

TREATING EXECUTIVE FUNCTIONING AND MOTIVATION DEFICITS IN ADOLESCENTS WITH ADHD

Maggie Sibley, Ph.D.

Associate Professor of Psychiatry & Behavioral Health

Florida International University

Disclosures

- Research funding from National Institute of Mental Health and Institute of Education Sciences
- Book Royalties from Guilford Press



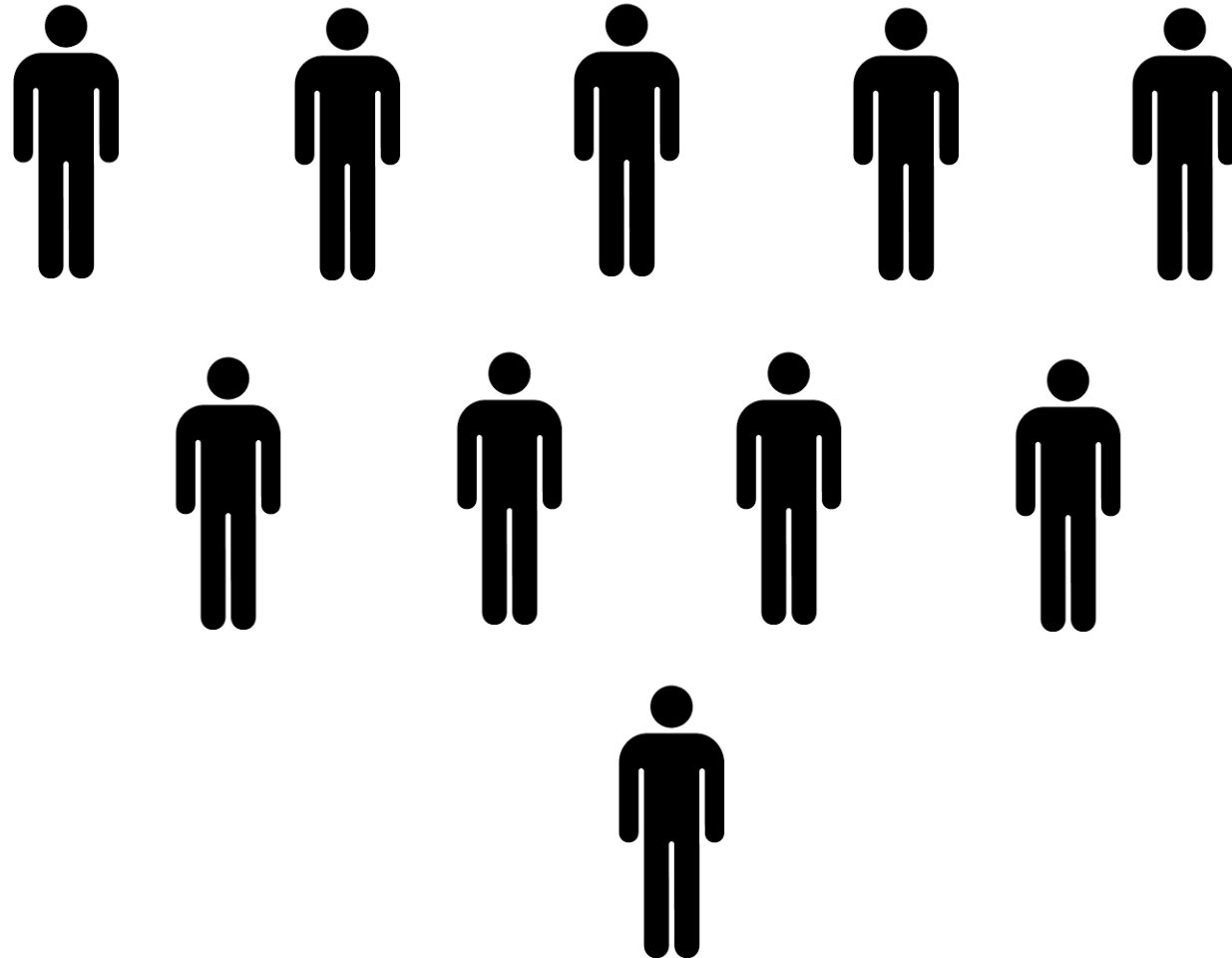








What is the prognosis for a teen with ADHD?



Persistence of ADHD into Adulthood



What can we do?



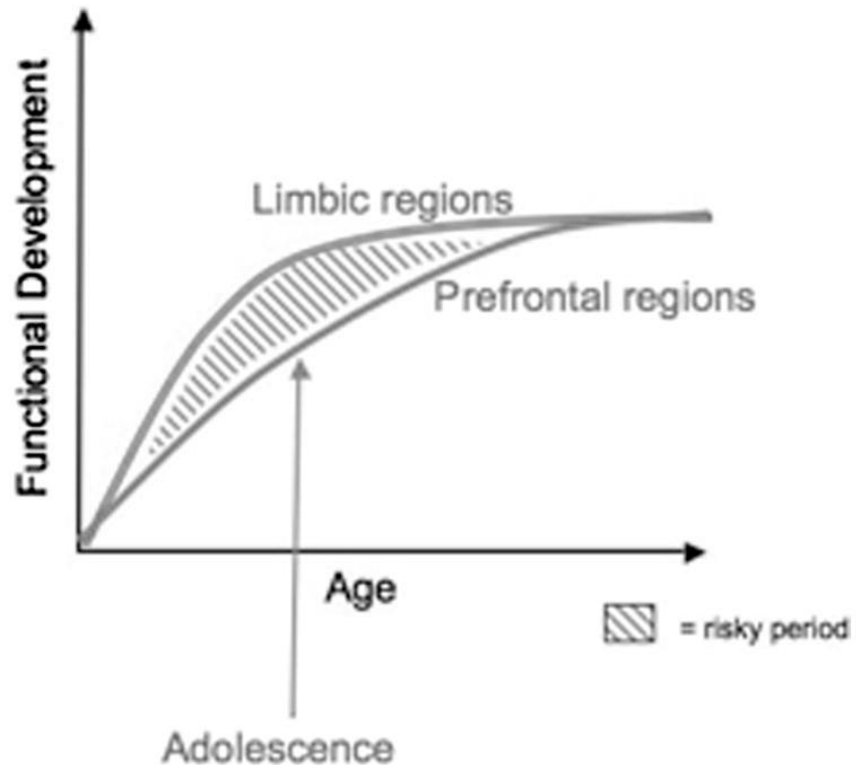
Longitudinal Literature on Adult Persistence

- Childhood ADHD severity
- Number of comorbidities in childhood
- Parental Mental Health Problems
- Adolescent Negative Life Events

Roy et al., 2016; Barkley et al., 2008; Breyer et al., 2014; Wymbs et al., 2012;
Caye et al., 2016

In Adolescence

Adverse Life Events (Barkley et al., 2008)



- School Drop out
- Car crashes
- Drug Addiction
- Legal System Involvement
- Grade Retention
- Expulsion from school
- Teen pregnancy
- Major Injury
- Trauma

Casey et al., 2008

“Cool” Executive Functioning Deficits

- Prefrontal Cortex
- Not fully developed in typical teens
 - Working Memory
 - Set shifting
 - Goal Pursuit
 - Behavioral Inhibition
 - Organization and Planning
 - Self monitoring
- Especially impaired in teens with ADHD

Castellanos et al., 2006; Martel et al., 2007

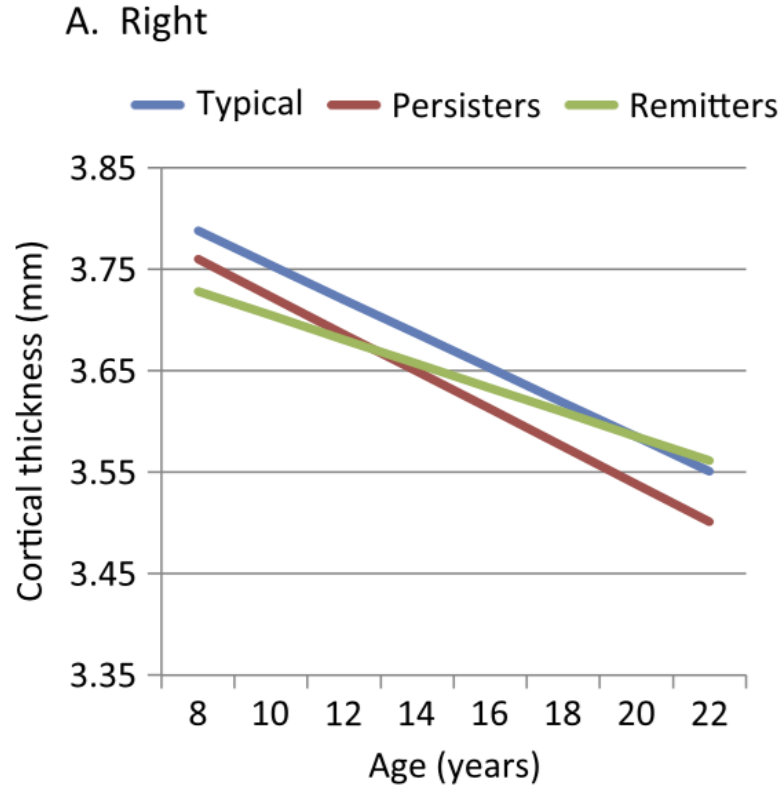
“Hot” Rewards Circuitry

- Strength of dopamine response to rewards
- Strength of communication between rewards centers (i.e., striatum) and EF regions
- Strength of anticipatory dopamine response when you think a reward is coming
- Translates into Motivation problems

