

Evaluating the effects of parent training: What we don't see predicts outcome better than what we do see

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Behavioral Dimensions

Introduction

- The mission of the FCBI program is to teach parents to apply a set of positive strategies to reduce problem behaviors and increase appropriate behavior during targeted daily routines.
- A critical component of this intervention is to teach parents to evaluate treatment strategies and monitor their implementation and their child's behavior.
- In this study we evaluated the effectiveness of the FCBI program and whether **parent reported implementation (adherence)** or **therapist observed implementation (integrity)** influence child outcomes.

Research Questions

1. Is the intervention package effective at reducing problem behavior and increasing appropriate behavior?
2. Is degree of behavior change related to parent reported adherence or therapist observed integrity?
3. How does parent report (adherence) correspond to therapist observation (integrity) of treatment implementation?

Method

Participants

- N = 20 families
- Child age range: 6 – 23 yrs
- Child diagnoses: Autism, PDD-NOS, Asperger's Syndrome, ODD, FAS, ADHD, PTSD, comorbid ID

Intervention

- Therapist consultation service 2.5 hours 2x/week
- Intervention duration: 10 - 85 weeks
- **Intervention Components**
 1. Functional assessment (interview, direct observation) during in home routines identified by parents as problematic
 2. Parents identify one routine to change, a behavior to increase & decrease for successful participation in the routine
 3. Parents develop baseline data collection system with staff & collect data for 1 week during target routine (30-120 minutes in length)
 4. Didactic training in FA & development (with parents) of proactive & reinforcement strategies, and positive responses to problem behavior
 5. Parents implement interventions each day during targeted routine
 6. Parents interpret ongoing data each week & decide next steps with FCBI staff
 7. Opportunities each week to generalize problem solving skills to new routines

Results

Statistical Analysis: Linear mixed models (LMM) repeated measures analysis AR1 covariance structure

Problem Behavior (AIC*=222) N=18 children, df=392:

