Executive Functioning Challenges and Interventions for Students With ASD or ADHD

Today's presenters:

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Today's Plan

Goal: To increase your understanding of how to teach executive functions

Plan

- Introduction – What is EF and why is it important

Disclosures

The work being presented today was partially funded through a Patient-Centered Outcomes Research Institute (PCORI) addressing disparities research award (AD-1304-7379) and a PCORI Dissemination and Implementation Award (DI-2019C2-17605).

The statements and opinions in these presentations are solely the responsibility of the authors and do not necessarily represent the views of the Patient-Centered Outcomes Research Institute (PCORI), its Board of Governors or Methodology Committee.

What are Executive Function Skills?

What are Executive Function Skills?

- Trouble transitioning or not getting started on something they don't want to do
- Not staying calm when facing challenges
- Inflexible thinking
- Poor problem-solving
- Difficulty accepting feedback and criticism
- Shutting down when something is challenging
- Difficulty keeping track of belongings or assignments

Why are Executive Functions important?

Executive Functioning problems are common in neurodivergent individuals (Craig et. al., 2015).

- as environmental expectations increase over time, more support and training are needed.

EFs are pivotal treatment targets and have been linked to functional outcomes:

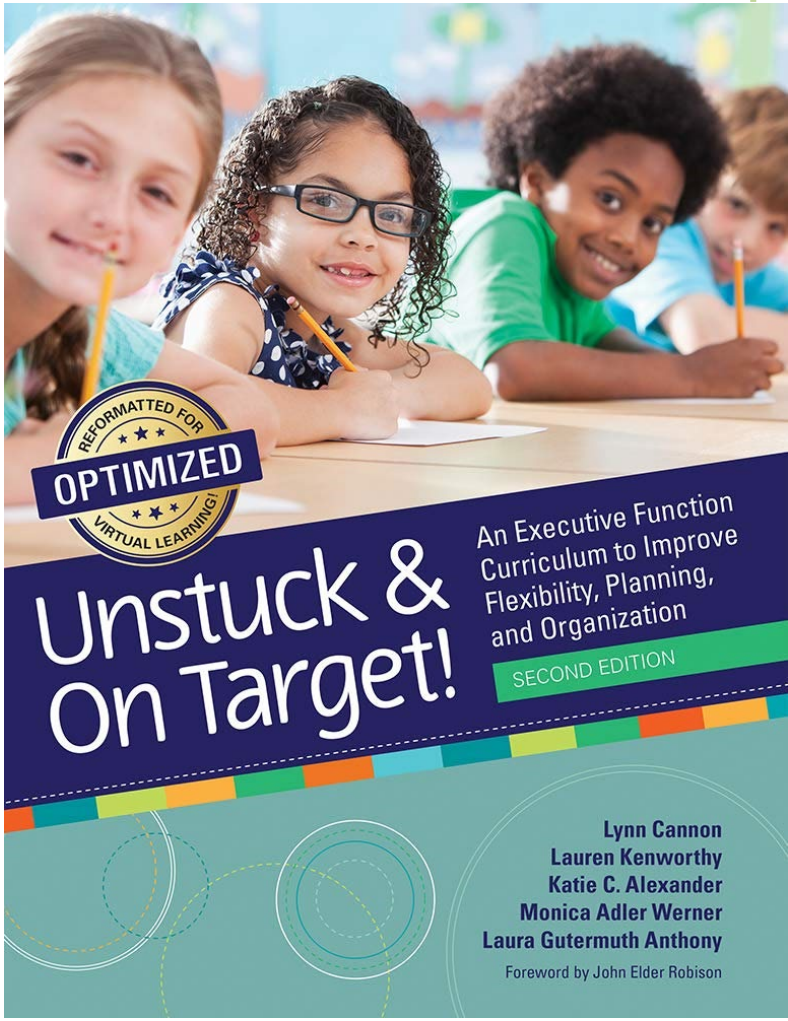
- Learning and academic skills (Pellicano et. al., 2017; St. John et. al., 2018)
- self-determination (Pugliese et. al., 2016)
- adaptive skills (Wallace et. al, 2016; Pugliese et. al., 2016; Gardiner et. al., 2018)
- Mental Health (Snyder et. al., 2015)
- Responsive to treatment (Kenworthy et al., 2014)

School is a primary service access point

Unstuck and On Target! Addresses EF Challenges

Spiraling intervention targeting EF with school curricula and asynchronous parent training programs and supports

- Elementary: Cannon, et al., 2011, 2014, 2018, 2021
- Middle: Strang et al, 2023
- High: Pugliese et al., 2023
- e-Unstuck for parents: Alexander et al., 2018
- Parent book: Kenworthy et al., 2014
- Parent Support videos: YouTube



Evidence (trials)

- Trial 1 (NIMH R34) – Pilot Randomized effectiveness trial comparing Unstuck to a social skills Intervention

THE JOURNAL OF CHILD PSYCHOLOGY AND PSYCHIATRY
ACAMH THE ASSOCIATION FOR CHILD AND ADOLESCENT MENTAL HEALTH
Journal of Child Psychology and Psychiatry 55:4 (2014), pp 374–383 doi:10.1111/jcpp.12161

Randomized controlled effectiveness trial of executive function intervention for children on the autism spectrum

Lauren Kenworthy,[1,2,*] Laura Gutermuth Anthony,[1,2,*] Daniel Q. Naiman,[3] Lynn Cannon,[4] Meagan C. Wills,[1] Caroline Luong-Tran,[1] Monica Adler Werner,[4] Katie C. Alexander,[4] John Strang,[1,2] Elgiz Bal,[1] Jennifer L. Sokoloff,[1] and Gregory L. Wallace[5]

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- Trial 2 (PCORI CER) – Disparities Comparative effectiveness trial comparing Unstuck to an adapted Contingency Behavior management system

PCORI AD-1304-7379

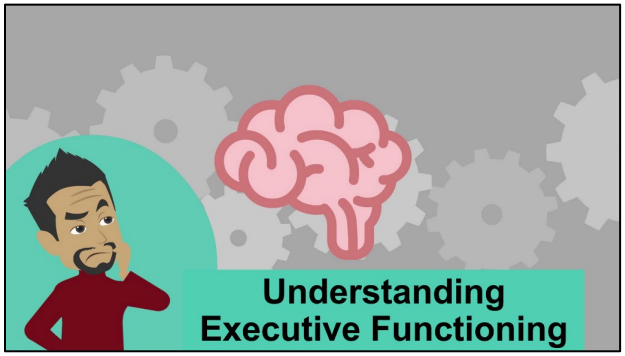
Target:	ASD		ADHD	
	UOT	CBM	UOT	CBM
Classroom behavior	✓	X	✓	✓
Student acceptability	✓	X	✓	X
Parent acceptability	✓	X	✓	X
Problem-solving	✓	✓	✓	X
Social Flexibility	✓	X	✓	✓
Planning	✓	X	✓	✓

Evidence (trials) cont.

- Dissemination & Implementation (PCORI D&I) – translating training into online format and disseminating Unstuck broadly

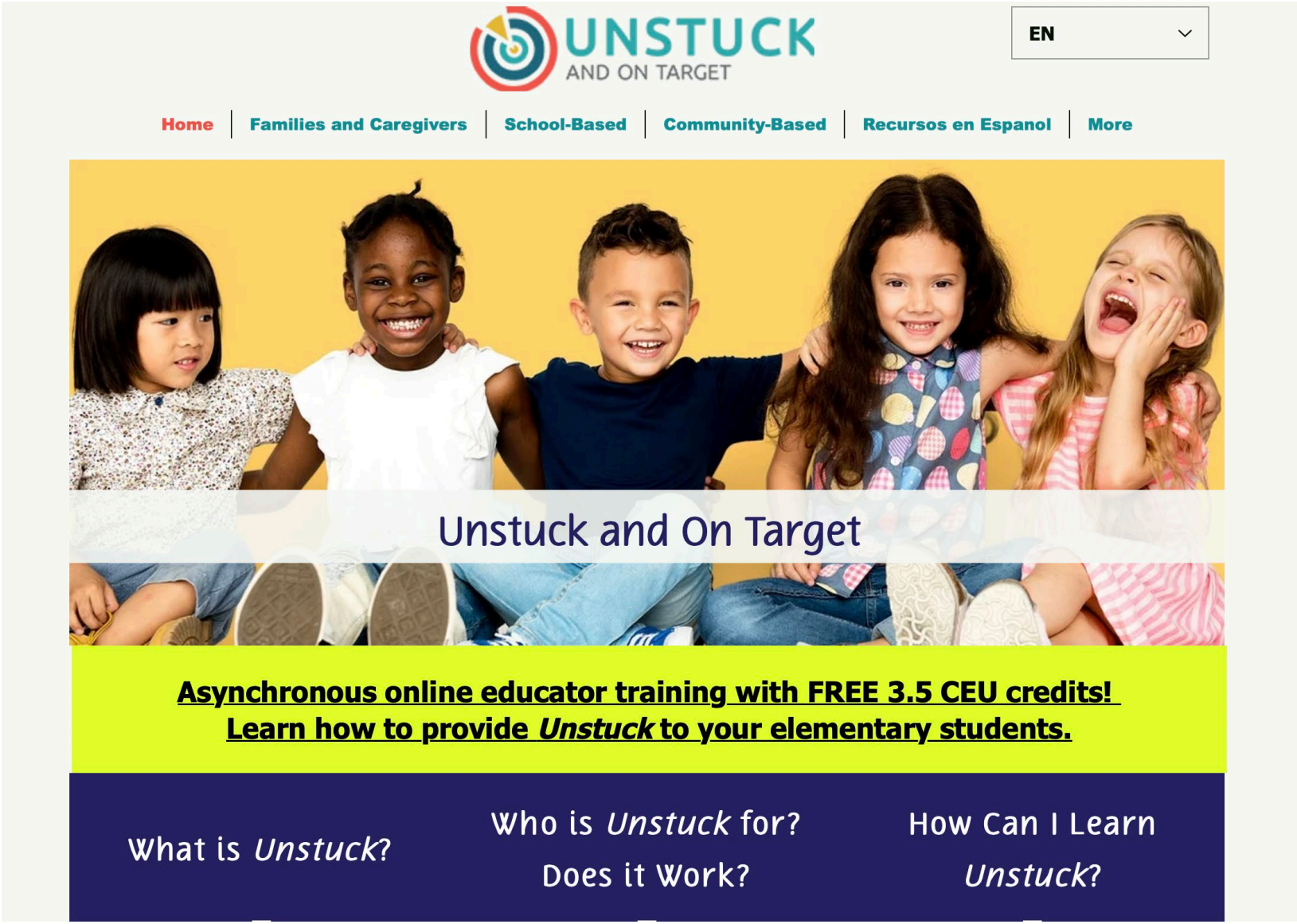
PCORI DI-2019C2-17605

  - Covid-19 Enhancement project provided Supplemental funding to create Unstuck at home parent materials



  - Additional supplemental funding received to examine the cost of running unstuck

Website: unstuckandontarget.com



Today's Plan

Goal: To increase your understanding of how to teach executive functions

Plan:

- Introduction – What is EF and why is it important
- **Paper 1: Observing Executive Functioning of Neurodiverse Students in the Classroom: Practicality, Patterns, and the Power of Praise**

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- **Paper 3: Innovative Implementation of a Robust Executive Function Intervention Delivered In Schools**

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- **Paper 4: What Does it Take to Deliver "Unstuck and on Target" in Elementary Schools**

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- Paper 4: What Does it Take to Deliver "Unstuck and on Target" in Elementary Schools
- **Discussion – What does this mean and next steps**

Observing Executive Functioning of Neurodiverse Students in the Classroom: Practicality, Patterns, and the Power of Praise

Safer-Lichtenstein, J., Kenworthy, L., Verbalis, A., Ba, C., Mikulich-Gilbertson, S.K., Anthony, B.J., & Anthony, L.G.

This work was supported by a grant from the Patient Centered Outcomes Research Institute (PCORI) AD-1304-7379 and a postdoctoral training grant for Dr. Jonathan Safer-Lichtenstein, Grant Number T32 MH015442.