Castellanos et al., 2006; Toplak et al., 2009



Neurobiological Literature



Cortical Strengthening in key areas:

- self-monitoring
- working memory
- goal directed behavior
- behavioral inhibition

Shaw et al., 2013

What can we do to move kids on to this remitting trajectory?



Creating Change for These Adolescents

- Right target mechanism
- Delivered in an appropriate context
- Delivered in a window of malleability

Target Mechanism: 1

- Organization, Time Management, and Planning Problems (OTP)

Figure 4. Academic Problem Behaviors Most Frequently Endorsed by Teachers and Parents of High School Students with ADHD (N=122)

TEACHERS	PARENTS
Fails to record homework assignments (72.1%)	Leaves projects to last minute (79.3%)
Leaves projects to last minute (70.0%)	Fails to record homework assignments (76.1%)
Poor time management (69.9%)	Difficulty starting assignments (75.2%)
Does not follow through on homework instructions (67.2%)	Poor time management (74.4%)

Target Mechanism 2: Motivation

- Intrinsic interest in school
- Goal formation and pursuit
- Willpower- ability to sustain attention to tasks that are not enjoyable in order to meet a desired outcome
- Self-control- ability to resist desires to engage in competing tasks that may be more enjoyable than responsibility
- Self-efficacy- belief that you could accomplish goals if you tried—that the goal is feasible

Evidence Based Components

Organization Skills Training

Worksheet 7: STAND MENU

Skill Modules
_____ Writing Down Homework Work together to make an action plan for keeping track of what the teen's homework assignments are each night. This module will help with forgetfulness about homework and can empower parents to know what the teen is supposed to be working on.
_____ Making a Homework Plan Work together to set mutual expectations for where, when, and how homework should be completed each night. Set clear limits on the parent's involvement in homework and what activities have to wait until after homework is completed.
_____ Organization Check-Ups Work together to set expectations about how school materials should be stored and organized. Plan regular organization checks and what to do if the teen passes the checks.
_____ Time Management Strategies Learn a strategy to help you get started on work when you dread it because it is hard or boring. Learn how to schedule homework tasks using a method that increases time on task during homework.
_____ Study Skills Learn study skills techniques that are particularly helpful for teens with attention or executive functioning difficulties. Work together to make a study plan for an upcoming test that breaks up studying over several days.
_____ Note Taking Decide on how you might use note taking to improve your attention in class and relationship with your teachers. Work together to make a plan in which the parent provides accountability for taking notes at school.
_____ Problem-Solving Learn decision-making skills that help you slow down and think through challenging situations, carefully choosing a solution. These skills can be helpful when troubleshooting why a skill listed above is not working for the teen.

Early Attempts to Create Clinic Based Model

STAND 1.0

- Brought parent-teen dyads into the clinic
- Taught the teen organization skills with parent present
- Set up home rewards for staying organized



Key Issues when working with Parents and Teens with ADHD

- Parent and Teen do not fully try out new strategies
- Demands of life prevent consistency
- Difficulties regulating teen electronics
- Teens not accurately presenting their efforts
- Parents not satisfied with slow gradual changes
- Parents who want to use the time to just complain about the teen or be overly negative
- Disconnect between what family members say they want to work on and what seems to be the problem
- Belief that a lot of useful strategies don't work because they've tried them once and didn't have immediate success

Parent Academic Involvement

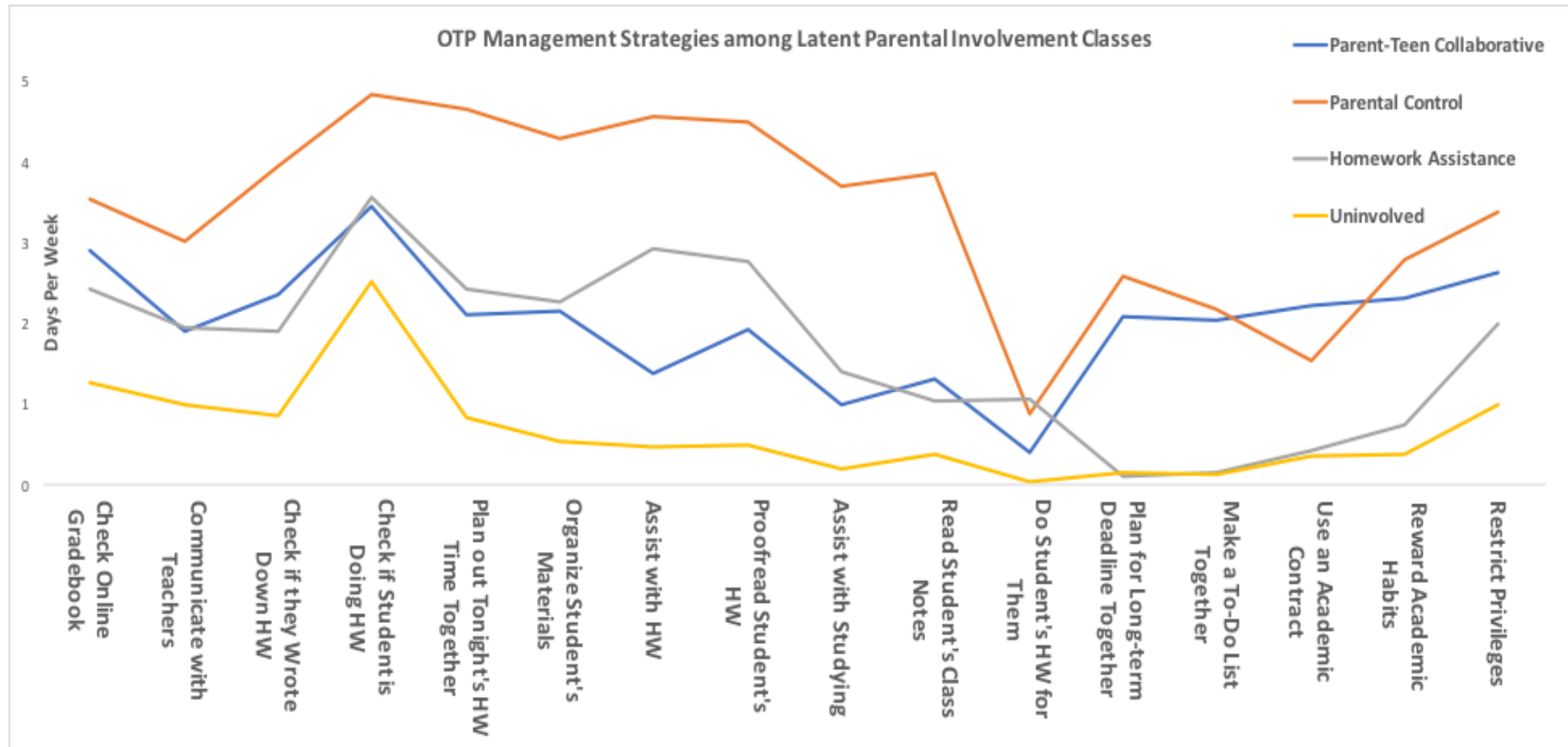
J Psychopathol Behav Assess (2016) 38:216–228
DOI 10.1007/s10862-015-9515-9



Parent Management of Organization, Time Management, and Planning Deficits among Adolescents with ADHD

Margaret H. Sibley¹ · Mileini Campezo¹ · Analay Perez¹ · Anne S. Morrow¹ ·
Brittany M. Merrill¹ · Amy R. Altszuler¹ · Stefany Coxe¹ · Carlos E. Yeguez²

