

## Introduction

•Even after standard of care hearing and speech interventions, deaf and hard of hearing (DHH) children may be twice as likely to exhibit behavioral problems as their typical hearing peers, with up to 50% experiencing significant disruptive behavior problems.

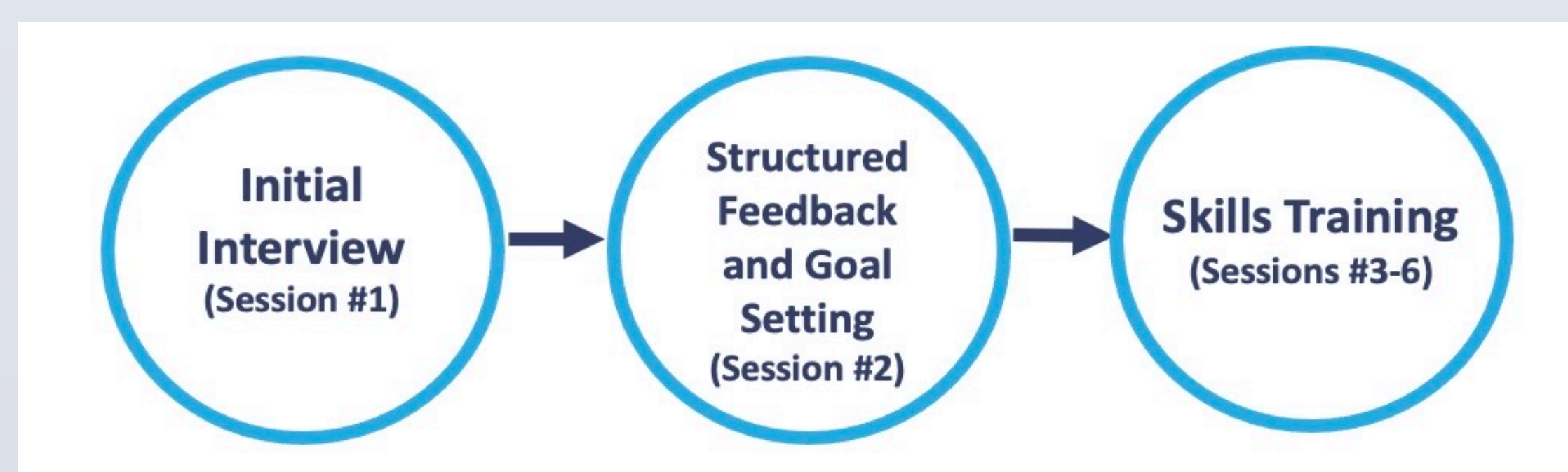
•Despite this increased risk, DHH children are less likely than their typical hearing peers to receive behavioral interventions to address these problems.

•While behavioral parent training (BPT) programs have consistently demonstrated a reduction of behavioral problems in typical hearing children, no prior research has examined the effectiveness of BPT interventions with DHH children.

•“The Family Check-Up” (FCU) is an evidence-based BPT designed to be delivered in brief, tailored sessions. It focuses on identifying parenting strengths and working with parents to learn and practice effective positive parenting skills.

• After systematically adapting the FCU to make it responsive to the needs and preferences of parents of DHH children, this study tests the effectiveness of the adapted intervention (FCU-DHH) in a randomized controlled trial, and it examines parent satisfaction with FCU-DHH.

•The FCU-DHH program is delivered in up to 6 structured sessions, according to the following model:



