

Executive Function and Challenging Behaviors in Preschool-age Children

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Executive functioning is comprised of working memory, response inhibition, cognitive flexibility, and attention control (Jones, Baily, Barnes, & Partee, 2016).

Executive Functioning  **Challenging Behaviors**

e.g., impulsivity, hyperactivity and aggression
(Shoemaker, Mulder, Dekovic & Matthys, 2013)

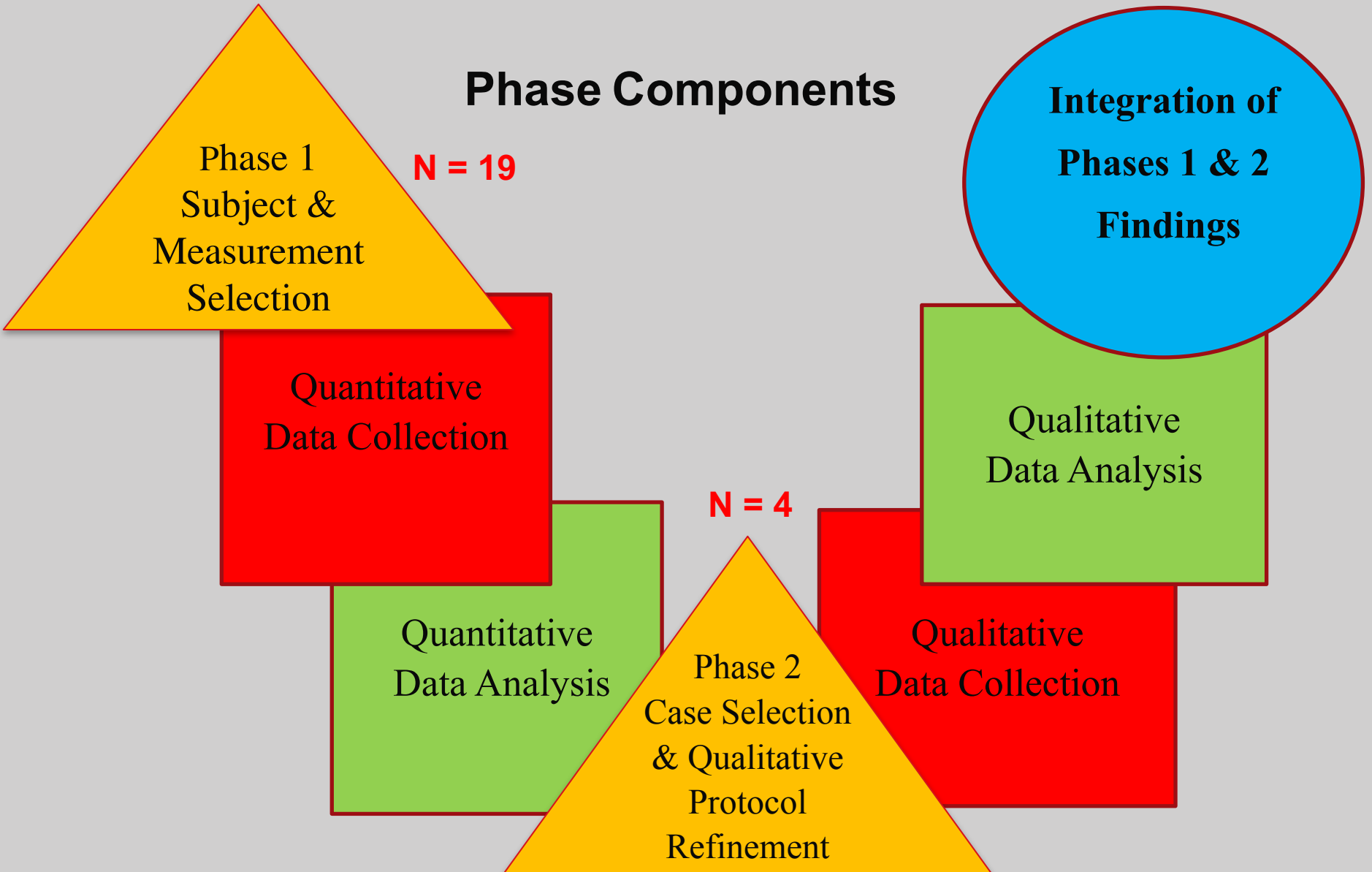
*Studies on oppositional defiance are less
conclusive* (Ezpeleto & Granero, 2015)

Parent-Professional Teams can strengthen
children's executive functioning skills.
(Sheridan, et al., 2010)

Research Questions

1. What is the relationship between preschool children's challenging behaviors and their executive functioning skills?
2. How do parents, teachers and early childhood coaches describe:
 - a) children's executive functioning?
and ...
 - b) their efforts as a team to support children's social and academic development?
3. What understanding emerges from integrating quantitative and qualitative findings regarding children's executive functioning and challenging behaviors?

Phase Components



Quantitative Phase

- *Participants*
 - 19 children (mean age 3.9 years)
13 boys, 6 girls
 - Selection Criteria:
Scores at or above 75th Percentile on *Problem Behaviors* domain in *Social Skills Improvement System Rating Scales* (SSIS-R; Gresham & Elliott, 2008)
- *Methods*
 - Teachers completed *Behavior Rating of Executive Function-Preschool Version* (BRIEF-P; Gioia et al., 2000)
- *Analysis*
 - Spearman's correlation--relationship between *SSIS-R Problem Behavior* and *BRIEF-P Global EF* scores on teacher reports

Quantitative Phase: Results

- Teachers' reports of the 19 children's problem behaviors as measured by the SSIS-R had a **significant** and **positive correlation** with teachers' reports of children's difficulties with EF as measured by the BRIEF-P Global Executive Composite Score ($r_s = .803, p < .001$)

Point of Mixing

- Explore this relationship between children's challenging behaviors and difficulties with EF through qualitative inquiry.

Qualitative Phase

- *Participants*
 - 4 children were selected from the quantitative strand
- *Methods*
 - Parent-professional team documents
 - Interview transcripts from parents, teachers, & early intervention coaches
- *Analysis*
 - 2 researchers coded documents and interviews using *a priori* and emerging codes

Qualitative Phase: Results

| Theme | Definition |
|---|--|
| Attentional control | the ability to voluntarily focus or sustain attention on a given task |
| Flexibility | the ability to move freely from one situation, activity, or aspect of a problem to another as the situation demands, make transitions, and solve problems flexibly |
| Inhibitory self-control | the ability to appropriately stop and modulate one's own behavior, impulses, and emotional response |
| EF skills that were not described | no descriptions of working memory or planning/organization were found |
| Oppositional defiance | a pattern of angry/irritable mood, argumentative/defiant behaviors, or vindictiveness |
| Team strategies that addressed EF deficits | positive results from several supportive measures taken with children |

Point of Mixing-- Integration of Findings

For children with challenging behaviors, consider:

- Salient executive functions— inhibitory self-control, flexibility, attentional control
- Demonstration of oppositional, defiant, or argumentative behaviors
- EF skills as a target of intervention for parent-professional partners

References

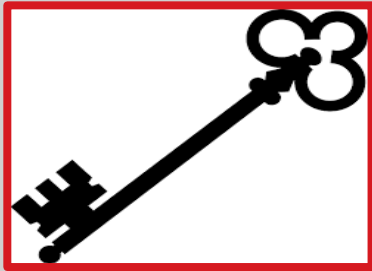
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Key **Take-Aways**



Implications for **EC Practice**



Implications for **EC Public Policy**



Research– **What's Next?**