Parenting Subtypes (N=299 teens with ADHD)



Sibley, Campez, et al 2016, *Journal of Psychopathology & Behavioral Assessment*

Parent-Teen Collaboration (20.4%)

- Moderate level of monitoring
- Infrequent helping
- Cooperative contracting
- High Autonomy Support
- Use of Privileges to Motivate Success



Parental Control (18.7%)

- High level of monitoring
- High level of homework assistance
- Organizing and planning for child
- Frequent contact with teachers
- Frequent issuing of consequences
- Low autonomy support



Excessive Helping and Managing Seems like only way to Prevent Failure



Homework Assistance (20.4%)

- Monitoring limited to homework completion
- High level of homework helping
- Doing homework for the teen when deadlines loomed
- Reliance on reminders



Finishing homework for teen may feel like only way to get it done before bedtime



Uninvolved (40.5%)



- Low to no monitoring
- Absence of rules or consequences
- No helping or reminding

Staying uninvolved may seem like the only way to keep peace at home



Parenting Dilemmas for Teens with ADHD

- How much do I assist vs. step back?
- Should I let him experience the natural consequences of his actions, even if it means serious outcomes like drop-out or arrest?
- Should I stick to my rules, even if it creates a lot of conflict and arguments at home?
- What battles are worth picking?
- How late should she stay up working on homework--are grades more important than sleep?
- Should I put him in gifted because he's bright, even if he has trouble managing the work?

STAND Model

- Weekly therapy attended by the parent and teen dyad.
- Delivered individually to the dyad (group format also tested)
- Typically delivered in 8-12 sessions (more encouraged when needed)
- Targets adolescent (ages 11-17) difficulties
 - Organization
 - Time management
 - Motivation
 - Homework completion
- Targets parent difficulties
 - Autonomy support
 - Positive parent-teen relationships
 - Appropriate monitoring
 - Appropriate use of natural vs external motivators for responsible behavior

Parent–Teen Therapy
for Executive Function
Deficits and ADHD
Building Skills and Motivation

MARGARET H. SIBLEY

What makes STAND unique?

- Flexible modular treatment (encourages repeating and sequencing sessions according to therapist discretion)
- Use of motivational interviewing as the principal style of STAND
- Blends organization skills and parenting skills with MI
- Supports family autonomy to select what they would like to work on in treatment
- Emphasizes the importance of increasing the adolescent's autonomy
- Personalizes treatment to presenting problems, age, and environmental context
- Emphasis on engaging the family
- Strives for realistic solutions and best case scenario rather than remission of symptoms

Importance of Home Activities

- Family members design their own home activities with support from the therapist
- Optional but encouraged to promote autonomy support in the family
- Motivational Interviewing to increase compliance
- Only realistic home activities are set
- Addresses parental concern that nothing works
 - One week experiment
 - Lets parents and teens see utility of strategies with their own eyes instead of taking therapist word for it.

Blended Motivational Interviewing

- Spirit of STAND is the spirit of MI
 - Honoring family autonomy in knowing what strategies will fit best in their lives
 - Building the self-efficacy of families through genuine affirmation of their worth
 - Developing deep empathy for the challenging situations of the parent and teen
 - Surrendering the expert role to collaborate with family members as equals
- Increasing change talk and decreasing sustain talk
 - Using open ended questions, affirmations, reflections, and summaries to deepen and broaden change talk offered by family members
 - Helping family members become more aware of their personal goals, values, and priorities
 - Celebrating any small positive steps toward success
 - Reframing failure to practice new skills to help family members learn from missteps rather than shaming them for noncompliance
- Providing structured components using an Elicit-Provide-Elicit approach

Parent-Teen Contracting

- Parent and teen come together as equals to discuss a shared problem at home
- Each compromises to reach a shared goal
- Teen may have to agree to contingent rules at home about free time and getting work and chores done
- Parent may have to be willing to extend greater freedoms to the teen if he or she earns them
- Important: Specify what the parent *won't* do. (i.e., give reminders, help, do things for the teen) so that autonomy is promoted

Imaginal Implementation and Implementation Intentions

- Parents may struggle to implement contracts because a scenario emerges that they are unsure of how to handle
- Parents may forget how the contract works if they insufficiently engage in planning about how to enact it.
- Working through contact may reduce teen oppositionality by working through differences in therapy room instead of letting them emerge at home.

Watch Clip: Eliciting Change Talk

Pilot Work (2009-2012)

Elizabeth Munsterberg Koppitz Dissertation
Award: American Psychological Foundation
(APF)

J Psychopathol Behav Assess (2013) 35:436-449
DOI 10.1007/s10862-013-9353-6

Seed Award: Florida International University,
Herbert Wertheim College of Medicine

A Pilot Trial of Supporting teens' Academic Needs Daily (STAND): A Parent-Adolescent Collaborative Intervention for ADHD

Rosalee G. and Raymond A. Weiss Research
and Program Innovation Award : American
Psychological Foundation

Margaret H. Sibley • William E. Pelham Jr. •
Karen J. Derefinko • Aparajita B. Kuriyan •
Frances Sanchez • Paulo A. Graziano

J Psychopathol Behav Assess (2017) 39:467-485
DOI 10.1007/s10862-017-9598-6



Available online at www.sciencedirect.com

ScienceDirect

Cognitive and Behavioral Practice 21 (2014) 32-42

Cognitive and
Behavioral
Practice

www.elsevier.com/locate/cabp

A Parent-Teen Collaborative Treatment Model for Academically Impaired High School Students With ADHD

Margaret H. Sibley, Amy R. Altszuler, J. Megan Ross, Frances Sanchez,
William E. Pelham, Jr., Elizabeth M. Gnagy, *Florida International University*

Delivering Parent-Teen Therapy for ADHD through Videoconferencing: a Preliminary Investigation

Margaret H. Sibley¹ • Jonathan S. Comer² • Jaife Gonzalez³

Empirical Support



National Institute
of Mental Health

Journal of Consulting and Clinical Psychology
2016, Vol. 84, No. 8, 699–712

© 2016 American Psychological Association
0022-006X/16/\$12.00 <http://dx.doi.org/10.1037/ccp0000106>

Parent–Teen Behavior Therapy + Motivational Interviewing for Adolescents With ADHD

Margaret H. Sibley, Paulo A. Graziano,
Aparajita B. Kuriyan, Stefany Coxe,
William E. Pelham, and Lourdes Rodriguez
Florida International University

Frances Sanchez
Nova Southeastern University

Karen Derefinko
University of Tennessee Health Science Center

Sarah Helseth and Anthony Ward
Florida International University

National Institute of Mental Health R34 MH092466

Participants

- 128 adolescents
 - Ages 11-15 at Baseline
 - Attended 81 different schools (77.8% public)
 - Eligibility Criteria
 - DSM-IV-TR ADHD
 - Enrolled in sixth-eighth grade at baseline
 - Estimated IQ > 80
 - No history of Autism Spectrum Disorder
 - Not placed in self-contained classroom
 - Matched on baseline medication status

Design

- Baseline Assessment
- Random Assignment to STAND vs. TAU
- STAND:
 - Received STAND for 10 weekly sessions (1 hr. each with teen and parent present)
 - Therapists were graduate students and masters level clinicians in a university clinic
- TAU
 - Encouraged to seek treatment in community
- Post-Test
- Six-month Follow-up

	STAND (N=67)	TAU (N=61)
Estimated FS IQ* (M,SD)	102.77 (12.09)	98.56 (12.57)
ADHD- Inattentive (%)*	47.8	29.5
ODD/CD (%)	53.7	62.3
Affective Problems	16.9	22.0
Anxiety Problems	18.5	20.3
Learning Disability	7.7	10.0
Current ADHD Meds (%)	34.4	34.4
Age (M, SD)	12.65 (.85)	12.85 (.87)
Male (%)	61.2	68.9
Black Non-Hispanic (%)	10.8	5.0
Hispanic Any Race (%)	78.5	76.7
% Parents with B.A. (%)	65.4	67.9

Outcome Measures

- **Parents**

- Academic Problems Checklist (Sibley et al., 2014; OTP problems/homework/classroom behavior)
- Disruptive Behavior Disorder Rating Scale (Pelham et al., 1992; ADHD symptoms)
- Parent Academic Management Scale (Sibley et al., 2014; parental involvement in OTP)
- Caregiver Strain Questionnaire (Brannan et al., 1997; parenting Stress)