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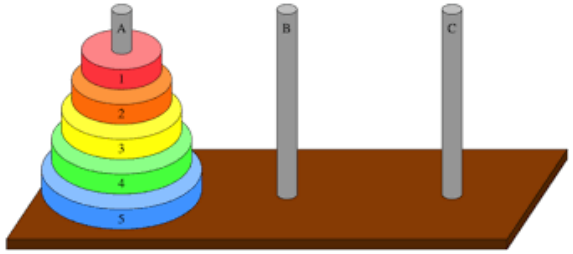
Background

- Executive Functioning (EF) challenges of neurodivergent youth in general are well documented
  - E.g., emotion regulation, organization, planning, flexibility, transitioning, etc. (Sparapani et al., 2016)

- Existing measures of EF are parent/teacher report or less contextually relevant tasks
  - E.g., BRIEF, BASC, CBCL; tower of London, Delis-Kaplan Executive Function System



Background

- Teacher practices that support student EF are also generally known, if not always widely utilized (Kranak et al., 2017; Lindsay et al., 2014)

Structure	Consistent routines	Goal setting
Rewards	Explicit planning	Praise
Visuals	Priming for transitions	Reviewing expectations

Present study

1) Develop quick/ easy direct observation measurement tool

2) Test it with autistic students and those with ADHD, and their teachers

3) Examine frequencies of student EF-related skills and teacher supporting practices; relationships between the two

Research Questions

(1) Is there construct validity to a direct observation measure of classroom EF skills?

(2) What are EF strengths and weaknesses of autistic students in the classroom as compared to students with ADHD? Are there any overall EF skill count differences between these students?

(3) How often are classroom teachers using practices known to support EF-related behaviors? Do these teacher practices predict student behaviors during observations?

Participants

Descriptive Statistics for Students with Diagnoses of ASD vs. ADHD

Measure	ASD ($n = 50$)	ADHD ($n = 98$)		
	M (SD) or %	*M (SD) or %*	*t'*	*p*
Child Age in Years	9.90 (0.83)	9.56 (0.88)	2.34	.021
WASI Full Scale IQ	98.34 (13.62)	96.74 (14.13)	0.67	.507
BRIEF GEC T Score	66.60 (10.51)	63.78 (11.95)	1.44	.154
SKAMP Total Score	38.57 (17.16)	37.11 (16.95)	0.45	.658
BOCEF Child EF Count	3.52 (1.47)	3.73 (1.68)	-0.78	.435
Household Income	$105,150 ($86,268)	$75,802 ($64,696)	2.06	.043
			χ^2	
Child Gender (Male)	96.00%	74.50%	10.27	.001
Race/ethnicity			12.04	.017
White	48.00%	22.70%		
Black/African-American	14.00%	25.80%		
Hispanic/Latino	22.00%	37.10%		
Other or Multiple Races	14.00%	10.30%		

Behavioral Observation of Classroom EF (BOCEF)

Procedure:

- 15-minute observation by masked research team member
- One student-teacher dyad at a time
- Preferably during academic period (e.g. math, reading, etc.)
- Not during purely individual work (e.g. test)
- Position to see and hear student, but without them knowing they are the focus of the observation
- Observation must include at least one transition (e.g. one activity to another, or one setting to another)

Rating tool and instruction guide:
https://www.unstuckandontarget.com/school-based-resources

Behavioral Observation of Classroom EF (BOCEF)

Student	NO	YES
Reciprocity Demonstrates reciprocal behavior and conversation when appropriate (to go back and forth in play, conversation, or planning with peers or adults) ☐ **N/A: Student is doing test or individualized work the entire time**		
Follows Rules Follows all rules set by the instructor, classroom or school		
Transitions Transitions from one activity to another every time without protest or need for individualized prompting (moving from receiving directions to working independently, starting next task, putting work or supplies away, getting up to sharpen pencil, go to the bathroom, etc.)		
Stuck One or more examples of getting stuck on a specific idea, plan, etc. (won't change topics, keeps coming back to the same idea, repetitive questions)		
Negativity/Overwhelmed Expresses any anger, frustration, sadness, anxiety, or difficulty coping, or behavior demonstrates feeling overloaded, frustrated or anxious (e.g. trouble expressing thoughts, withdrawal, etc.)		
Participates Demonstrates active and sustained participation in learning, completing tasks, group work at least as much as peers (e.g., contributes ideas, answers questions, volunteers during activities, etc) ☐ **Child was not engaged during observation**		

Behavioral Observation of Classroom EF (BOCEF)

Teacher	NO	YES
Praise-to-correction ratio (more praise or rewards than corrections or commands)		
Priming Gives warnings for changes to routine and transitions every time when needed (e.g. "In 5 minutes, we will close our books and get ready for math)		
Flexible Models flexible behavior (e.g., implicitly demonstrates or explicitly labels flexible behavior)		
Planning/Organizing Appears to have a clear plan or is organized; models planning/organizing skills (e.g., implicitly demonstrates or explicitly labels planning/organizing behaviors)		
Provides clear instructions/expectations Communicates clear behavioral expectations more than vague instructions (e.g., "Sit down and read your book" = clear vs. "Stop it" = vague).		
Active use of visual supports Refers to visual supports (e.g., smart board, white board, visual schedule, role playing) in any interactions with student		
References classroom rules or classroom procedures Directs student to classroom rules (e.g., "Safe hands/feet") and/or classroom procedures (e.g., "Everyday, you are to pack your backpack at the first dismissal bell"); reviews rules; role-play of rules		
Uses behavioral reward system Active and correct use of a behavioral reward system for individual student and/or the entire class (e.g., behavior chart, daily report card, token economy, marbles in a jar, rewards for participation, etc.)		

BOCEF construct validity

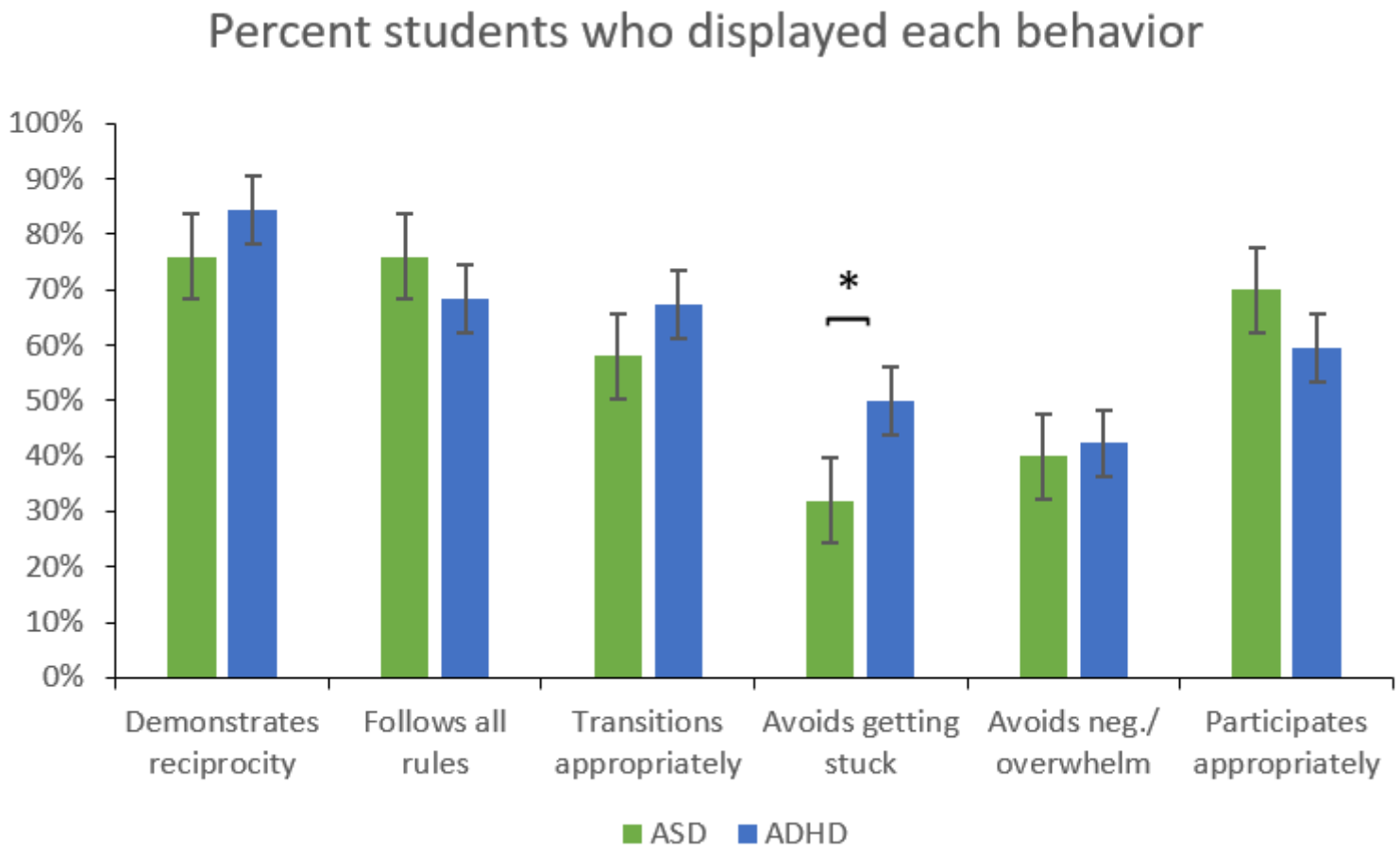
Significant correlation with Swanson, Kotkin, Agler, M-Flynn, and Pelham Scale (SKAMP; Swanson, 1992), a teacher completed measure of child ADHD/ EF in classroom

$r = -.44$, $p < .001$

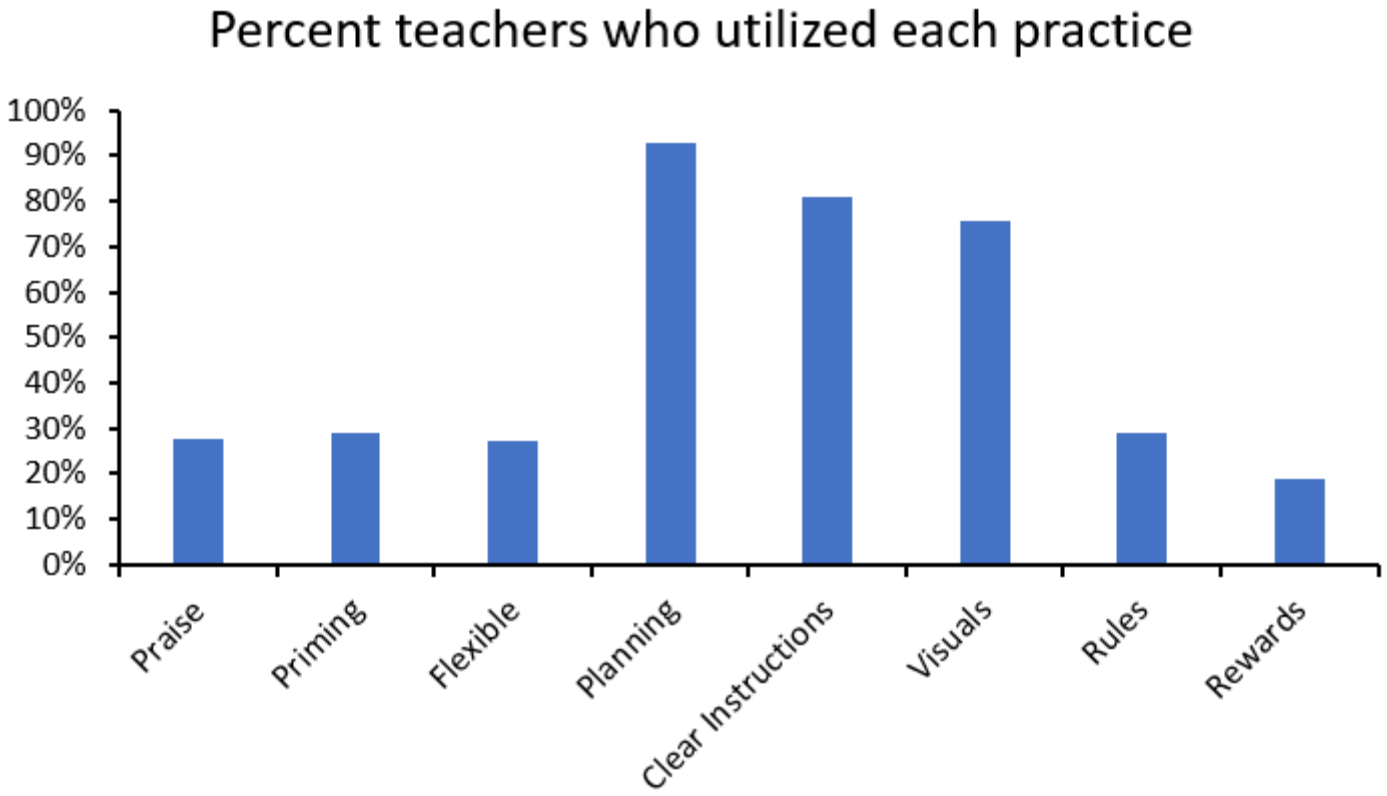
No relationship with Behavior Rating Inventory of Executive Function (BRIEF-2; Gioia et al., 2015), parent-completed rating scale of child EF

$r = .10$, $p = .265$

Student EF Behaviors



Teacher EF-supporting Practices



Results

No differences between students with ASD vs. ADHD on observed EF-related skills count after accounting for key demographics

$F(4, 129) = 0.90$, $p = .464$

Total count of teacher practices not predictive of child observed EF-related skills count after accounting for key demographics

$F(5, 128) = 0.76$, $p = .581$.