## Methods

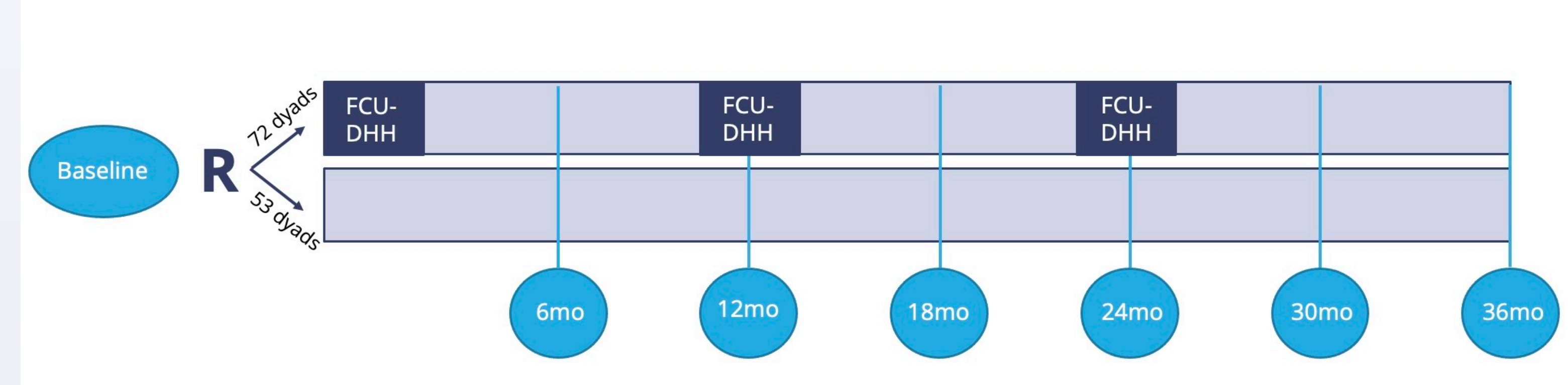
•125 families are being recruited through hearing healthcare practices, social media, and Community Advisory Board contacts.

•Direct recruitment from patient lists is allowable through clinics formally affiliated with the research grant.

Inclusion Criteria	
• Parent or legal guardian is 18 years or older	
• Lives in Kentucky	
• Able to communicate by English or American Sign Language	
• Child is 3-6 years (at first contact)	
• Child is deaf or hard of hearing	
• Child has had a hearing device for at least 6 months	
Exclusion Criteria	
• Family has previously accessed behavioral health services for the child	
• Family has a current child protective services case	

•After baseline data collection, dyads are randomized (stratified by income/poverty level and hearing device) to the FCU-DHH (n=72) or control group (n=53).

## Methods, continued



•Families complete research assessments at baseline and every 6 months for up to 3 years, including standardized measures of parenting and child behaviors, parenting sense of competence, parent depression, parent motivation, parent-child interactions, and child language skills. Families receive up to \$150 each year for completing research assessments.

•FCU-DHH families receive up to 6 FCU-DHH sessions annually, delivered by a trained and supervised coach who is also the parent of a DHH child of any age. There is no additional payment to families for attending FCU-DHH sessions.