- **Adolescents**

- Conflict Behavior Questionnaire (Prinz et al., 1979; Parent-Teen Relationship)

- **Teachers**

- Academic Problems Checklist (Sibley et al., 2014; OTP problems, homework and classroom behavior)
- Disruptive Behavior Disorder Rating Scale (Pelham et al., 1992; ADHD symptom severity)

- **Objective/Observational**

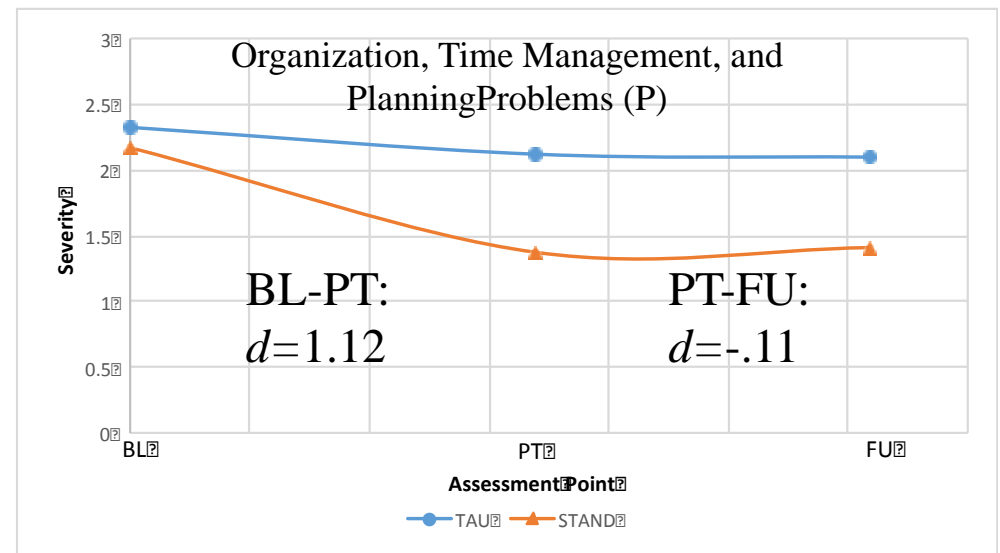
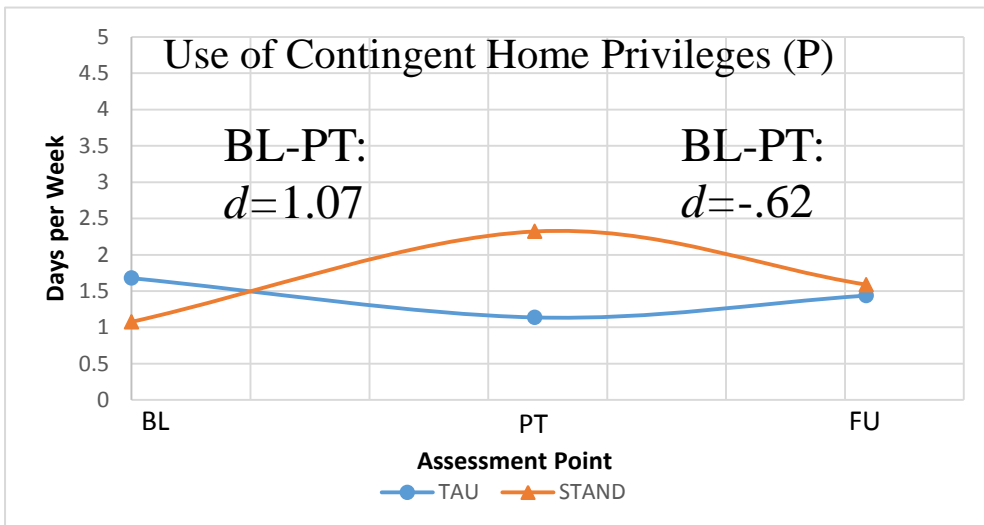
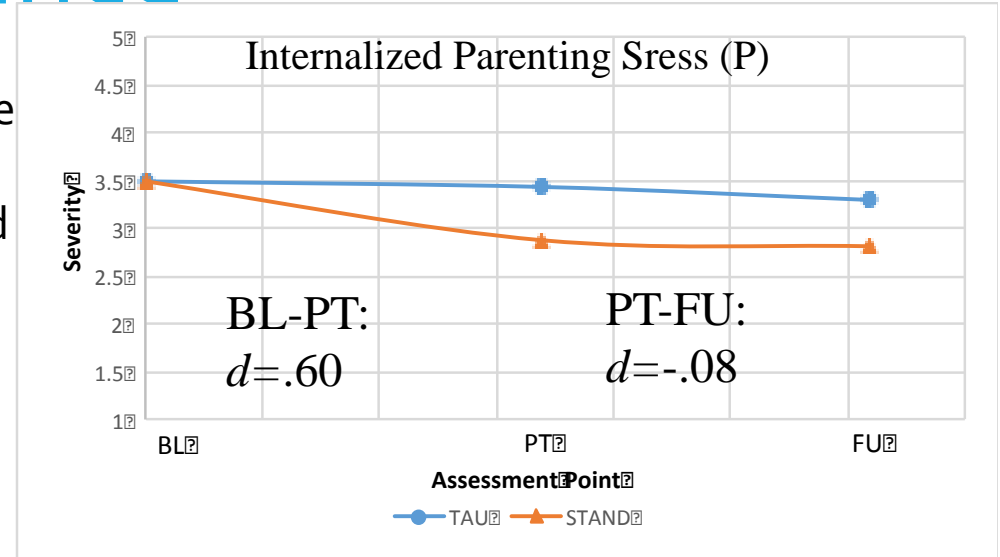
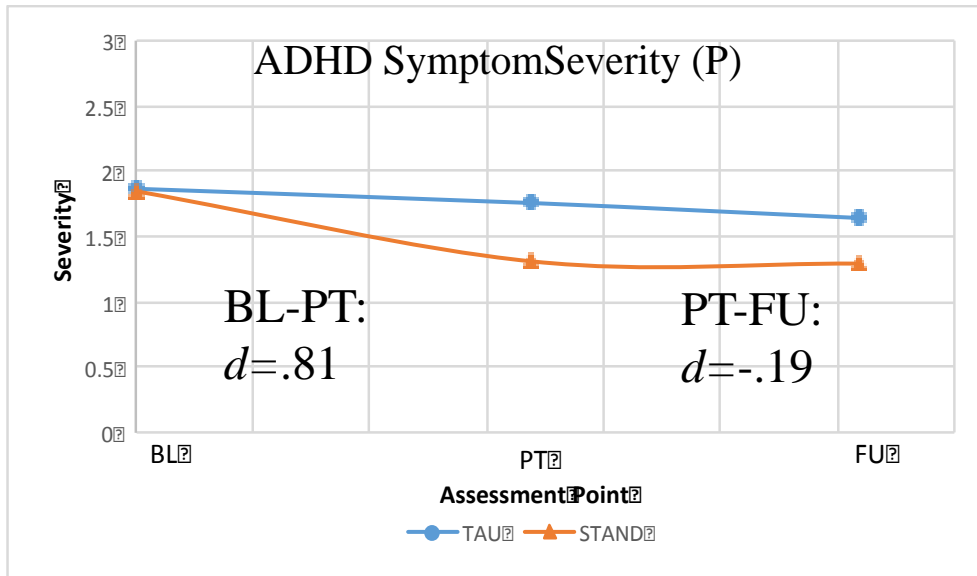
- Teacher Gradebook Data (GPA)
- Photocopies of Adolescent Daily Agenda or Planner (% of homework recorded)
- Bookbag organization checklist (organization of school materials)