Students had **higher** EF-related skills counts during observations teachers used more praise than corrections ($t = 3.61$, $p < .001$) and **lower** EF-related skills count during observations when teachers referenced rules ($t = -2.05$, $p = .044$)

Discussion/ takeaways

1. Feasible to use BOCEF in 15 minutes, and significant correlation with teachers' ratings of same types of behaviors
   - ➢ Unbiased, real-world measure

2. No big differences between autistic students and those with ADHD; Only on getting "stuck"
   - ➢ Similar EF interventions/supports may work for both

3. Teachers using some practices (planning, clear instructions, and visuals) a lot more than others
   - ➢ Favorable praise to correction ratio had biggest observed association with positive student behavior (Sabey et al., 2019; Kranak et al., 2017)

Acknowledgement

Funding statement:

This work was supported by a grant from the Patient Centered Outcomes Research Institute (PCORI) AD-1304-7379.

This work was also supported by a postdoctoral training grant for Dr. Jonathan Safer-Lichtenstein, Grant Number T32 MH015442.

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Supporting Families in a Pandemic:

Executive Function Videos for Caregivers of Children with Flexibility Challenges

Tennyson Dahlman*, Jessica V. Smith*, Jessica Holmes, A. Chelsea Armour, Alyssa Verbalis, Allison B. Ratto, Kristina K. Hardy, Meredith Gunn, Kaitlyn Decker, Dennard Brown, Te'Andis Elliott, Monica A. Werner, Katie C. Alexander, Lynn Cannon, Bruno J. Anthony, Lauren Kenworthy, and Laura G. Anthony

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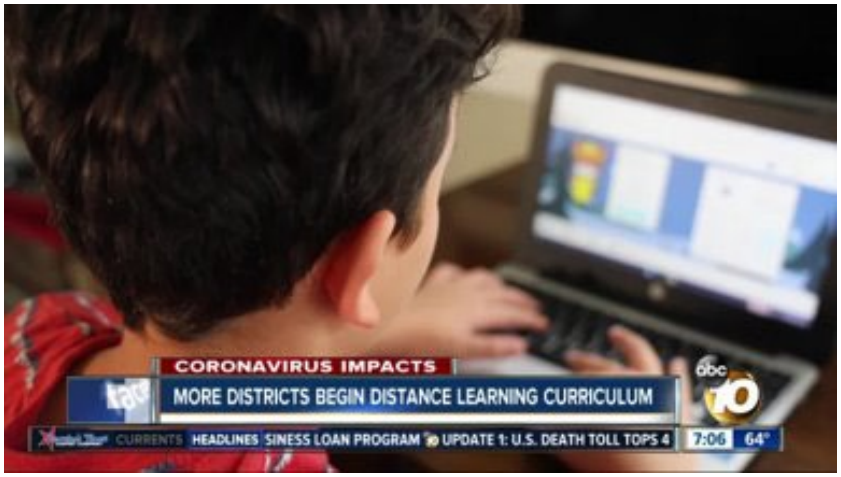
Effects of COVID-19 on Families

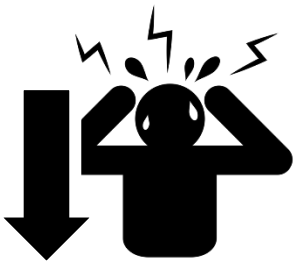


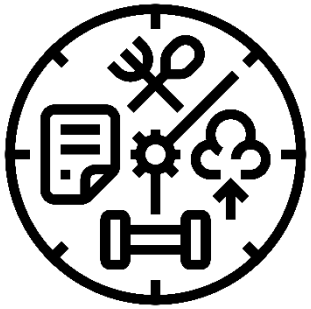
Parenting in a Pandemic: Tips to Keep the Calm at Home

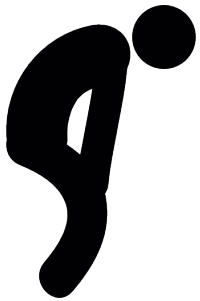
Fear, uncertainty, and being holed up at home more to slow the spread of COVID-19 can make it tough for families to keep a sense of calm. But it's important to help children feel safe, keep healthy routines, manage their emotions and behavior and build

Caregiver Outcomes

- Caregiver-mediated models have been an effective approach to child intervention
  - Aim to increase knowledge of concepts and strategies
  - Also aim to decrease strain and burden
- Disruptive behaviors and symptom severity contribute to objective and subjective caregiver strain
  - Negatively impacts caregiver functioning in multiple domains

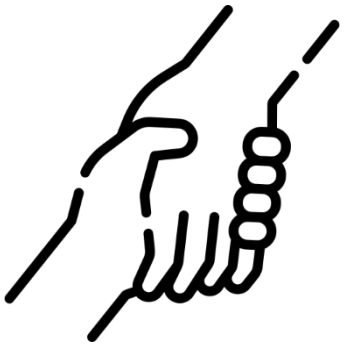






Caregiver Knowledge and Psychoeducation

- Programs to educate caregivers lead to better outcomes for them and their children
  - Online, caregiver-directed supports promote widespread education
  - Fosters learning about valuable tools to manage mental health difficulties
  - Lead to improved ability to support their children and decreased problem behaviors



Neurodevelopmental Disorders and Families

- Executive Functions (EFs)

EF Skills	EF Challenges
• Flexibility • Organization • Emotion regulation • Goal-setting • Planning	• Can't find shoes when getting ready for school • Forgetting to do homework • Trouble handling changes in plans

- Interventions can reduce EF challenges; however, skills learned in treatment do not always generalize to new contexts

Current Project and Hypotheses

- Develop videos addressing basic EF instructional and support strategies
  - Adapting concepts and skills from *Unstuck and On Target!*
- Examine the feasibility of using these videos to educate and support caregivers
- Hypotheses:
  a) Caregivers find the videos helpful, informative, acceptable, feasible, and efficacious
  b) Increase knowledge of EF principles and tools
  c) Reduce caregiver strain
  d) Increase caregiver sense of competency
  e) Reduce frequency of children's EF challenges and their interference

Participants–Caregivers

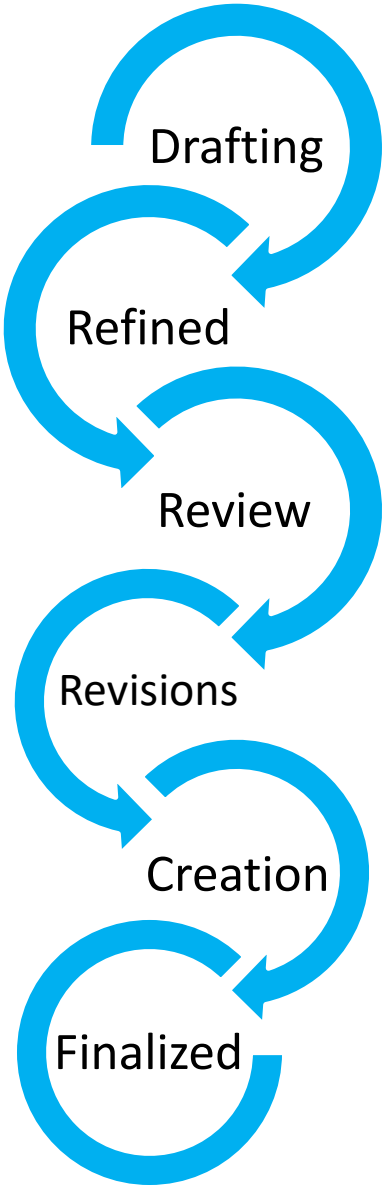
Total *N*	102
Caregiver age, *M (SD)*	41.33 (6.15)
Caregiver gender, *n*	
Male	8
Female	93
Non-Binary	1
Caregiver Racioethnicity, *n*	
Hispanic/Latino	18
Asian, non-Hispanic/Latino	2
Black, non-Hispanic/Latino	14
Pacific Islander, non-Hispanic/Latino	1
White, non-Hispanic/Latino	64
Multiracial, non-Hispanic/Latino	3
Languages Spoken, *n*	
Only English	86
English and Spanish	14
English and another language	2

Participants–Children

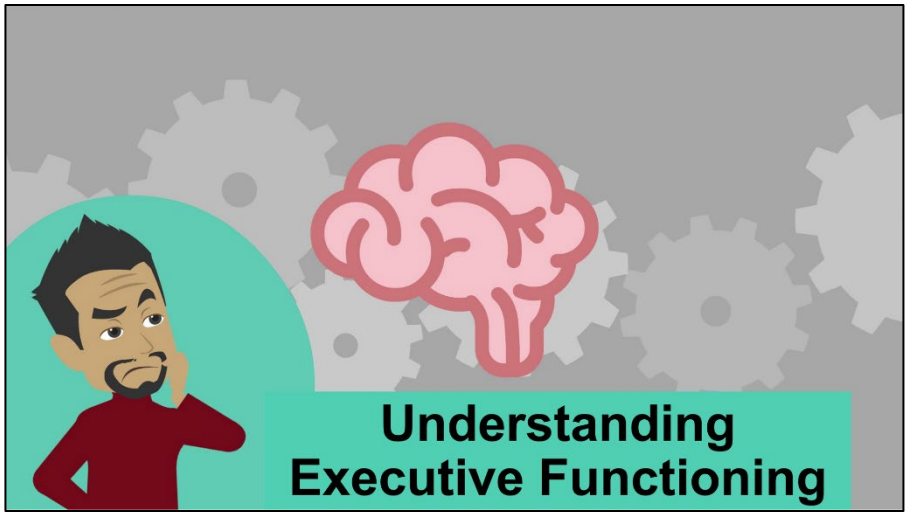
Total *N*	102
Child age, *M (SD)*	9.75 (.93)
Child gender, *n*	
Male	77
Female	24
Gender Fluid	1
Child Symptoms/Behaviors, *n*	
ASD	21
ADHD	43
ASD and ADHD	38
Child Racioethnicity, *n*	
Hispanic/Latino	17
Native American, non-Hispanic/Latino	1
Asian, non-Hispanic/Latino	2
Black, non-Hispanic/Latino	14
Pacific Islander, non-Hispanic/Latino	1
White, non-Hispanic/Latino	55
Multiracial, non-Hispanic/Latino	11
Chose not to respond	1

Video Development and Refinement

- Videos translated core components of *Unstuck and On Target!*
  - Introduction to EF
  - How to expect the unexpected
  - How to prevent overload
- Vested community members
  - Consisted of teachers, school administrators, caregivers of children with ADHD or Autism, and an Autistic parent self-advocate



