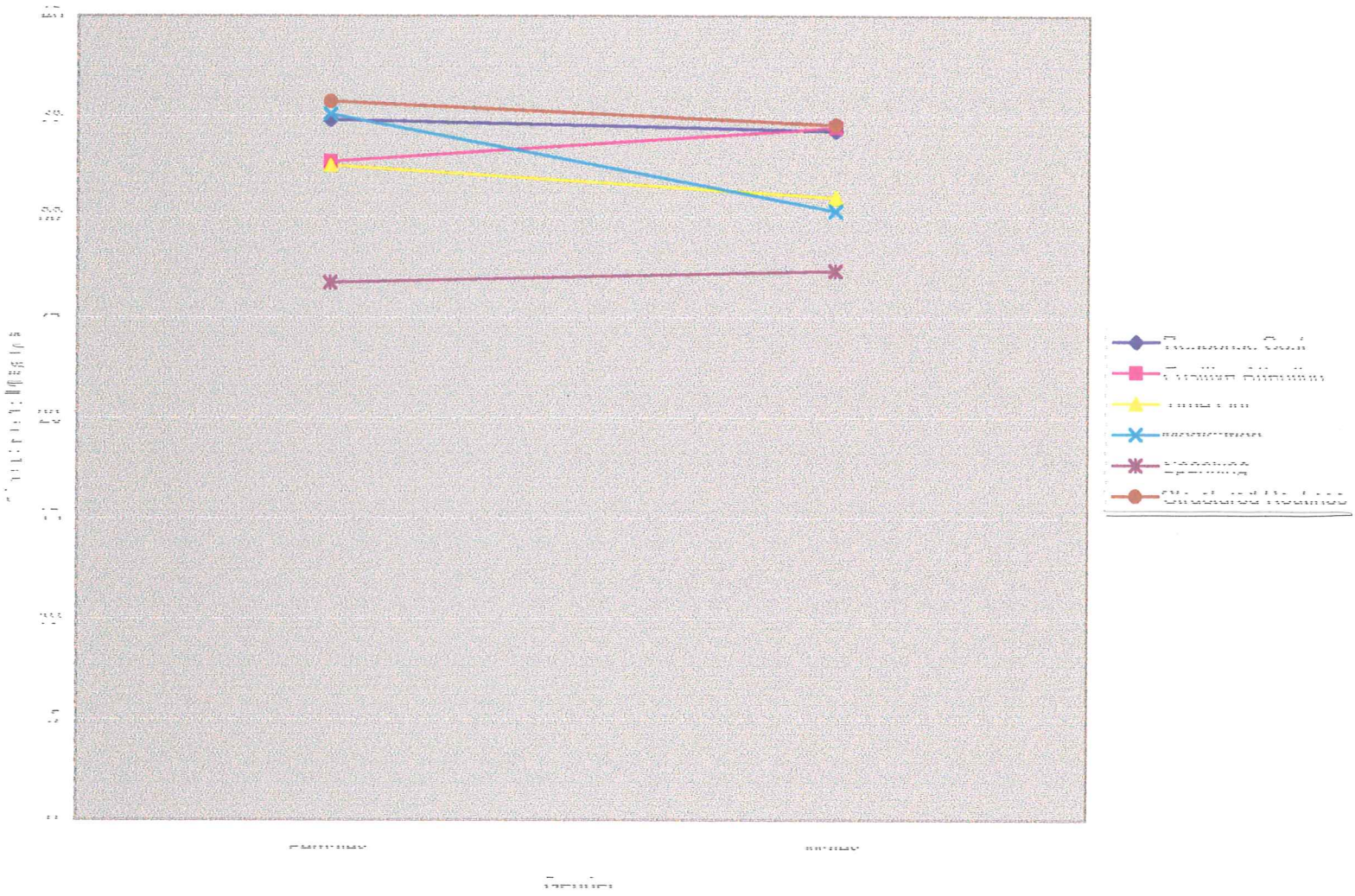
Figure 3. Mean treatment scores for non-ADHD.

Figure 4. Mean treatment scores for ADHD.









Location _____ **DEMOGRAPHIC QUESTIONNAIRE** # _____

These forms are for mothers with children between the ages of 5 and 12 years. If you do not provide most of the care for a child age 5 to 12, please STOP and tell the researcher now.