Results

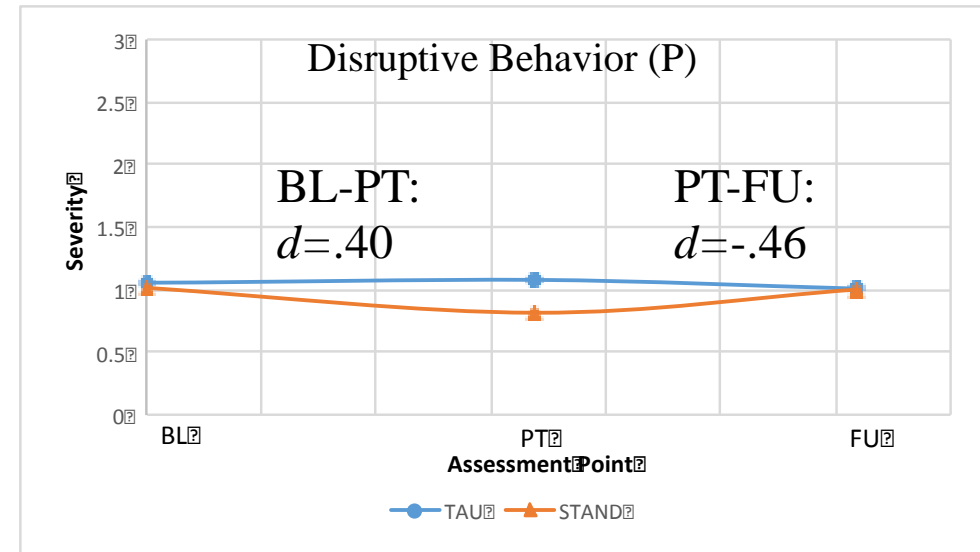
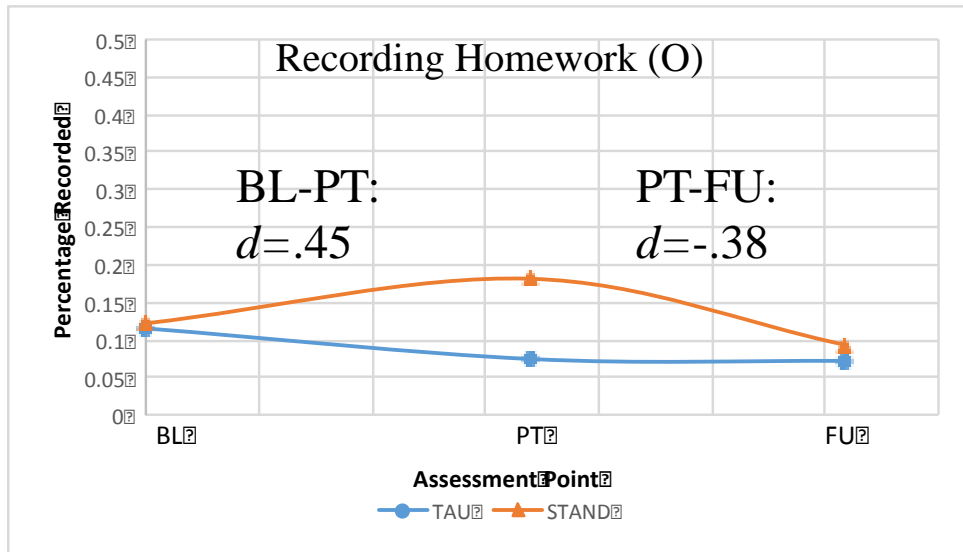
- Average fidelity checklist score: 96.4%
- Average MITI 4.1 Global averages at competency:
 - Cultivating Change Talk ($M=3.76$, $SD=.87$)
 - Softening Sustain Talk ($M=4.12$, $SD=.56$)
 - Partnership ($M=3.82$, $SD=.95$)
 - Empathy ($M=3.87$, $SD=.63$)
- 85.1% of families completed all STAND sessions
- On average, 8.34 sessions were attended per family.
- Mean satisfaction with the demands of the intervention (1-7 scale) was 5.95 for parents ($SD=1.64$) and 5.26 for adolescents ($SD=1.62$).

Group x Time Effects with Full or Partial Maintenance

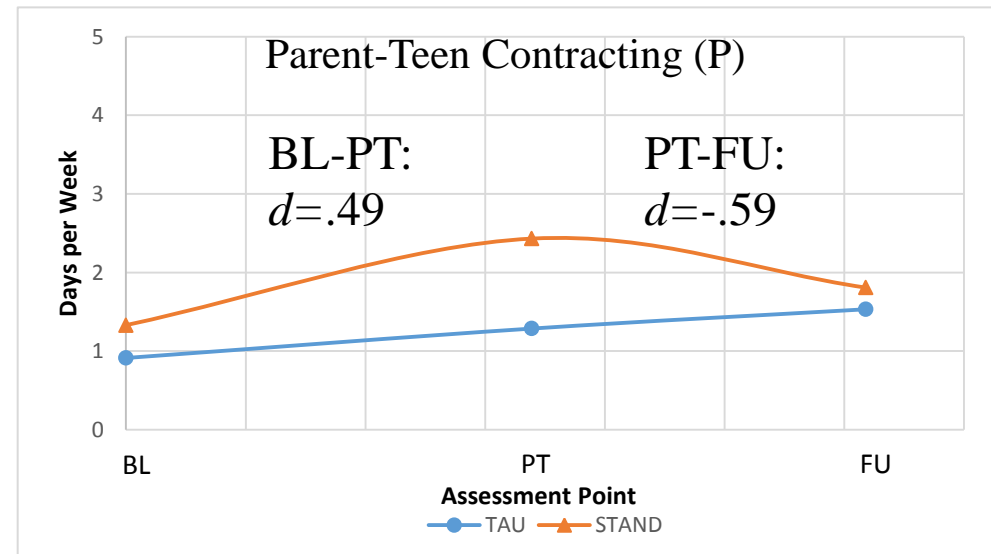
Represents Group x Time effects in Linear Mixed Models. All $p < .01$.