Video Examples



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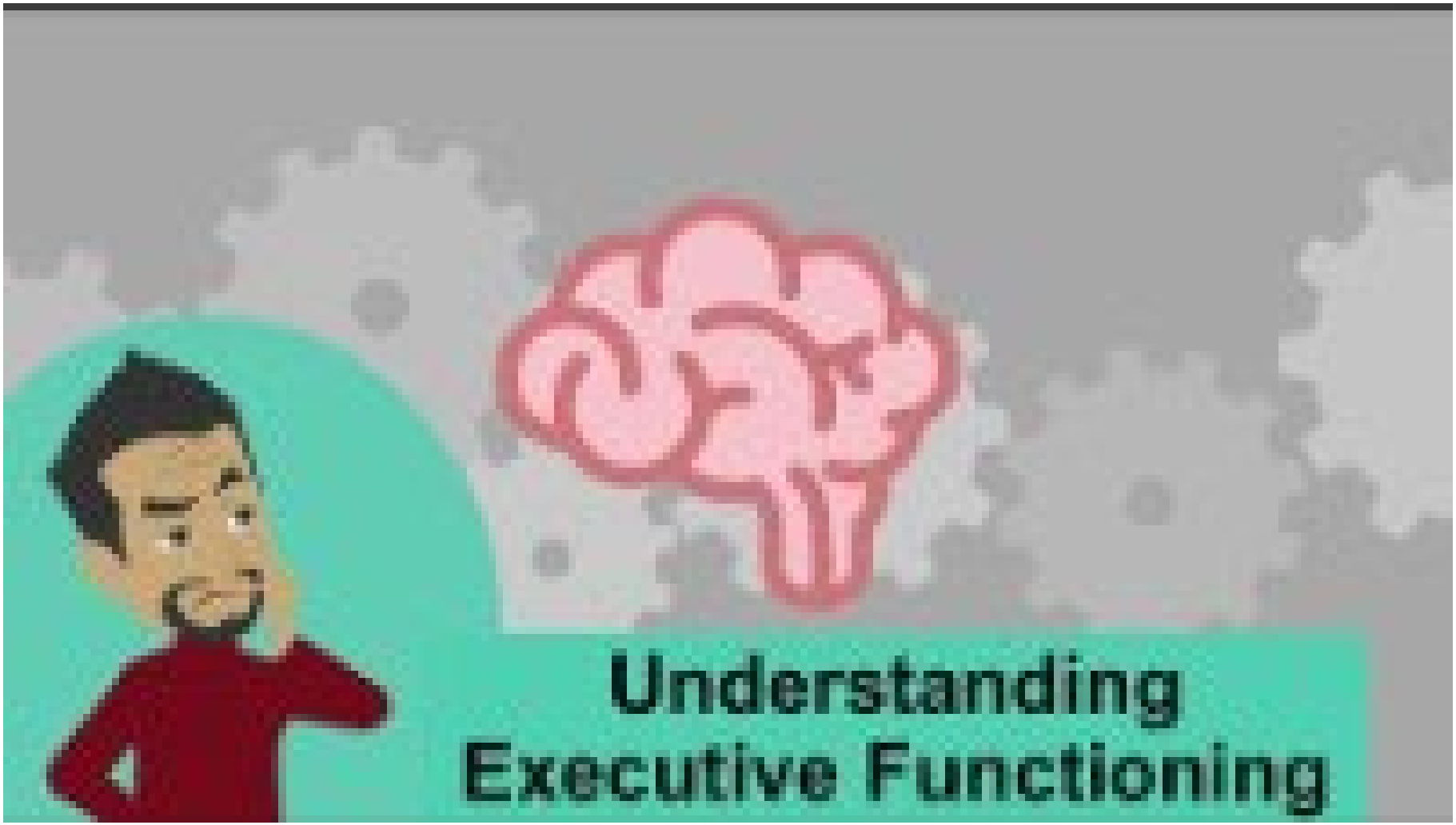


Results

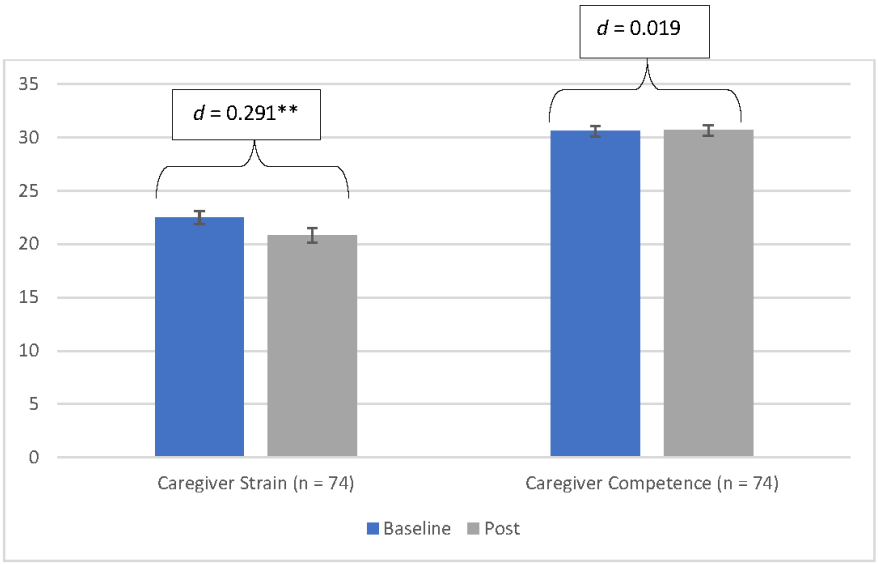
- Baseline Comparisons:
  - Those who reviewed more than half of the videos (87.25% of total sample) had higher baseline knowledge
    - $t(8) = -4.720$, $p = 0.001$, 95% CIs [-3.062, -1.056]
  - Differences in child EF severity based on whether caregivers spoke only English or were Spanish-English bilingual
    - Welch's t (1,22.92) = 5.209, $p < .05$
  - No other significant baseline differences between these groups from analyses of categorical demographic variables or continuous variables
- Helps us understand just how much changes from baseline to other timepoints

Results cont.

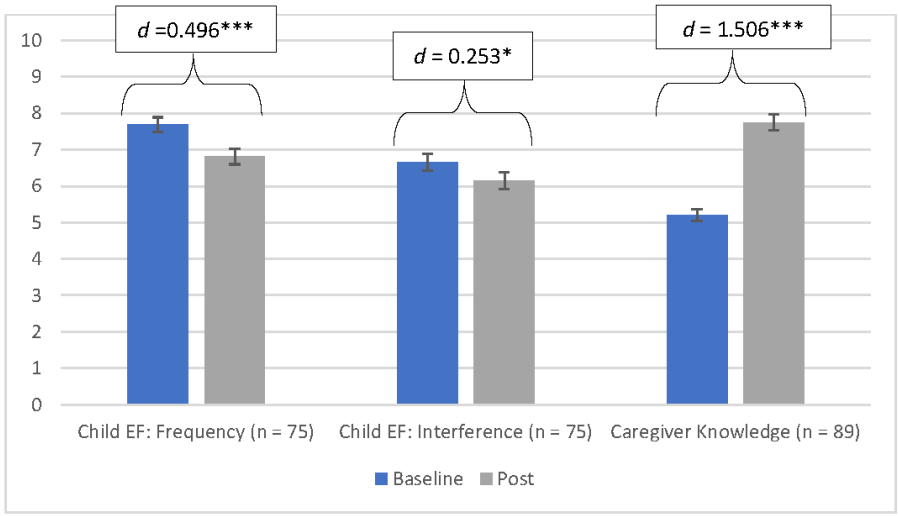
- Caregiver Ratings on Helpfulness, Acceptability, Efficacy, and Feasibility:
  - Caregivers indicated that:
    - Videos were helpful and informative (M = 4.012, SD = 0.144, range: 1-5)
    - They would recommend the videos (M = 4.608, SD = 0.569)
    - Found them valuable (M = 4.162, SD = 0.794)
    - The videos changed the way they viewed their child's difficulties (M = 3.814, SD = 0.839)
      - Views also significantly changed ($t(69) = -7.313$, $p < 0.001$, 95% CI [-0.746, -0.426])

Results cont.

Caregiver Strain and Sense of Competency

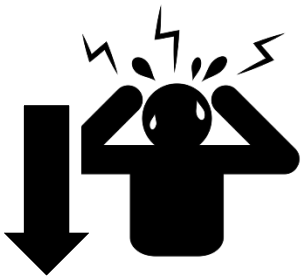


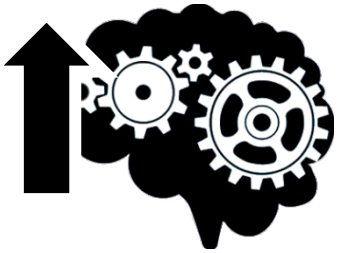
Child EF and Caregiver Knowledge



Conclusions and Moving Forward

- Potentially feasible to teach basic concepts and skills that can be used to support child EF at home
- Small series of short videos may:
  - Significantly reduce caregiver strain
  - Increase caregiver knowledge
  - Improve child executive functioning at home
- Our findings highlight the utility of freely available videos to support both parents and children
- Videos may have a variety of potential uses





Innovative Implementation of a Robust Executive Function Intervention Delivered In Schools

Holmes, J., Safer, J., Dahlman, T., Panklang, E., Verbalis, A., Whiteford, J., Gritz, M., Studts, C., Alladin, A., Anthony, L.G., Cronin, J., Smith, J.V., Armour, A.C., Decker, K., Brown, D., Cannon, L., Werner, M.A., Alexander, K.C., Anthony, B., Campos, L., Grinsteiner, E., Wolnitzek, G.,
Gunn, M., Kenworthy, L.

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Training Development

Unstuck and On Target for Elementary Educators

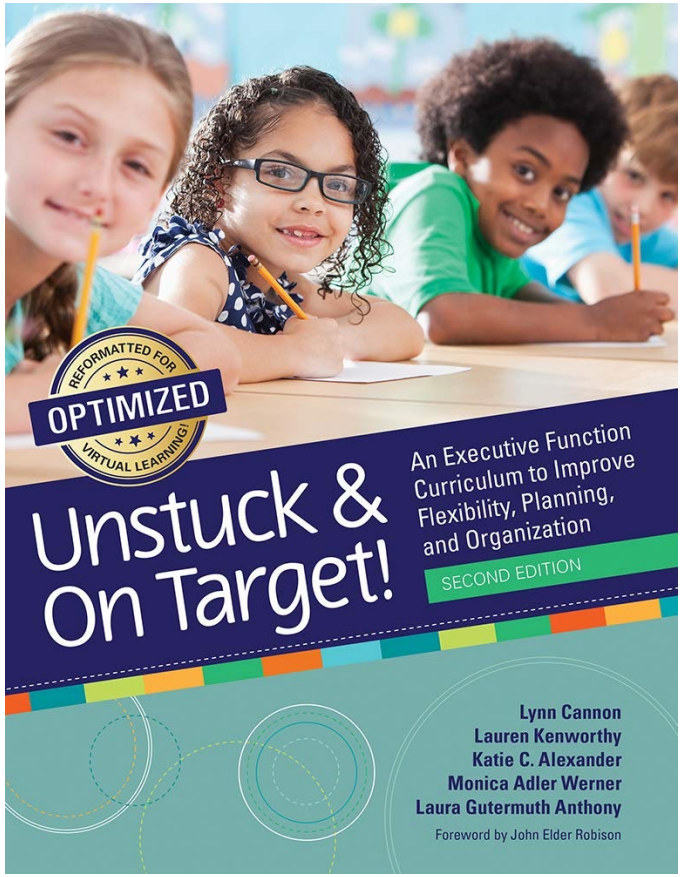
Paper 3: Training Development

1. Rationale and process for creating the Unstuck and On Target for Elementary Educators online training
2. Elements of the training that have made it effective

Why an Online Training?