Child's Age _____ Child's sex? _____ Girl _____ Boy

Have this child ever received help (from a counselor, therapist, or psychologist) due to behavior problems? Yes ____ No ____ If *yes*, when? From: _____ (Month / Year) To: _____ (Month / Year)

Has this child been referred to ADHD or Behavior Clinic at Earl K. Long? Yes _____ No _____

ABOUT YOU AND YOUR FAMILY

Please fill out the following information about yourself and your family. Read each item carefully.

Your age: _____ years

Race: _____ White _____ Black _____ Hispanic _____ Asian _____ Native American
_____ Pacific Islander _____ Other (list) _____

Marital Status: _____ Never Married _____ Married _____ Separated _____ Divorced
_____ Widowed

Education: What is the highest level of education completed by:

Yourself	Your Spouse
_____ 6th grade or less	_____ 6th grade or less
_____ Junior high school (7th, 8th, 9th grade)	_____ Junior high school (7th, 8th, 9th grade)
_____ Some high school (10th, 11th grade)	_____ Some high school (10th,11th grade)
_____ High school graduate	_____ High school graduate
_____ Some college (at least 1 year) or specialized training	_____ Some college (at least 1 year) or specialized training
_____ Standard college or university graduate	_____ Standard college or university graduate
_____ Graduate professional degree (Master's, Doctorate)	_____ Graduate professional degree (Master's, Doctorate)

Occupation: Please provide your job title or position, NOT the just name of your employer. For example, if you are a teacher at Lee High School, please state "high school teacher". If you are retired, please state your prior occupation. If you do not work outside the home, state "unemployed".

What is your occupation? _____ (please be specific)

What is your spouse's occupation? _____ (please be specific)

Income: What is the total annual income of your household? (Combine the income of all the people living in your house right now.)

_____ $ 0 – $ 4,999 _____ $15,000 – $24,999 _____ $50,000 – $74,999
_____ $ 5,000 – $ 9,999 _____ $25,000 – $34,999 _____ $75,000 – $99,999

Conners' Parent Rating Scale - Revised (S)

by C. Keith Conners, Ph.D.

Child's Name:_____ **Gender:** M F

Birthdate:____/____/____ (Month / Day / Year) **Age:**____ **School Grade:**____

Parent's Name:_____ **Today's Date:**____/____/____ (Month / Day / Year)

Instructions: Below are a number of common problems that children have. Please rate each item according to your child's behavior in the last month. For each item, ask yourself, "How much of a problem has this been in the last month?", and circle the best answer for each one. If none, not at all, seldom, or very infrequently, you would circle 0. If very much true, or it occurs very often or frequently, you would circle 3. You would circle 1 or 2 for ratings in between. Please respond to each item.

	NOT TRUE AT ALL (Never, Seldom)	JUST A LITTLE TRUE (Occasionally)	PRETTY MUCH TRUE (Often, Quite a Bit)	VERY MUCH TRUE (Very Often, Very Frequent)
1. Inattentive, easily distracted	0	1	2	3
2. Angry and resentful	0	1	2	3
3. Difficulty doing or completing homework	0	1	2	3
4. Is always "on the go" or acts as if driven by a motor	0	1	2	3
5. Short attention span	0	1	2	3
6. Argues with adults	0	1	2	3
7. Fidgets with hands or feet or squirms in seat	0	1	2	3
8. Fails to complete assignments	0	1	2	3
9. Hard to control in malls or while grocery shopping	0	1	2	3
10. Messy or disorganized at home or school	0	1	2	3
11. Loses temper	0	1	2	3
12. Needs close supervision to get through assignments	0	1	2	3
13. Only attends if it is something he/she is very interested in	0	1	2	3
14. Runs about or climbs excessively in situations where it is inappropriate	0	1	2	3
15. Distractibility or attention span a problem	0	1	2	3
16. Irritable	0	1	2	3
17. Avoids, expresses reluctance about, or has difficulties engaging in tasks that require sustained mental effort (such as schoolwork or homework)	0	1	2	3
18. Restless in the "squirmy" sense	0	1	2	3
19. Gets distracted when given instructions to do something	0	1	2	3
20. Actively defies or refuses to comply with adults' requests	0	1	2	3
21. Has trouble concentrating in class	0	1	2	3
22. Has difficulty waiting in lines or awaiting turn in games or group situations	0	1	2	3
23. Leaves seat in classroom or in other situations in which remaining seated is expected	0	1	2	3
24. Deliberately does things that annoy other people	0	1	2	3
25. Does not follow through on instructions and fails to finish schoolwork, chores or duties in the workplace (not due to oppositional behavior or failure to understand instructions)	0	1	2	3
26. Has difficulty playing or engaging in leisure activities quietly	0	1	2	3
27. Easily frustrated in efforts	0	1	2	3

Conners' Parent Rating Scale - Revised (S)

by C. Keith Conners, Ph.D.