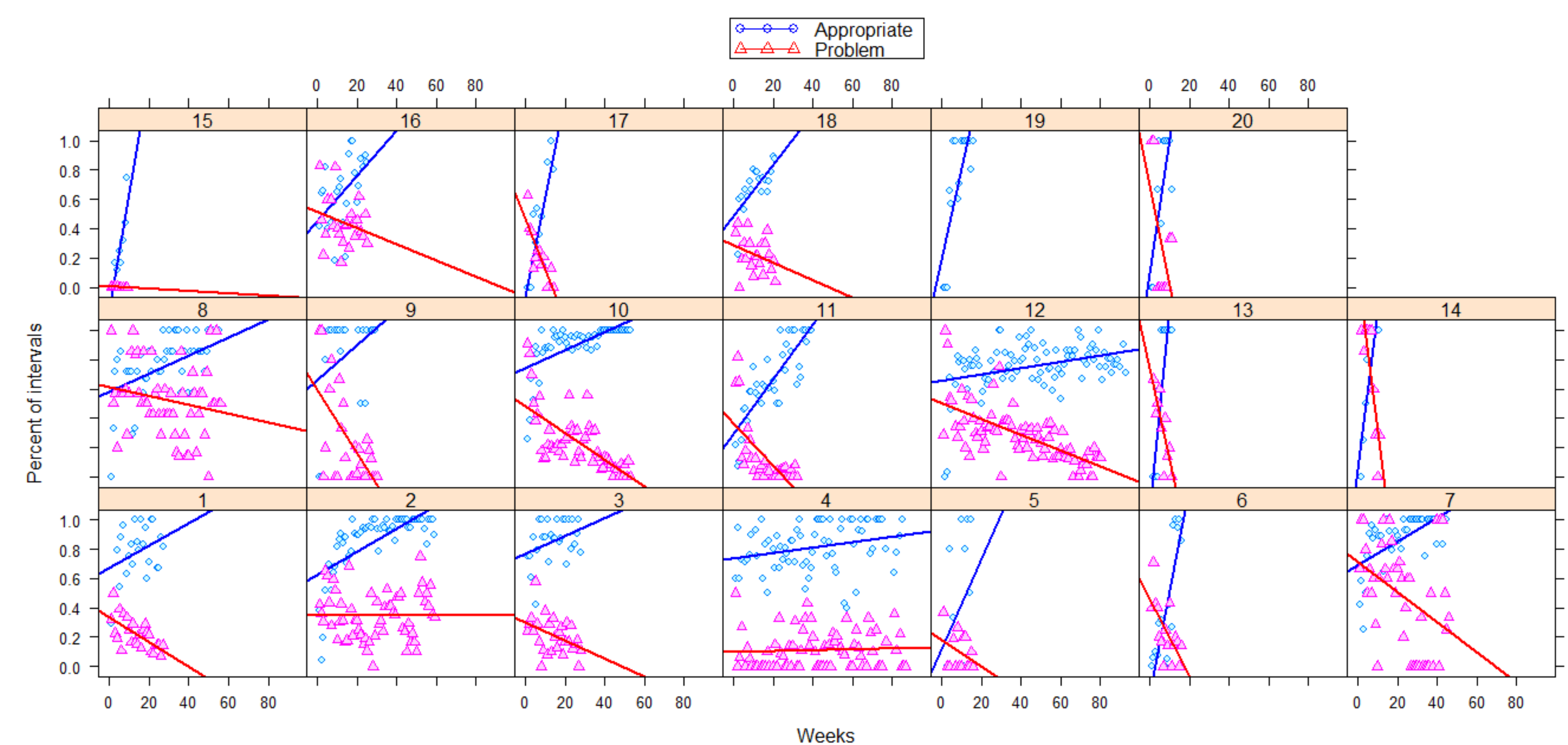
- Treatment effects: Decrease of 21% in problem behavior ($p < .05$, S.E.**=9%, $t = -2.27$)
- Treatment Adherence: associated with a decrease of 23% ($p < .05$, S.E.=12%, $t = -1.97$)
- Treatment Integrity: not related to treatment outcome 12% change ($p < .26$, S.E.=10%, $t = 1.14$)

Appropriate Behavior (AIC= 280) N=19 children, df=409:

- Treatment Effect: Increase of 50% in appropriate behavior ($p < .0001$, S.E.=10%, $t = 5.53$)
- Treatment Adherence: Associated with an increase of 20% (n.s. $p < .09$, S.E.=11%, $t = 1.70$)
- Treatment Integrity: not related to treatment outcome change of 10%, ($p < .29$, S.E.=10%, $t = -1.06$)

Relationship between parent reported adherence and therapist observed integrity of implementation. (Figure 2)
Correlation Spearman's Rho=.37 (S=8971576, $p < .001$)

* Akaike's Information Criterion (AIC) = index of model to data fit, smaller is better, often used as a measure of variance accounted for in LMM models. **S.E.=Standard Error



behaviors (blue triangles) by week of intervention. Week 0=baseline. Lines represent slopes. Each graph represents one child