- In the original Unstuck studies, implementers were trained by our team and in person
  - Not a scalable training model!
- Our goal: Increase the reach, adoption, implementation, and maintenance of Unstuck
- A free online training for Unstuck could:
  - Increase the number of schools adopting Unstuck
  - Increase the number of implementers delivering Unstuck
  - Increase the number of children reached by Unstuck
  - Increase the chances of sustaining Unstuck over time

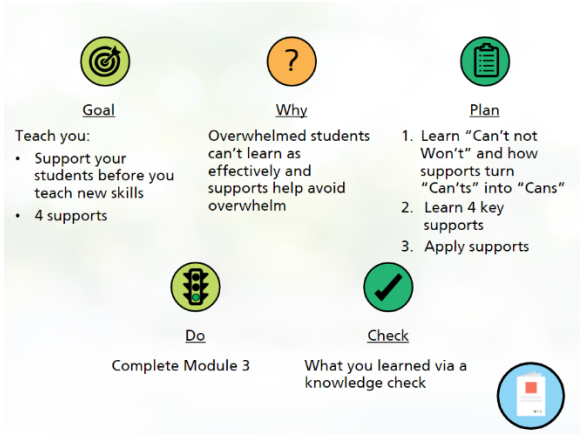
Training Development: Process

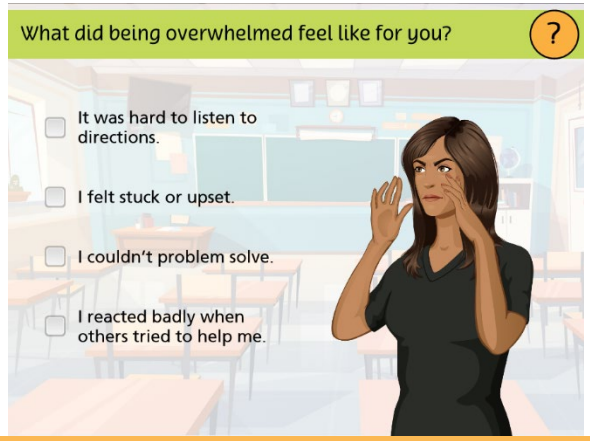


Foundational Skills Lesson 1 Lesson 2 Lesson 3 Lesson 4	**What is Flexibility?** Lesson 5 Lesson 6 Lesson 7	**How to Be Flexible** Lesson 8 Lesson 9 Lesson 10 Lesson 11 Lesson 12
Why Be Flexible? Lesson 13 Lesson 14	**Your Goals: Getting What You Want** Lesson 15 Lesson 16 Lesson 17&18 Lesson 19 Lesson 20	**Flexible/Goal-Directed Futures** Lesson 21

Training Development: Process

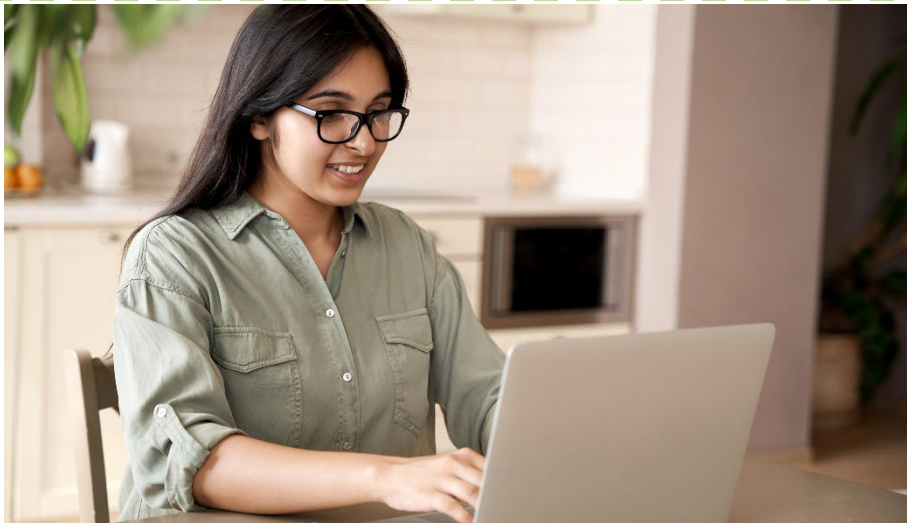
Training Development: Elements





Experience

Training Development: Elements



W3C® WCAG 2.1
Web Content Accessibility Guidelines



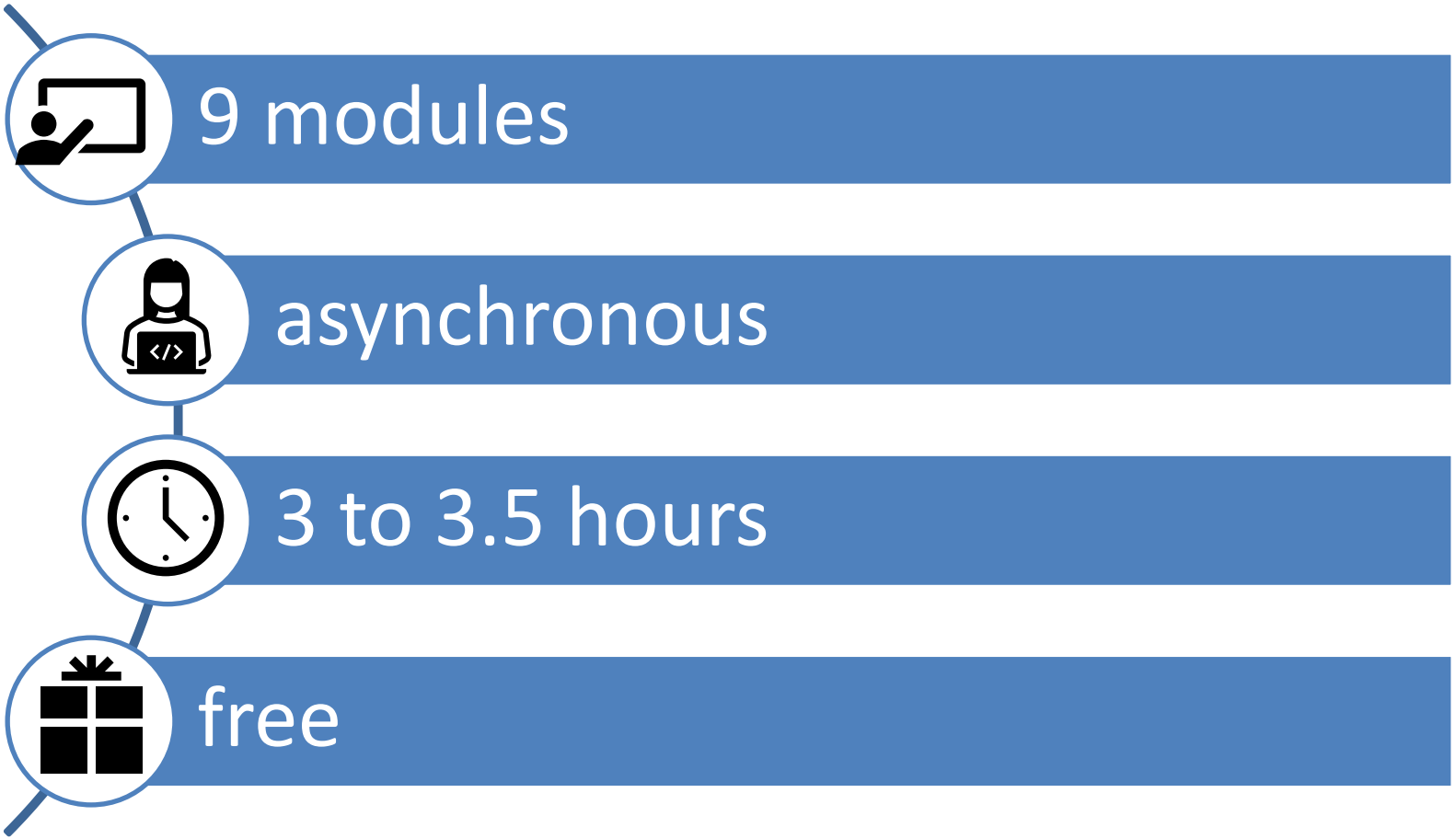

Accessibility

Training Development: Elements

Experience

Accessibility

Online Educator Training trial



Implementer Demographics

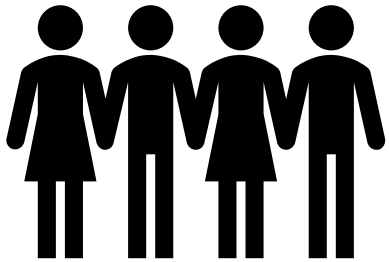
281 implementers (school staff)