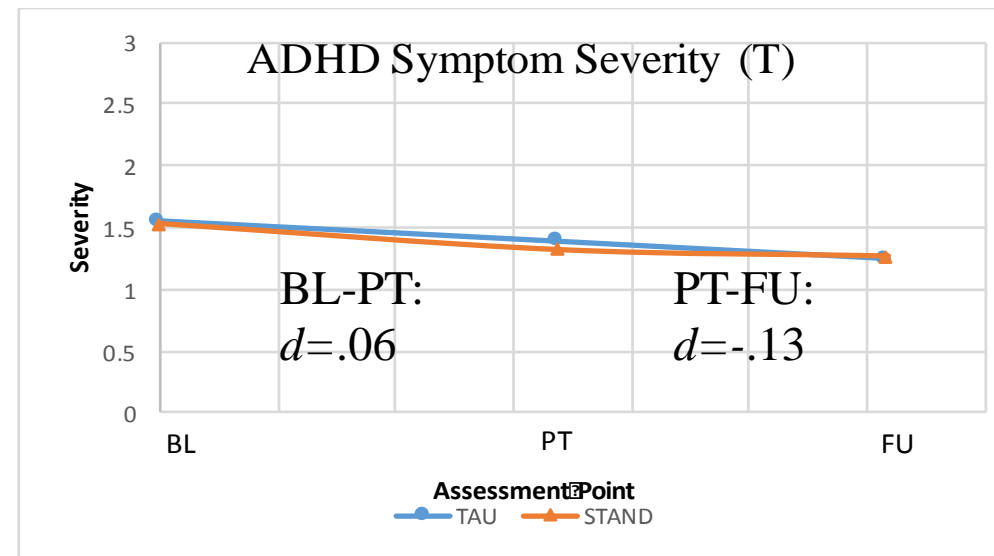
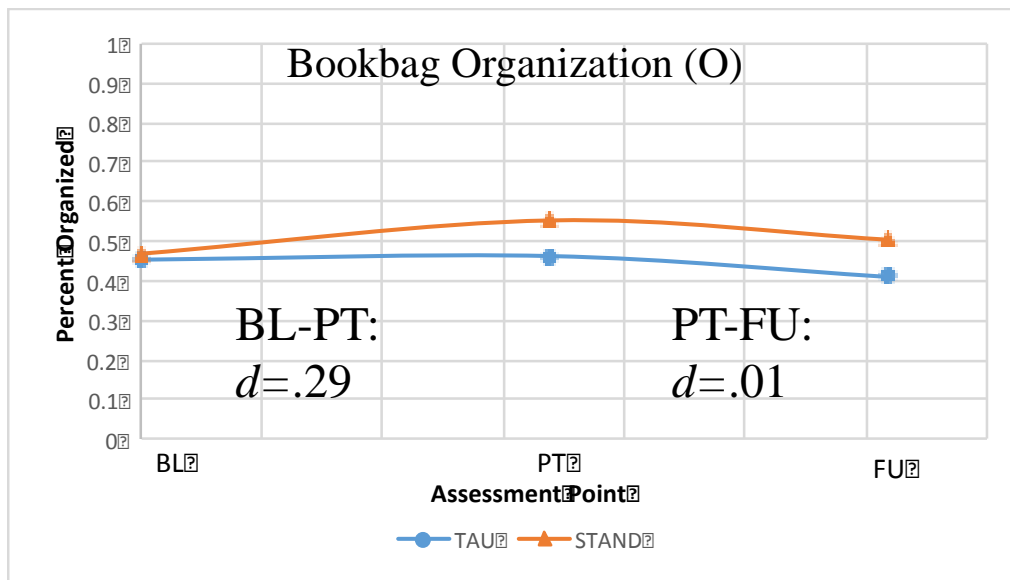
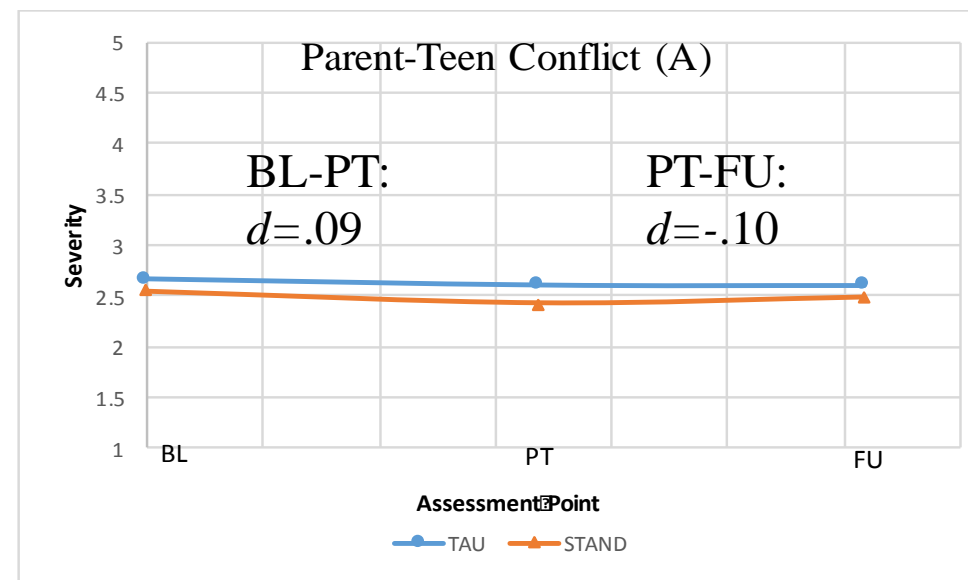
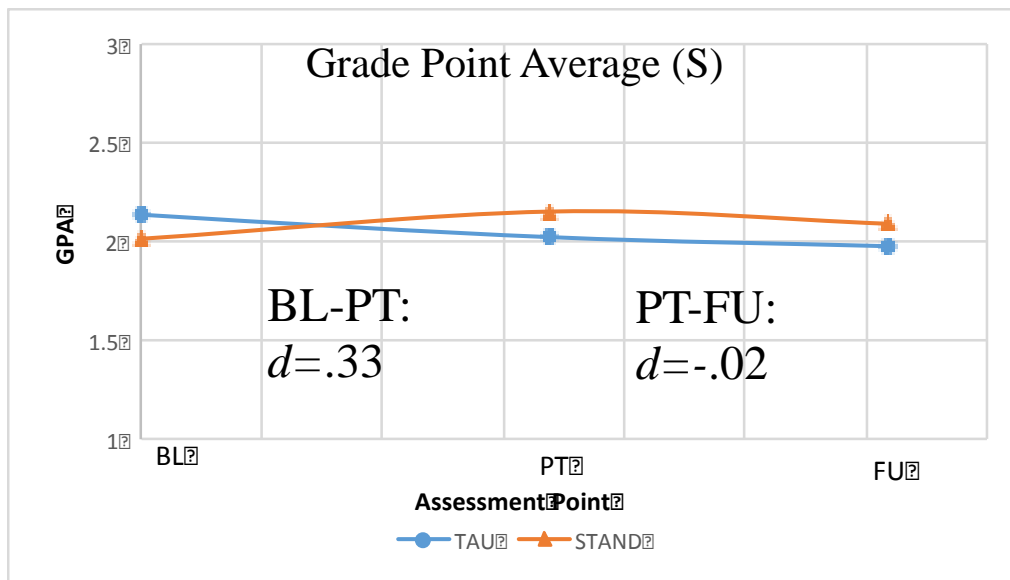
Group x Time Effects: Without Maintenance



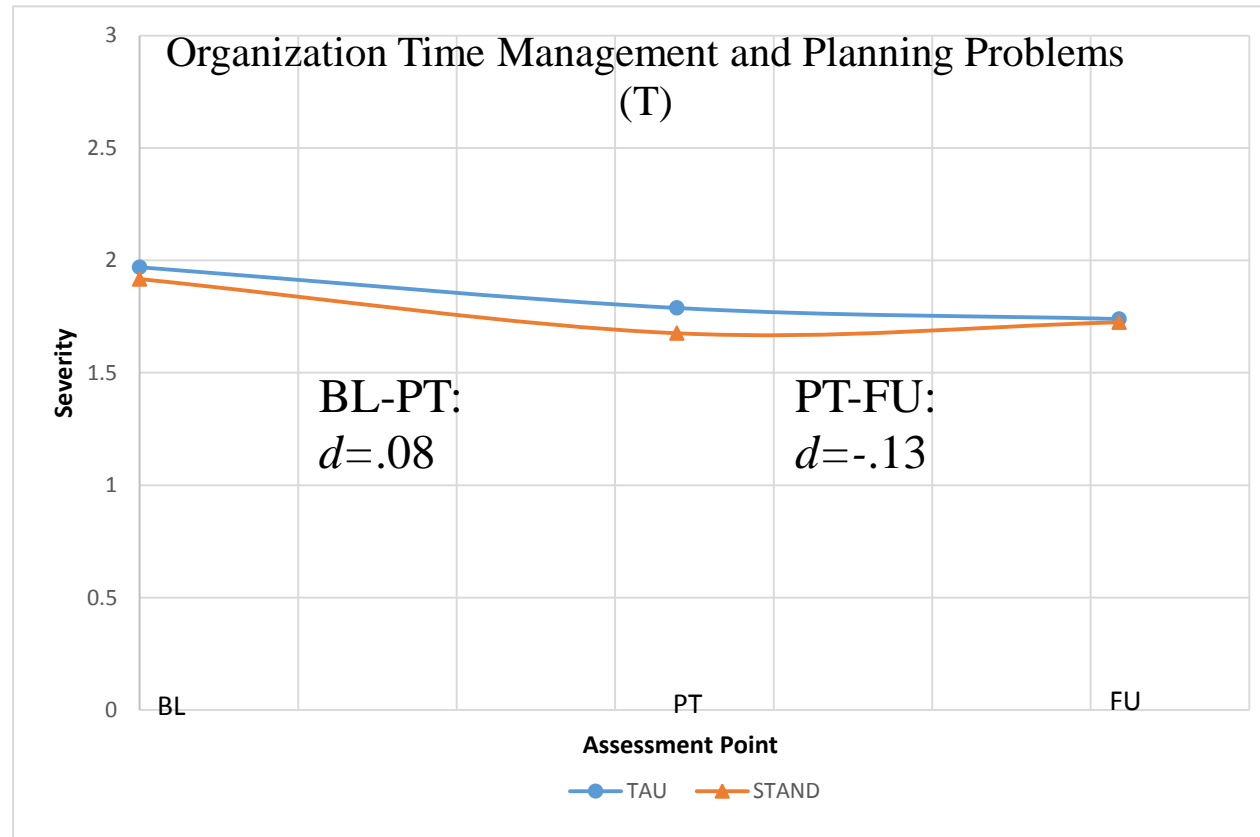
Represents Group x Time effects in Linear Mixed Models. All $p < .05$.



Non-Significant Effects



“He’s still getting B’s but now it’s his B,
not my B”



Can STAND be delivered as a group?