Integrity and Adherence by Client

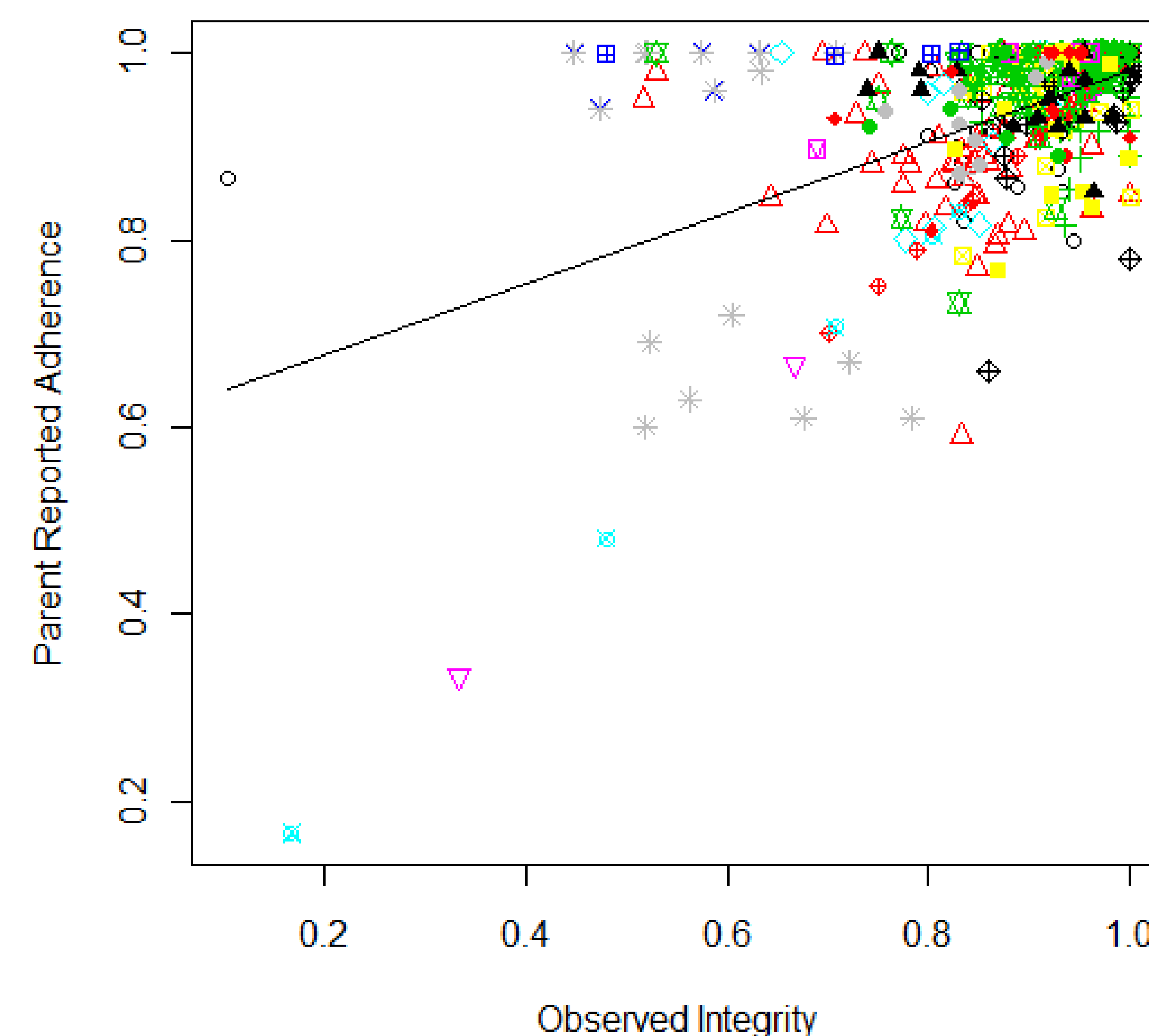


Figure 2. Parent reported adherence and therapist observed integrity for each week of service. Symbol type and color represent s an individual child. Line represents correlation between adherence and integrity ($\rho = .37$).

Discussion

Results:

1. Problem behavior reduced and appropriate behavior increased between baseline and treatment
2. Parent reported adherence predicted greater reductions in problem behavior and greater improvements in appropriate behavior than therapist observed integrity.
3. Integrity and adherence correlations suggest parents are moderately accurate reporters of implementation when not being observed.

Limitation:

- Lack of reliability measures on therapist observed integrity

Next steps:

What types of adherence best predicts treatment outcome?

References

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- Tharp, R. G., & Wetzel, R. J. (1969). *Behavior Modification in the Natural Environment*. New York: Academic Press