53% completed online training

96% Female

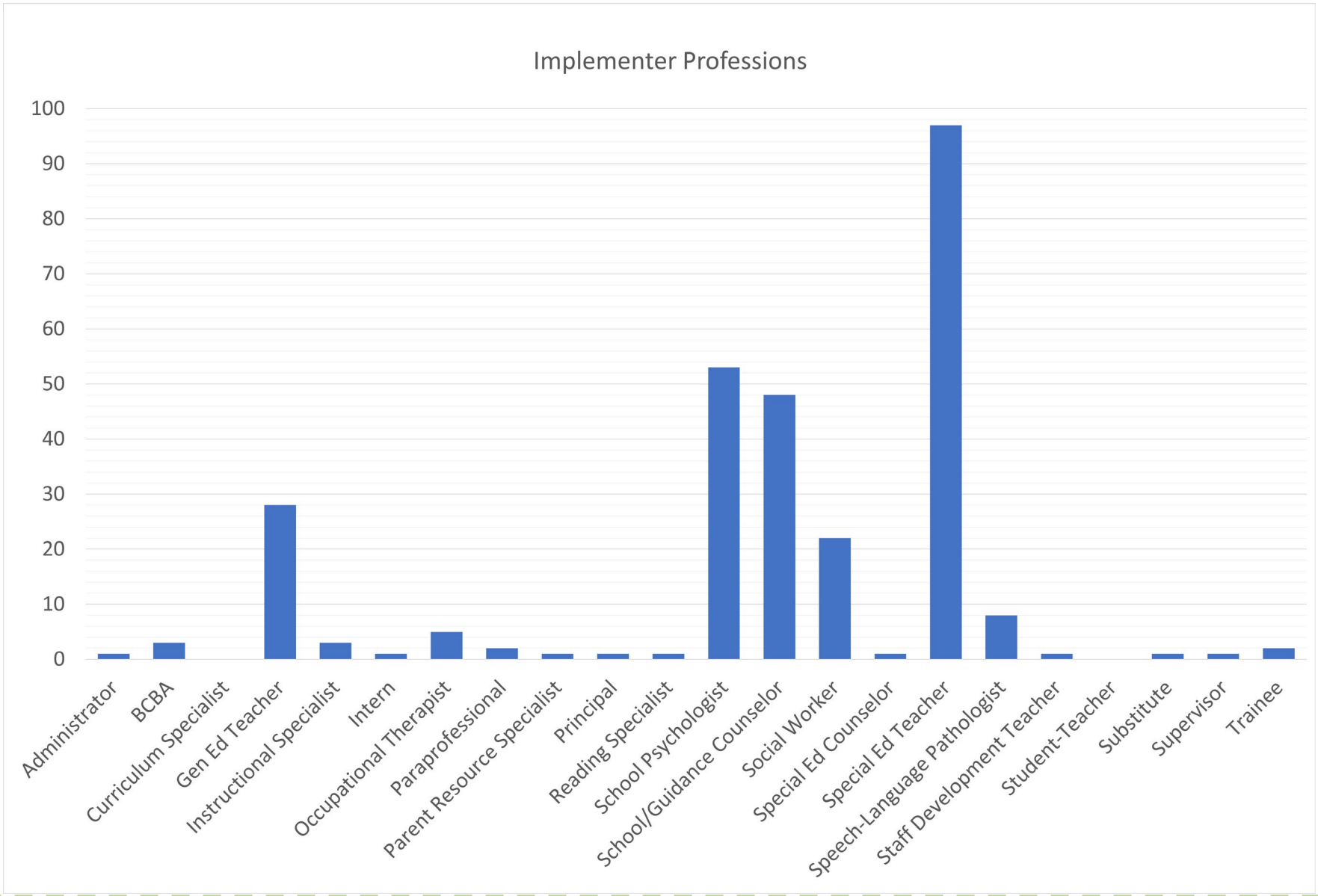
92% not Hispanic

57% completed post data surveys

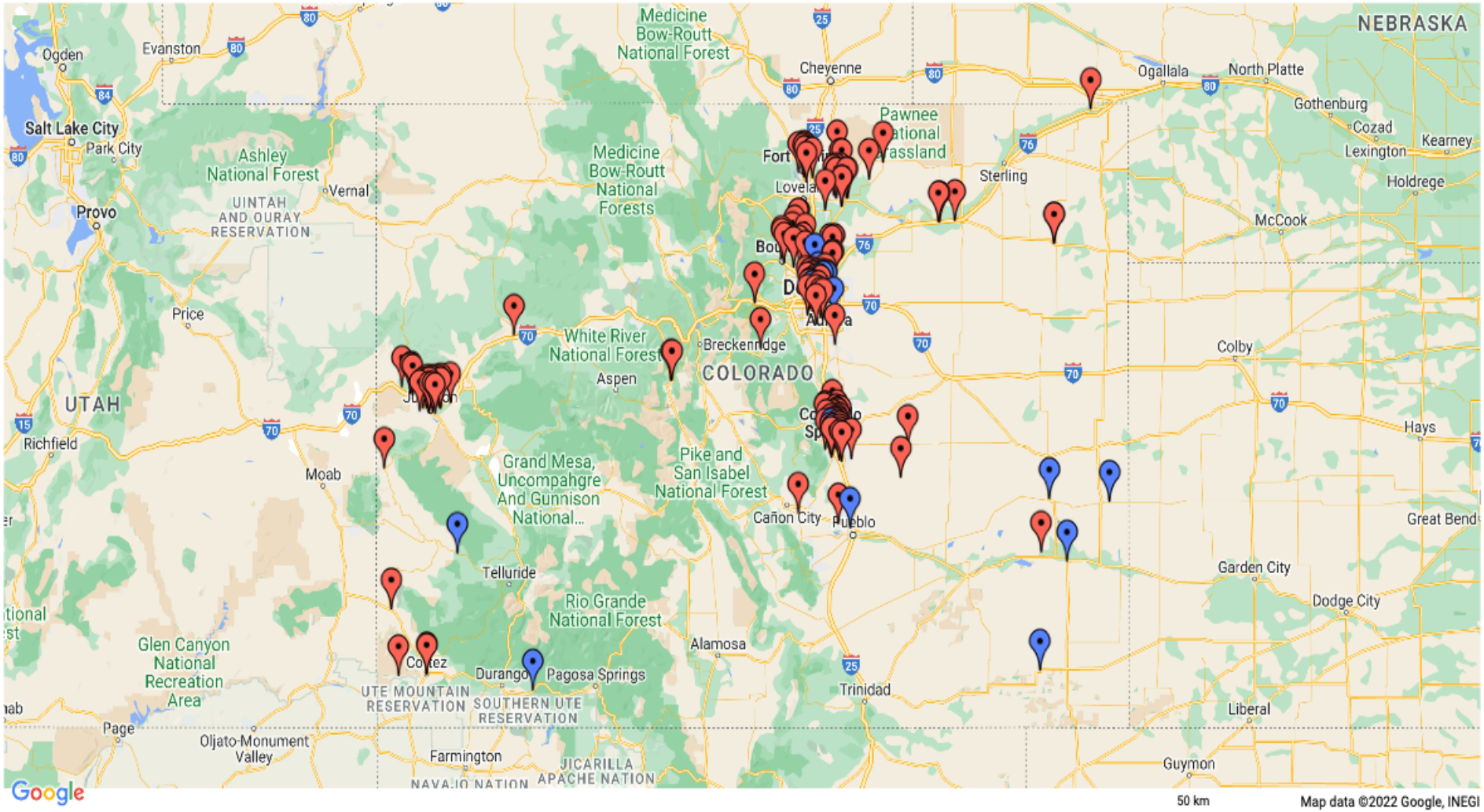


90% White

Implementer Demographics

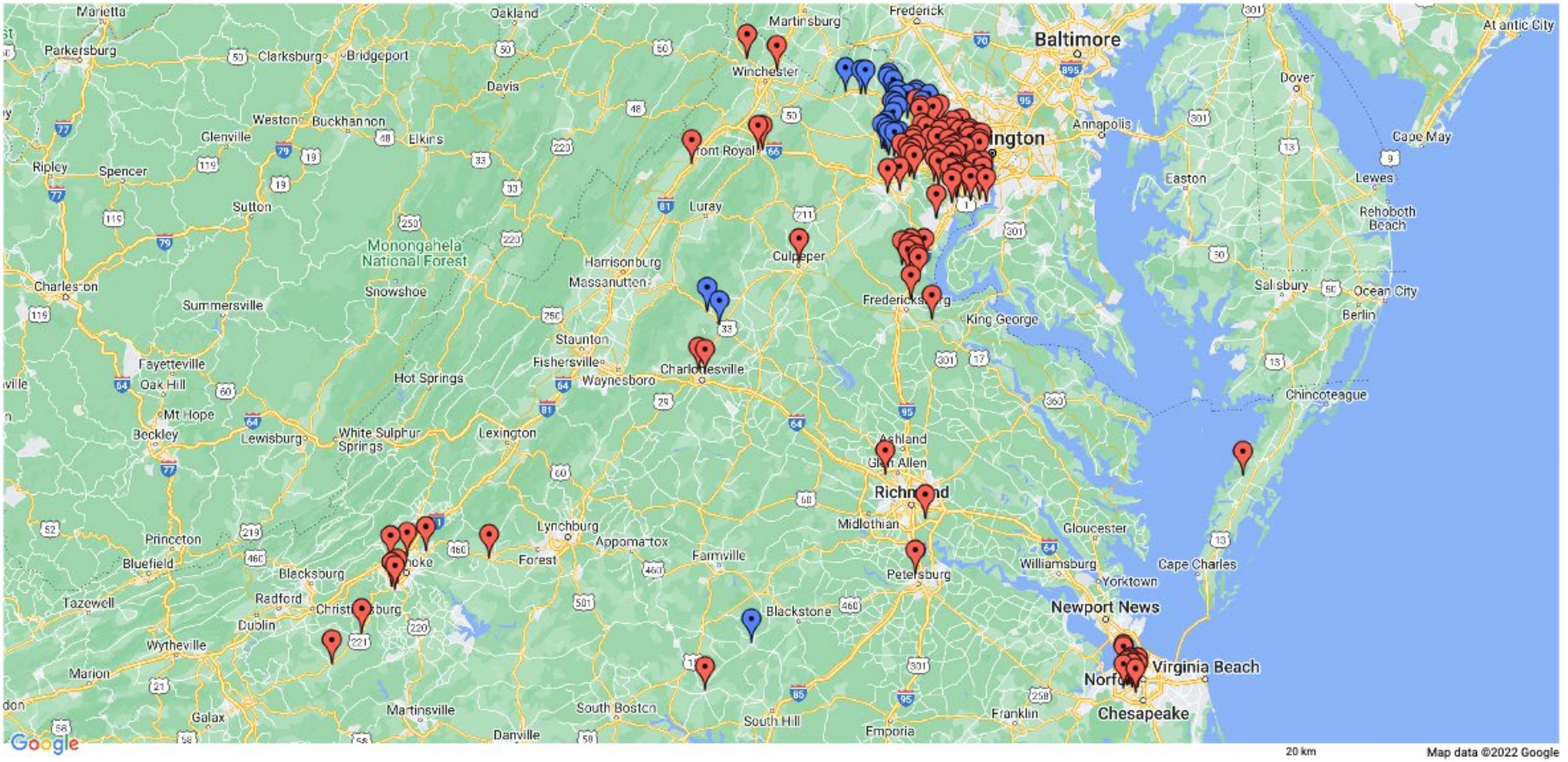


Pin map of Colorado



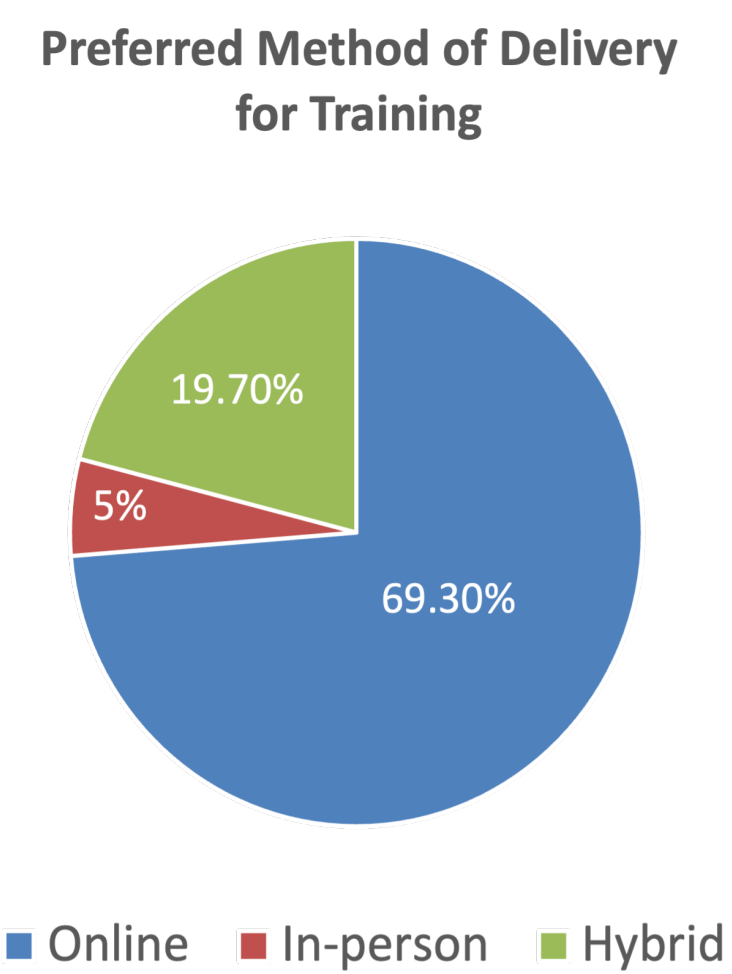
130 Enrolled Schools

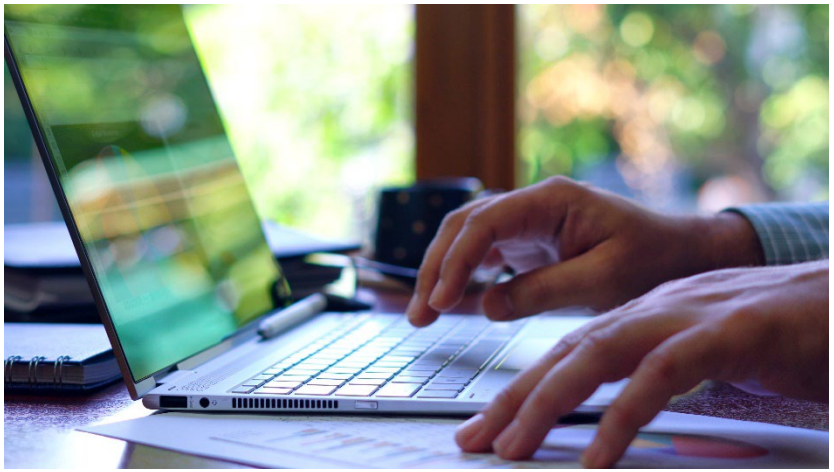
Pin Map of Virginia

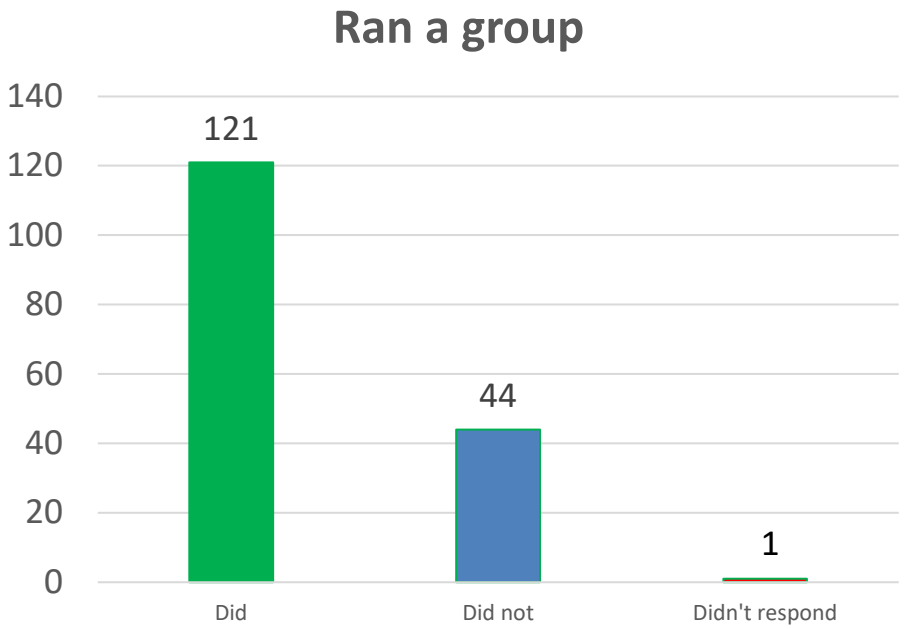


99 Enrolled Schools

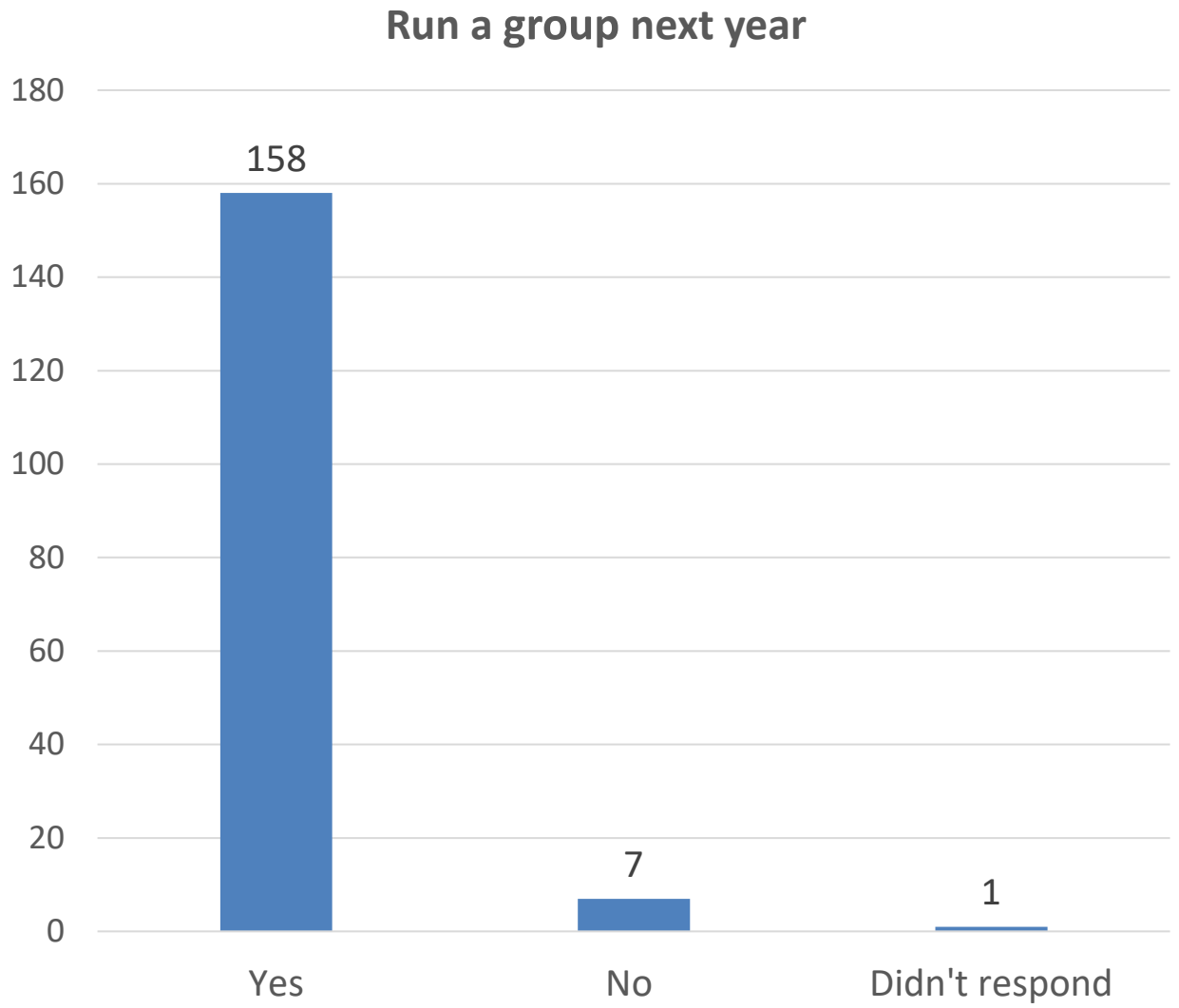
Results


Preferred Method of Delivery for Training
19.70%
5%
69.30%
Online
In-person
Hybrid




Ran a group
140
120
100
80
60
40
20
0
121
44
1
Did
Did not
Didn't respond

Results


Run a group next year
180
160
140
120
100
80
60
40
20
0
158
7
1
Yes
No
Didn't respond

Results (cont.)

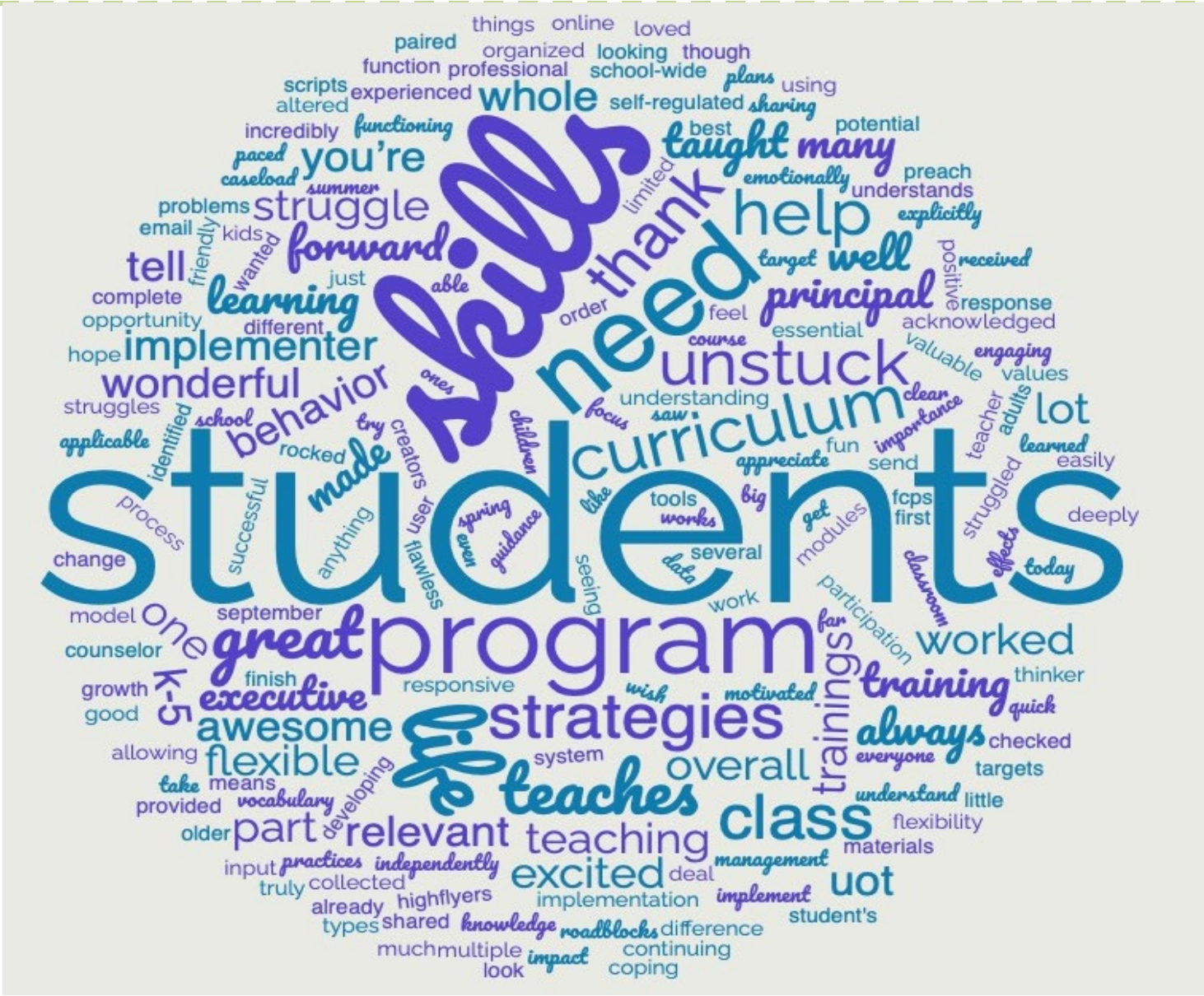
- Of the 161 implementers that completed post, **96%** (n = 155) indicated they plan on using Unstuck during the 2022-2023 school year

- **94%** (n = 152) agreed that they were prepared to launch and integrate Unstuck in their classroom (*M*= 4.3, *SD*=0.65)

- **84%** (n = 136) indicated that their knowledge of the issues and needs of the elementary students had increased (*M*= 4.04, *SD*=0.65 agree that knowledge increased)

- **95%** (n = 153) reported an increase in competence

Results (cont.)



Implementer Quotes

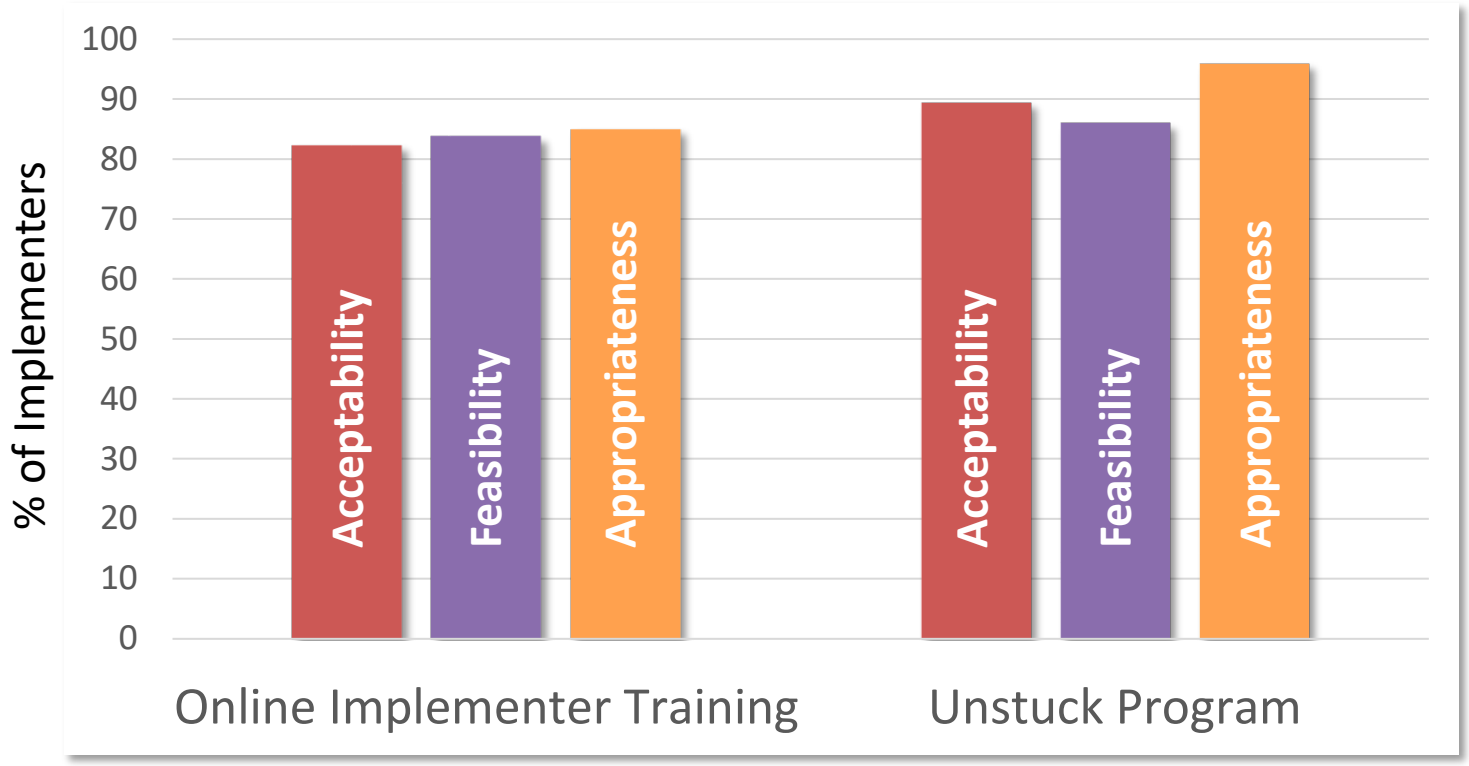
Feedback about the training itself:

- "Thank you so much for sharing! That is wonderful! We are already seeing the wonderful effects of this program!" –Principal

- I saw a lot of growth in my students who struggle. Not just ones identified with EF struggles, and it motivated my students who are highflyers. I altered the curriculum to be part of a whole class focus for 26 students and it worked well and paired easily with my behavior management system." –Implementer and Classroom teacher

Acceptability, Feasibility, and Appropriateness

Percent of implementers with scores of **4 or higher** on the AIM, FIM, and IAM



Conclusion

- *Unstuck* is a low-cost, evidence-supported EF intervention that can be implemented by school staff, thus reducing many barriers in access to care for elementary age children with flexibility, organization, and planning challenges.

- The development of an effective on-line educator training modules removes a key implementation barrier related to school staff training needs.

What Does it Take to Deliver "Unstuck and on Target" in Elementary Schools

R. Mark Gritz, PhD; Jack Cronin, MS; Christina Studts, PhD

Children's National

University of Colorado
Anschutz Medical Campus

This presentation was funded through a Patient-Centered Outcomes Research Institute (PCORI) Dissemination and Implementation Award (DI-2019C2-17605).

The statements in this presentation are solely the responsibility of the authors and do not necessarily represent the views of the Patient-Centered Outcomes Research Institute (PCORI), its Board of Governors or Methodology Committee.

