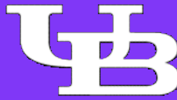

Impact of Child, Family and Treatment Experience Factors on Treatment Preference/Acceptability among Parents of Children with ADHD attending a Summer Treatment Program

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INTRODUCTION

- Attention Deficit/Hyperactivity Disorder (ADHD) is a *chronic* disorder, and impairs children into adolescence and adulthood. As such, taking a developmental psychopathology outlook and a *chronic* conceptualization of treatment is an important goal for clinicians (American Academy of Pediatrics, 2001.
- Three treatments are considered empirically supported in the treatment of ADHD: psychosocial treatments (Pelham, Wheeler & Chronis, 1998), stimulant medications (Spencer et.al, 1996), and the combination thereof (Pelham & Waschbusch, 1999).
- Understanding what factors make these treatments useful and meaningful to the client, and worth continuing will be important for their dissemination (Foster & Mash, 1999)
- The social validity of treatments for families seeking treatment for their children's ADHD has been measured in several different ways: through treatment acceptability, treatment adherence and treatment satisfaction.
- Overall, across numerous studies, including one recent large study (Pelham & MTA Group, in preparation), parents (as well as student samples, and teachers) rate behavioral techniques as more acceptable, and rate greater satisfaction with behavioral treatment than medication, even if they feel that more improvement achieved with medication
- Some research has shown demographic differences on treatment acceptability and adherence including child severity, marital adjustment, race, child age (Bennett et.al, 1996; Cross-Calvert & Johnson, 1990; Miller & Kelley, 1992 Firestone & Witt, 1982, Kazdin et.al, 1997).
- Other research shows that family factors are unrelated to parents willingness to pursue medication or to pursue counseling (Rostain et.al, 1993, Tarnowski et,al, 1992, Reimers et.al, 1992)
- *Exposure* to treatment may also influence subsequent treatment acceptability (Liu et.al, 1991).
- One recent investigation of client satisfaction and preference was conducted on the MTA project, showing parents of children assigned to the behavioral condition endorsed much higher ratings of satisfaction.. In a recent look at parent satisfaction after intervention, parents assigned to the behavioral or combined treatment conditions (as compared to medication-only parents: were more satisfied, and less likely to drop out, and rated their children as more improved. However parents in that study were differentially assigned to one of four treatment conditions (medication only, behavioral treatment only, a combination of the two, or community control group), all the children were ADHD-Combined type, and both the behavioral and pharmacological interventions were intensive
- The present study looks parent treatment preferences after going through a summer treatment program which exposes them to multiple intensities of behavioral treatment and medication.

RESEARCH QUESTIONS

1. Do preexisting family or child characteristics predict treatment preferences, or whether parents say they would use that treatment in the future?
   - Child Factors (Age, # of Inattentive Symptoms, # of Hyperactive/Impulsive Symptoms, comorbid ODD or CD, Impairment, History of Stimulant Treatment)
   - Family Factors (Total Family Income, Single/Two Parent, # siblings, any siblings with behavioral problems)
2. Do aspects of parent's treatment experiences predict whether they say they would use that treatment in the future?

METHODS

•*Participants*

•92 children diagnosed with ADHD
- 86% ADHD-C, 13% ADHD-I, 1% ADHD-HI
- 67% Comorbid ODD or CD
- 12% female
- 50% Caucasian, 46% African American, 3% Asian

Family Characteristics
- Average Family Income: $56, 671 (6, 100 - 151, 000)
- 75% Two Parent Families

•*Measures*

•Child and Family Characteristics
- –Baseline Client Information Form
- –DISC-IV (Shaffer et.al, 1993)
- –Impairment Rating Scale (Fabiano et.al, 2002)

•End of Treatment Rating Parent
- –Made up of forced--choice, likert-type and ranking ratings of parent's perceptions of the treatment conditions, and their respective preferences for the behavioral, pharmacological or combined treatment

•*Procedure*

•Ninety-six children with ADHD aged 5 through 12 participated in a nine-week Summer Treatment Program (STP) from June to August of 2002 and 2003 (MH62946).
•For three-week cycles (order counterbalanced across children), children participated in the STP under one of three behavioral conditions (intensive behavioral treatment, low behavioral treatment, and no behavioral treatment). Within each of those cycles, methylphenidate dosage was varied randomly on a daily basis within children with ADHD (placebo, .15 mg/kg, .3 mg/kg, and .6 mg/kg—all t.i.d. dosing).
•Behavioral Conditions were extended into the home setting, and children received a late afternoon dose of medication so parents experienced both treatments in the home setting.
•These two summers, as part of a larger ongoing project, provided a unique opportunity to look in a within-subject design at treatment preferences for parents who have experienced varying levels of behavior modification as well as medication.
•At the end of the nine weeks of treatment, parents completed measures of child improvement, and forced choice preferences of treatment (behavioral vs. medication as well as rank orderings of treatment combinations (level of behavior modification crossed with medication).