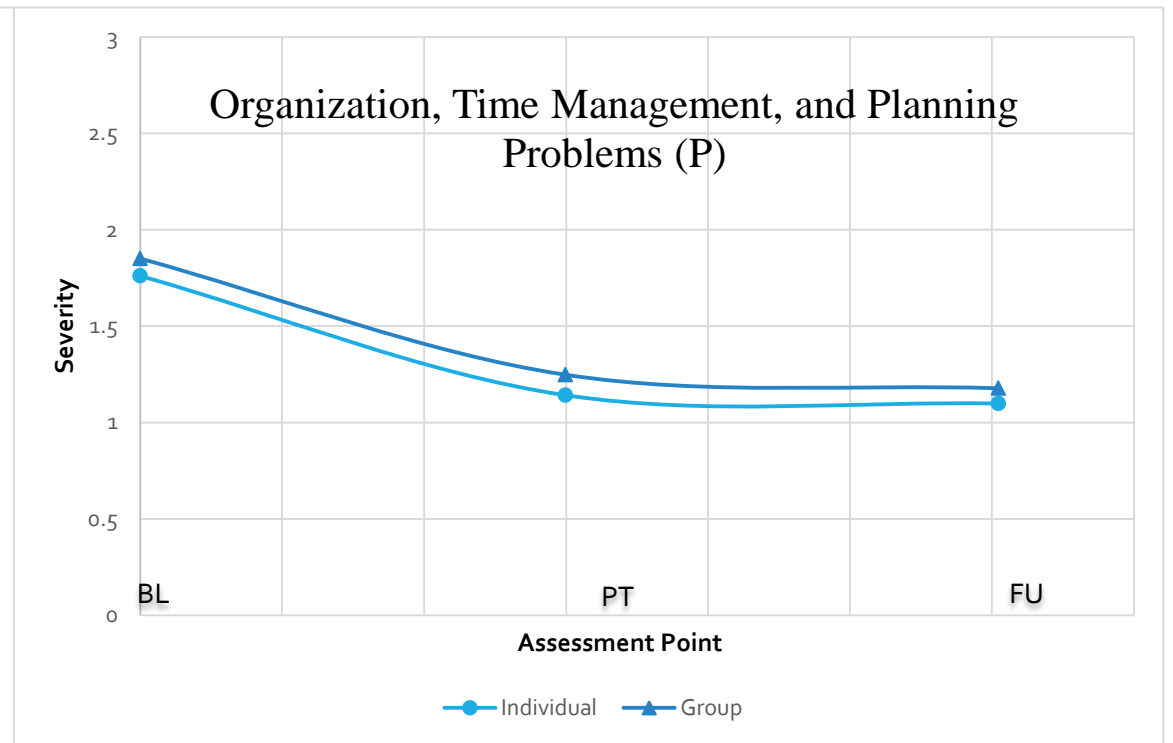
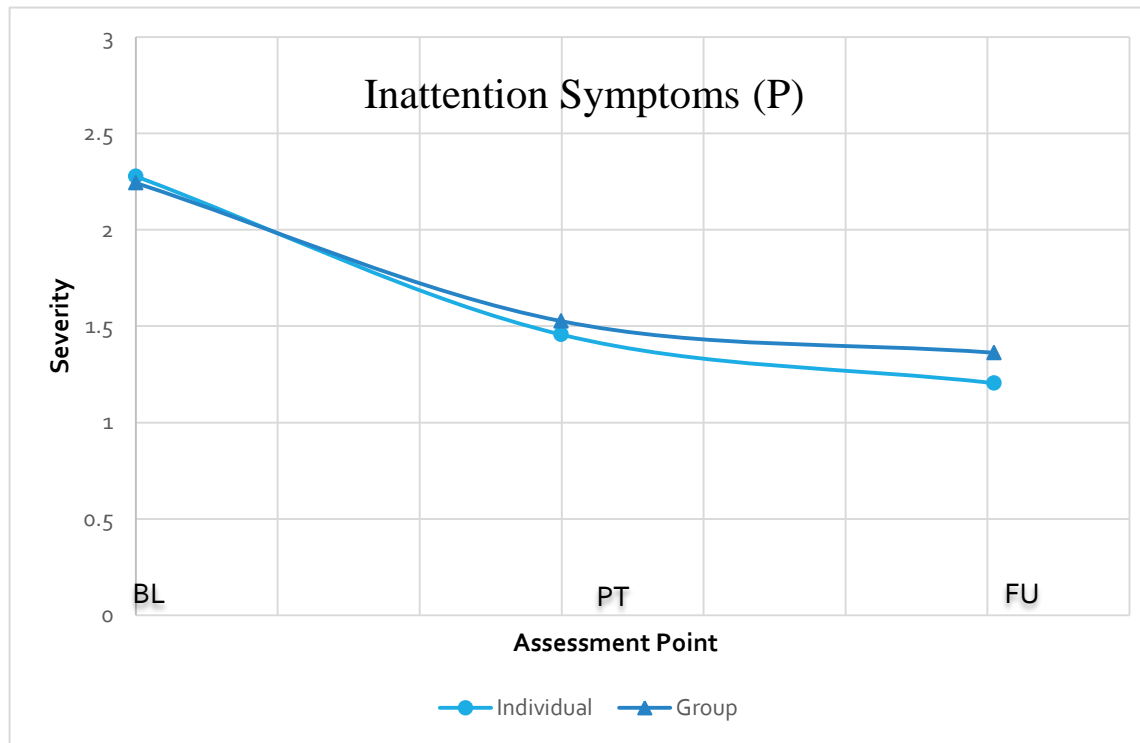


Group vs. Individual

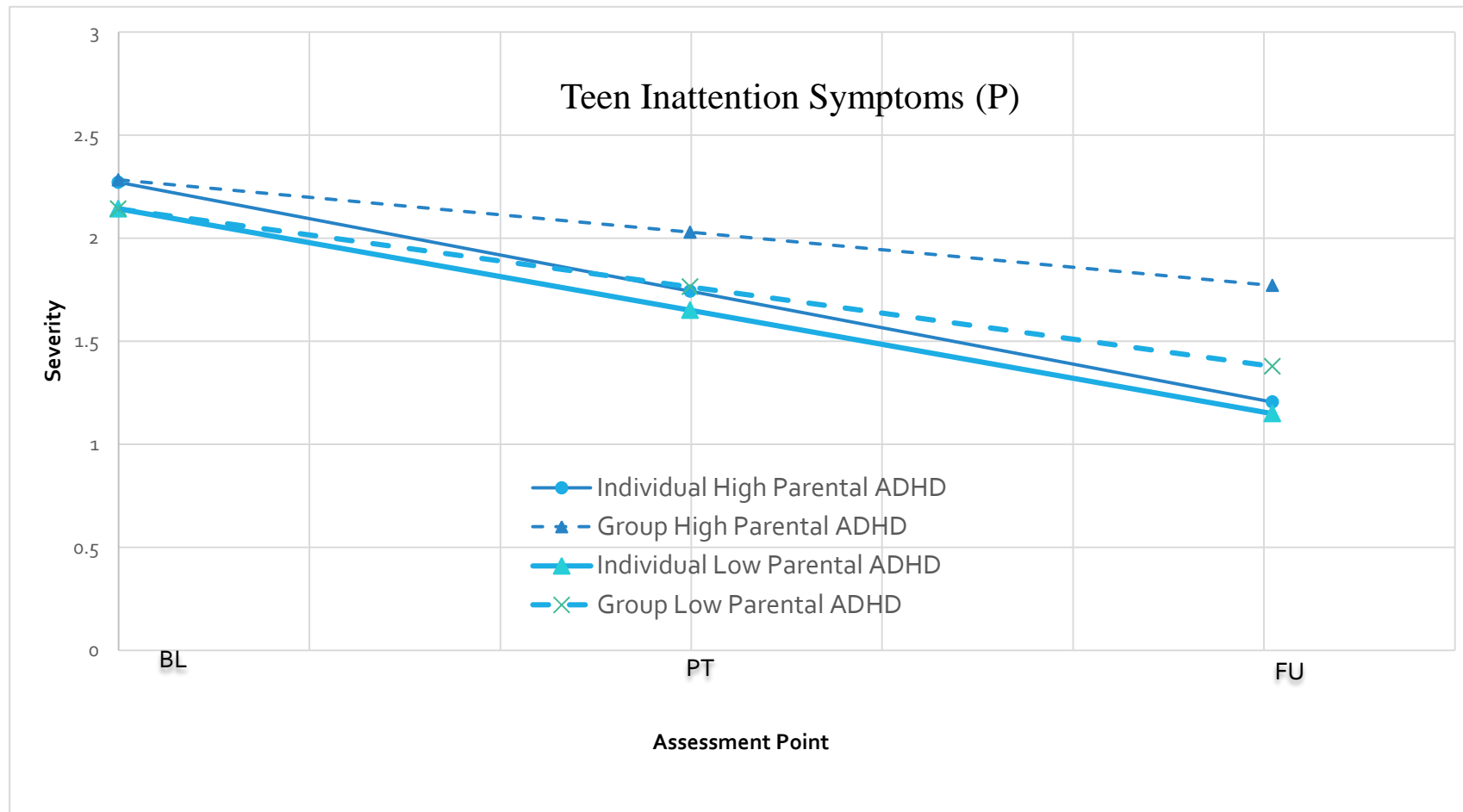
- Klingenstein Third Generation Foundation: Fellowship in ADHD
- **Design:**
 - 123 6th-12th grade students with ADHD
 - Randomly assigned to:
 - Dyadic STAND
 - Group Parent Training + Organization Skills Training
- Content of Interventions is the same (organization skills, behavioral treatment)
- *Process* of the Interventions is different (individual MI vs. group process)