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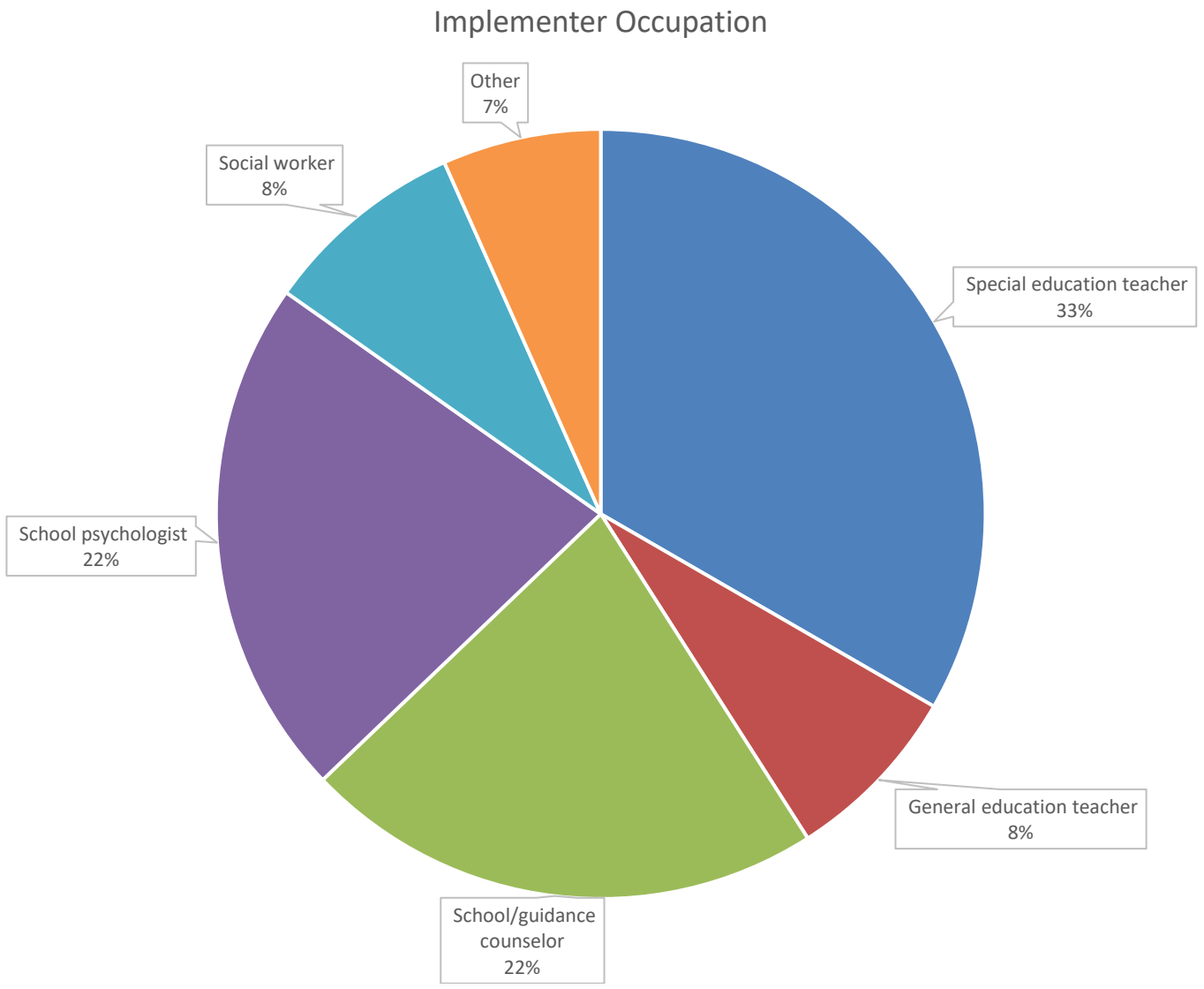
Overview

- Understand the human and other resources used in delivering Unstuck over a school year
  - Measured time and resources spent on activities related to providing 21 Unstuck lessons
  - Not including pre-implementation costs
- Asked 296 implementers to complete a weekly time log of their and others' activities in a random week during school year
  - Received 110 usable time logs
- Presenting averages of resources used and costs, along with information from interviews of implementers to provide additional insights

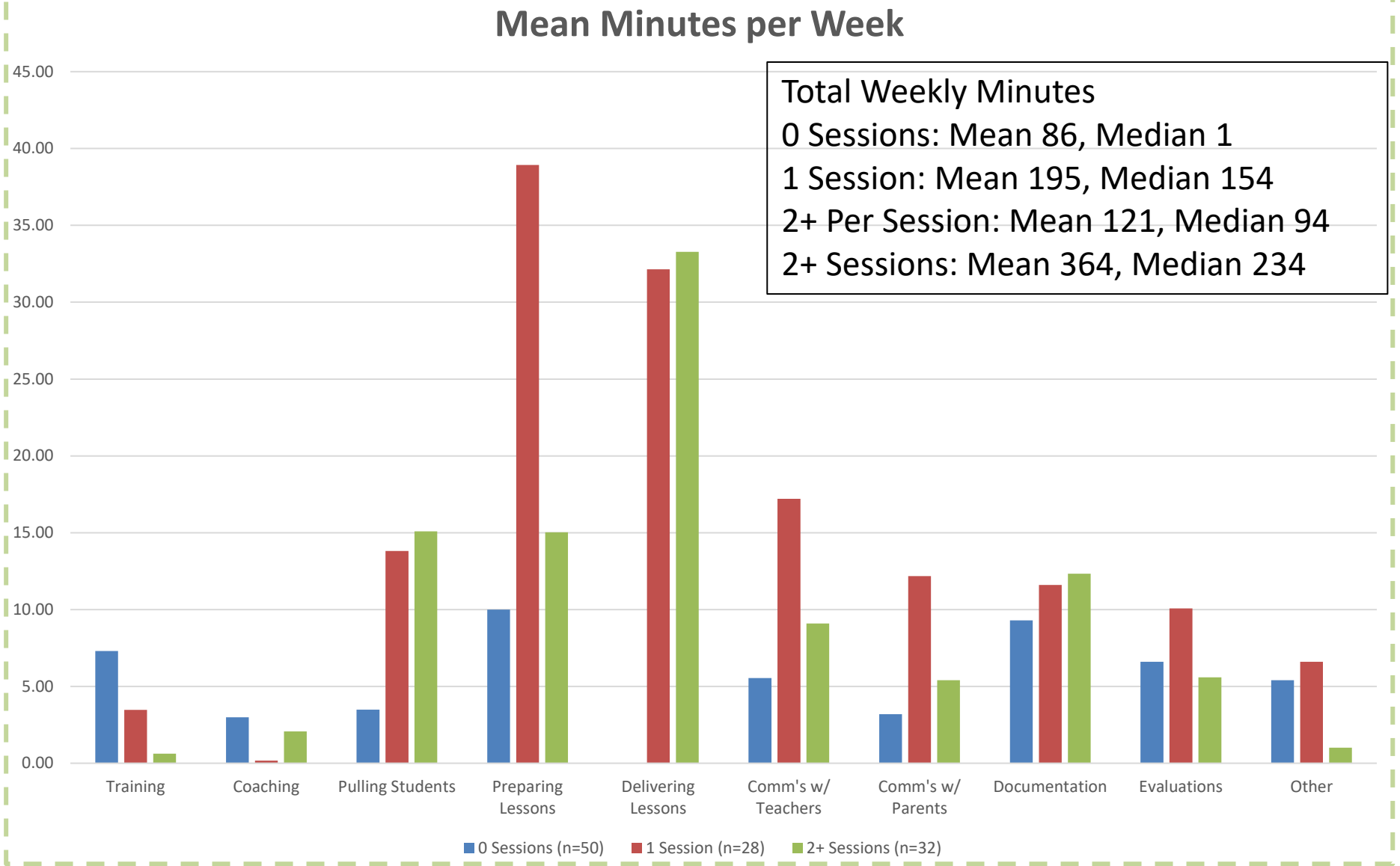
School Settings

- Located in Virginia and Colorado
- 91% public
- 15% in rural areas

Who is Implementing Unstuck?



What are Implementers Spending Time Doing



So What Does It Cost?

- To measure cost over a school year, assumed:
  - Delivered 1 lesson (2 sessions) per week for 21 weeks
  - 15 weeks with 0 lessons delivered
- Measured salaries and benefits using Bureau of Labor Statistics Occupational Wage and Benefit data for implementers and support staff
  - Implementer: special education teacher and school psychologist
  - Support staff: school psychologist and principal
- Added in reported cost of materials and supplies

So What Does It Cost?

Overall Average Minutes Per Session

Implementer Supporting Staff	Weeks Without Lessons (15)	Weeks With Lessons (21)	Total Personnel Cost	Materials and Supplies	Total Cost
Special Education Teacher School Psychologist	$ 802.91 $ 272.39	$ 2,533.19 $ 849.04	$ 4,457.53	$ 54.72	$ 4,512.25
School Psychologist School Psychologist	$ 964.83 $ 272.39	$ 3,044.03 $ 849.04	$ 5,130.28	$ 54.72	$ 5,185.00
School Psychologist Principal	$ 964.83 $ 335.31	$ 3,044.03 $ 1,045.17	$ 5,389.33	$ 54.72	$ 5,444.05

Two+ Sessions Average Minutes Per Session

Implementer Supporting Staff	Weeks Without Lessons (15)	Weeks With Lessons (21)	Total Personnel Cost	Materials and Supplies	Total Cost
Special Education Teacher School Psychologist	$ 802.91 $ 272.39	$ 2,078.32 $ 531.95	$ 3,685.58	$ 54.72	$ 3,740.30
School Psychologist School Psychologist	$ 964.83 $ 272.39	$ 2,497.42 $ 531.96	$ 4,266.60	$ 54.72	$ 4,321.32
School Psychologist Principal	$ 964.83 $ 335.31	$ 2,497.42 $ 654.85	$ 4,452.41	$ 54.72	$ 4,507.13

What Do the Implementers Say?

- Conducted key informant interviews with 20 implementers after school year completion about their experiences with Unstuck training and implementation
- Selected based on multiple criteria, including relative number of total hours/week reported in time logs (above median, below median, and missing)
- Included implementers reporting especially high (N=6) and low (N=8) weekly hours to explore variability
- Reviewed time log data at the end of the interview

What Do the Implementers Say?

- For those <u>with</u> time log data, shared their response and asked if that was representative of a typical week; if not representative, asked for an estimate and details
- For those <u>without</u> time log data, asked for an estimate of weekly minutes spent in Unstuck activities

"Just as a reminder, the Unstuck activities included your Unstuck training, coaching/webinar sessions, pulling students for sessions, preparing for Unstuck sessions, delivering sessions, communicating with teachers or parents, documentation, and student evaluations. **Roughly how many minutes do you think you spent on Unstuck in a typical week?** Your best estimate is fine. **And how many groups did you typically run in a week?**"

What Do the Implementers Say?

- Implementers with low weekly minutes (0-45min) on time logs explained that they had either not run sessions or had completed their time logs before beginning to deliver Unstuck
- Those reporting high weekly minutes (>150min) either:
  - Revised their estimate downward, citing prep time decreasing as Unstuck delivery progressed, or
  - Reported leading high numbers of sessions each week (5-12)
- Session length (meeting with students) was typically 25-30min per session

What Do the Implementers Say?

- Virtually all implementers interviewed explained that it took two sessions to complete one Unstuck lesson
- Transition time (settling, engaging, and returning students to class) was described as taking up to an additional 15min per session
- Prep time was described as taking 15-60min per week
  - Several implementers related prep time to their desire to implement Unstuck with high levels of fidelity

What Do the Implementers Say?

In general, implementers with both high and low time log data described spending 45-60 minutes in Unstuck activities per session in a typical week, with variation in total time spent per week related to:

- Prep time
  - Unique sessions vs. multiple sessions covering the same content in a given week
  - Comfort level of implementer with the curriculum and materials
- Time spent communicating with teachers and/or parents (ranged from 0-90min among interviewed implementers)

Summary & Conclusions

- Unstuck was delivered by implementers with a variety of occupations and school roles
- Overall cost to deliver Unstuck in a single school year was driven by personnel cost and number of sessions per week
  - Ranged from approximately $3,750 to $5,500
- Costs other than personnel time were minimal
- Implementers described variations in time spent associated with:
  - Number of sessions delivered per week
  - Amount of prep time
  - Amount of communication with teachers and parents

More *Unstuck* on our website!