Child's Name:______________________________ Gender: M F

Birthdate:____/____/____ Age:______ School Grade:______
Month Day Year

Parent's Name:______________________________ Today's Date:____/____/____
Month Day Year

For each item, transfer the circled number into each of the white boxes across the row. Sum each column and write the totals in the boxes labelled "TOTALS" at the bottom.

A: Oppositional	B: Cognitive Problems/ Inattention	C: Hyper-activity	D: ADHD Index				
				0	1	2	3
				[illegible]	[illegible]	[illegible]	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	[illegible]	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
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				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				0	1	2	3
				TOTALS			

Appendix D

TREATMENT EVALUATION INVENTORY – SHORT FORM

Please complete the items listed below by placing a checkmark on the line next to each question that best indicates how you feel about the treatment. Please read the items very carefully because a checkmark accidentally placed on one space rather than another may not represent the meaning you intended.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I find this treatment to be an acceptable way of dealing with the child's problem behavior.	_____	_____	_____	_____	_____
2. I would be willing to use this procedure if I had to change the child's problem behavior.	_____	_____	_____	_____	_____
3. I believe that it would be acceptable to use this treatment without children's consent.	_____	_____	_____	_____	_____
4. I like the procedures used in this treatment.	_____	_____	_____	_____	_____
5. I believe this treatment is likely to be effective.	_____	_____	_____	_____	_____
6. I believe the child will experience discomfort during the treatment.	_____	_____	_____	_____	_____
7. I believe this treatment is likely to result in permanent improvement.	_____	_____	_____	_____	_____
8. I believe it would be acceptable to use this treatment with individuals who cannot choose treatment for themselves.	_____	_____	_____	_____	_____
9. Overall, I have a positive reaction to this treatment.	_____	_____	_____	_____	_____

Appendix E

VIGNETTES AND DESCRIPTIONS OF TREATMENTS

Case Description

This is a story about Joe, an 8-year-old boy who has problems behaving at home. On the next pages are six different ways Joe's mother might use to correct his problem. Please read each different treatment, and then answer the 9 questions which follow each treatment in the order in which they are given. Please do not look ahead or look back to other treatments. Please ask for help if you do not understand what you should do or if you have trouble with any of the words. Thank you.

Joe has a Behavior Problem

Joe is an 8-year-old boy with behavior problems who frequently does not obey his parents. Often, Joe seems to ignore his parents when they give him an instruction. He sometimes begins to obey and then gets distracted. Other times, he argues. Often, he has to be reminded over and over to follow rules or complete a chore.

Treatment 1: Positive Attention

To improve Joe's behavior, his parents let him earn privileges when he obeys or completes his chore(s). The privileges include things that Joe really enjoys, such as watching TV, going to a friend's house, staying up late, and playing video games. Each time Joe obeys or completes his chore(s), his parents give him one privilege.

Treatment 2: Response Cost

To improve Joe's behavior, his parents take away his privileges when he disobeys or does not complete his chore(s). The privileges include things that Joe really enjoys such as watching TV, going to a friend's house, staying up late, and playing video games. Each time Joe disobeys or fails to completes his chore(s), his parents take away one privilege.

Treatment 3: Time Out

To improve Joe's behavior, his parents make him sit in the corner of a boring room for 8 minutes, each time Joe either disobeys or doesn't complete his chore(s). If Joe's misbehavior continues, he must go back to the corner again for 8 minutes.

Treatment 4: Medication

To improve Joe's behavior, his parents take him to their family doctor. They tell the doctor about his disobedience, how he does not listen, and his inability to keep his attention focused on chore(s). The doctor gives Joe medication to help him calm down, listen better, and control himself. Joe's parents give him the medication twice a day to improve his attention and behavior.

Treatment 5: Spanking

To improve Joe's behavior, his parents spank him by hitting him twice firmly on the bottom with the palm of their hand. They spank Joe each time he does not obey or fails to complete his chore(s). If Joe's misbehavior continues, then they give him two more swats on the bottom.

Treatment 6: Structured Routines

To improve Joe's behavior, his parents make rules and structured routines. Every day Joe must complete certain activities in the same order and at about the same time before he is allowed to have free time to do things he enjoys. Joe has a morning routine, a homework routine, and a bedtime routine. For example, Joe must make his bed, get dressed, eat breakfast, brush his teeth, and comb his hair before school.