Results: Group vs. Individual

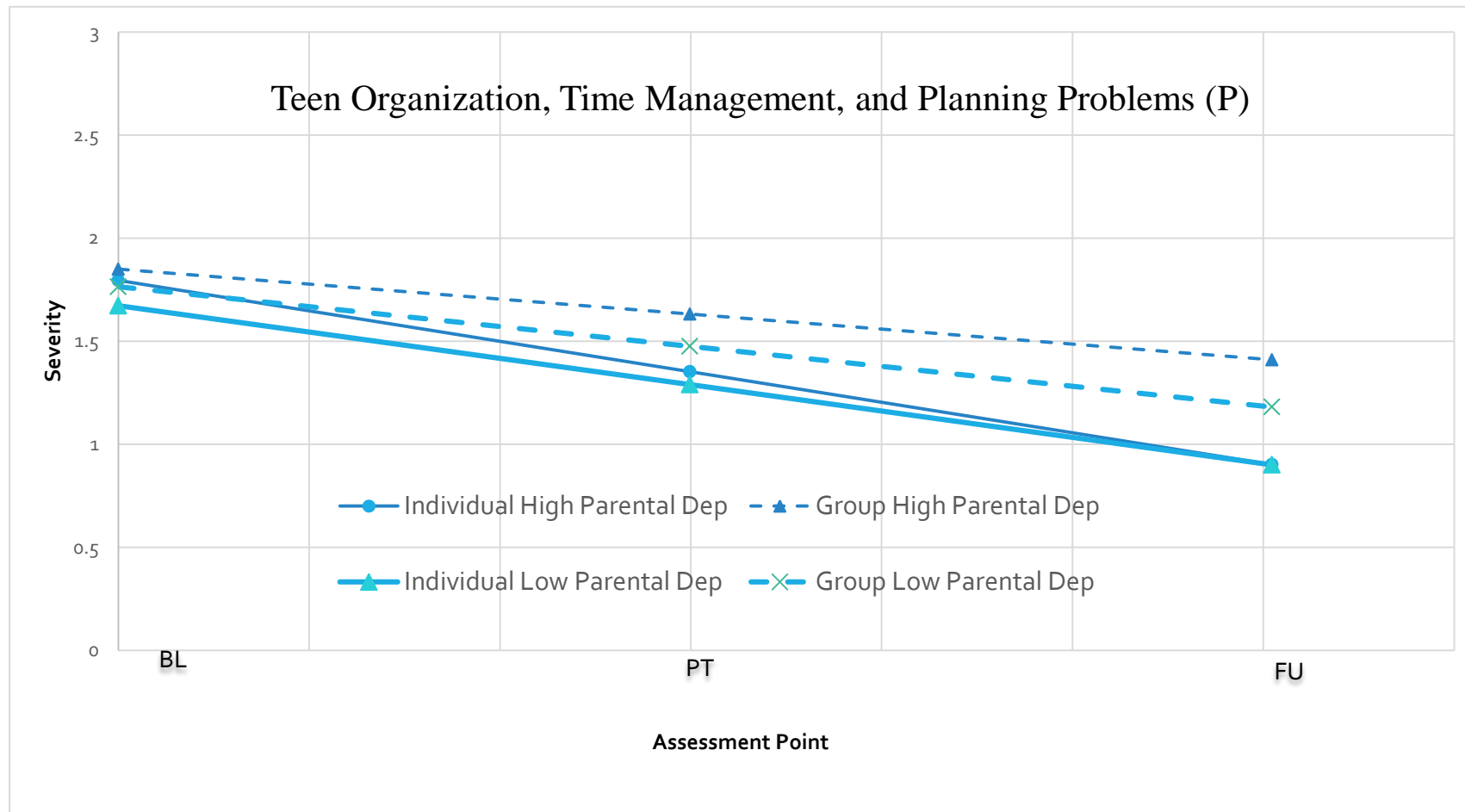
- Overall effectiveness is same. Group may be more cost effective.



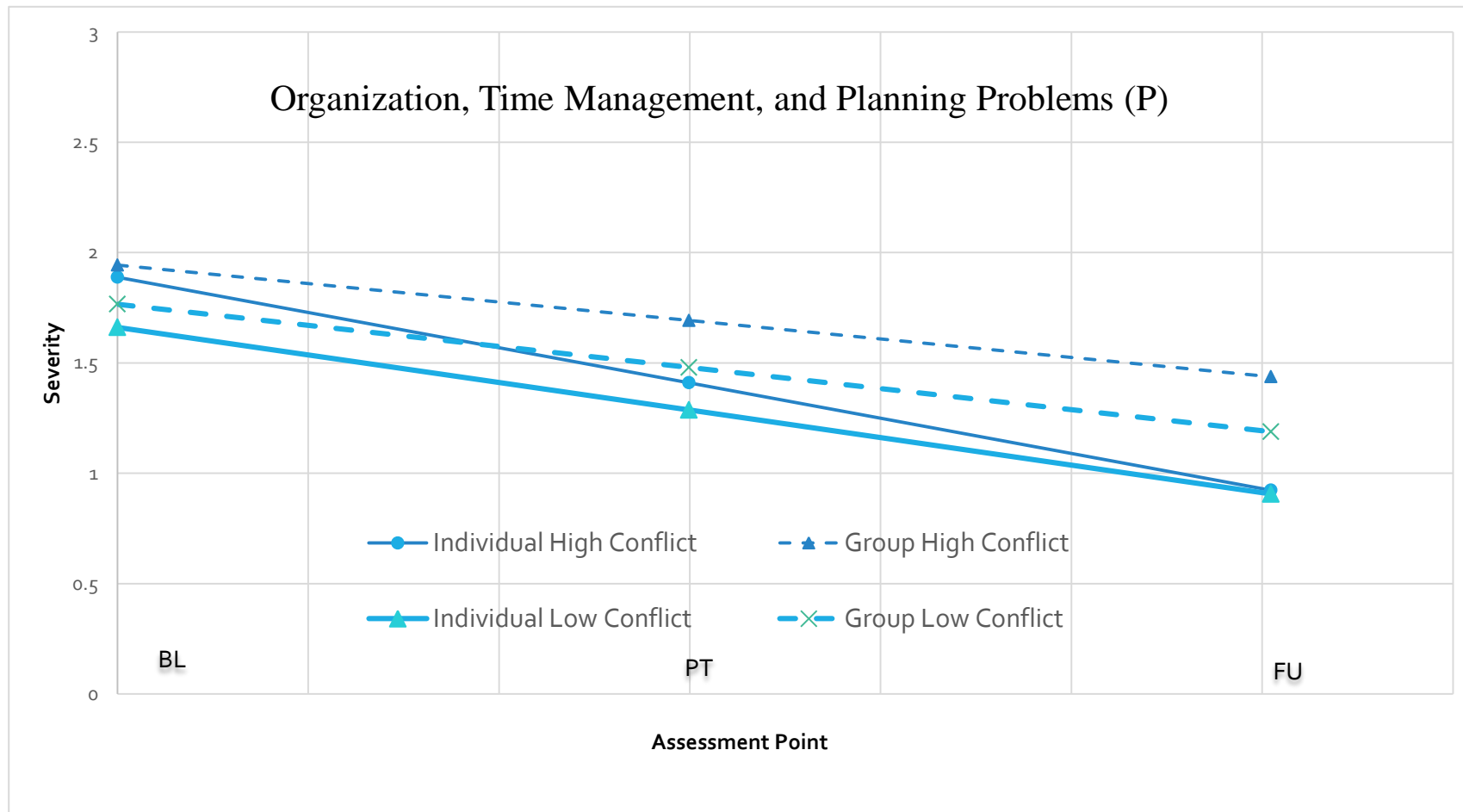
Parental ADHD may reduce effectiveness of Group STAND



Parental Depression may reduce effectiveness of STAND group



High Parent-teen conflict may reduce effectiveness of STAND group



Thank you.

- www.margaretsibley.com
- <http://stand.fiu.edu>