	No Behavior Modification	Low Behavior Modification	High Behavior Modification
Feedback to Parents	None	Daily Report Card	Daily Report Card
Rewards	None	Weekly	Daily
Discipline Procedure	Think Sheets	Fixed length time out	Escalating deescalating time out

Table 1. Home Components of 3-Week Behavioral Conditions

RESULTS

- ***Do preexisting family or child characteristics predict treatment preferences, or whether parents say they would use that treatment in the future?***
- Do child or family factors impact (1) likelihood to prefer medication vs. behavior modification, or (2) likelihood to continue the child management conditions in the future?
- (1) Logistic Regressions (one for child-factors, and one for family factors)
- (2) Ordinal Regressions (one for child factors at every behavioral condition, and one for family factors at every behavioral condition)
- All analyses were nonsignificant

- ***Do aspects of parent's treatment experiences predict if they say they would elect to use that treatment in the future?***
- Ordinal Regressions for each behavioral condition were run to examine the impact of:
  - IV's:
    1. Perceived Effectiveness at Camp
    2. Perceived Effectiveness at Home
    3. Difficulty in implementing
    4. Stress experienced in interactions with the child
  - DV: likelihood to use no, low or high behavioral child management procedures in the future
    - 1 (definitely not) to 5 (definitely yes)

	No Behvior Modification **R^2=.33*****	Low Behavior Modification **R^2=.19*****	High Behavior Modification **R^2=.35*****
How effective at camp?			
How effective at home?	β = .349***	β = .306***	β = .257***
How difficult?		β = -.271*	β = .236*
How stressed in interactions?	β = -.349 §		β = -.251*

- *p<.05, **p<.01, ***p<.001, §p<.000

Table 2. Within-Treatment Predictors of Likelihood to continue child management procedures

- Figure 1 shows the respective mean ratings on each of these conditions by behavioral condition. Results are as follows (see Figure 1):

1. "How difficult were the management procedures to use in this condition?"
   - Responses ranged from 1 (Very Difficult) to 7 (Very Easy)
   - **High** (x= **4.49**, SD=1.44) **< No** (x = **3.8**, SD=1.66) **< Low** (x= **3.68**, SD=1.58)
2. "How stressed did you feel in interactions with your child in this condition?"
   - Ranged from 0(not at all stressed) to 6(Very Stressed)
   - **No** (x = **3.33**, SD=1.57) **= Low**(x=**3.2**, SD=1.34) **>High** (x = **2.05**, SD=1.31)
3. "Would you use the child management procedures used in this condition in the future?"
   - Ranged from 1(Definitely not) to 5 (definitely yes)
   - **Low** (x = **4.81**, SD=1.38) **>High** (x= **4.22**, SD = .89) **>No** (x= **3.62**, SD=1.73)

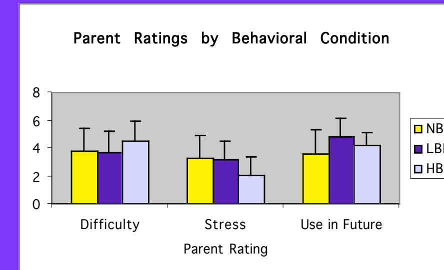

Figure 1. Parents Likert Ratings by Behavioral Condition

DISCUSSION

•No child or familial pre-existing characteristics were found to influence parent preference for behavioral treatment vs. medication, or likelihood to continue any level of behavioral treatment
•Replicates earlier research that failed to find differences in acceptability as a function of demographic variables (Bennett et.al, 1996; Miller & Kelley, 1992; Tarnowski et.al, 1992; Pelham & Hoza, 1996; Pelham et.al, in preparation)
•The parent's *experiences* of the difficulty, effectiveness and stress associated with each level of behavioral treatment *does* relate to their likelihood of utilizing that condition in the future.
•This is the first study to examine preferences in families who have been exposed to different doses of medication, and behavioral treatment
•Further analyses should include pre-treatment measures of treatment preferences for each of the treatment conditions, and should validate these post-treatment preference ratings with measurement of actual treatment utilization.
•The use of social validity measures may help understand the balance between effectiveness, and feasibility for families of children with ADHD.
•Clinical implications include that treatment providers and pediatricians should not screen families from receiving behavioral treatment options based on child or family characteristics.

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