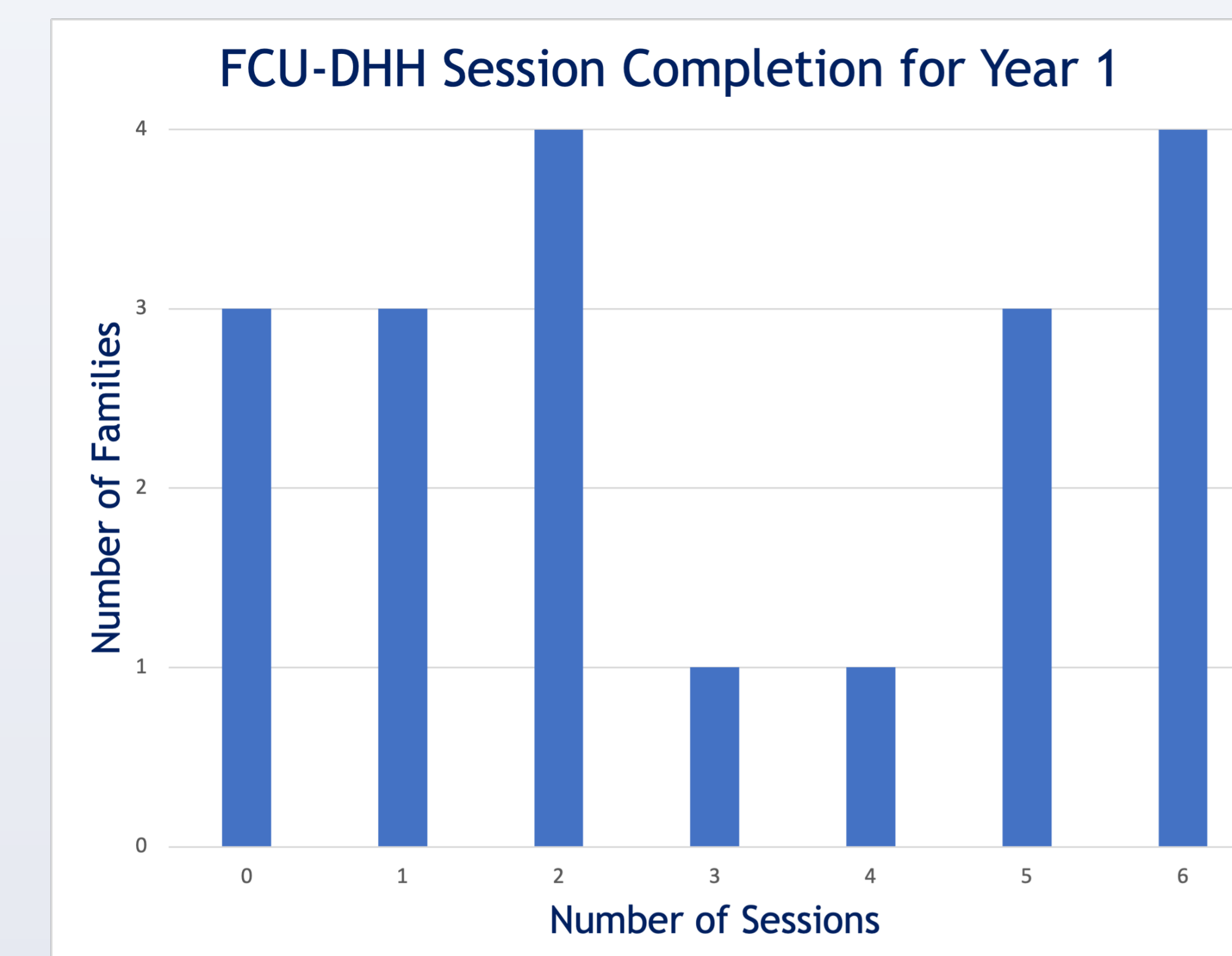
## Results

•Of the 234 families contacted for the study, 37 families have currently completed baseline data collection and are randomized to FCU-DHH or control conditions. To date, 2 families have withdrawn from the study.

•Of the 197 families who did not enroll: 30 were ineligible; 73 declined to participate; and 94 did not respond to multiple contacts.

Parent Characteristics	FCU-DHH N=21	Control N=16	Child Characteristics	FCU-DHH N=21	Control N=16
Parent Race			Child's Highest Severity of Hearing Loss		
White	17 (81.0%)	13 (81.3%)	Mild	3 (14.3%)	1 (7.1%)
Other	4 (19.0%)	3 (18.8%)	Moderate	6 (28.6%)	8 (57.1%)
Parent Gender			Severe	3 (14.3%)	2 (14.3%)
Female	20 (95.2%)	16 (100.0%)	Profound	9 (42.9%)	3 (21.4%)
Male	1 (4.8%)	0 (0.0%)	Child's Hearing Device		
Parent Income			Cochlear Implant	7 (33.3%)	5 (31.3%)
<\$40,000	8 (38.1%)	6(37.5%)	Hearing Aid	14 (66.7%)	11 (68.8%)
\$40,000-\$79,999	9 (42.9%)	5 (31.3%)	Behavioral Problems in Clinical Range (Child Behavior Checklist/1.5-5)		
\$80,000+	4 (19.0%)	5 (31.3%)	Externalizing Scale	3 (14.3%)	2 (12.5%)
Parent Education			Internalizing Scale	2 (9.5%)	1 (6.3%)
≤ High school/GED	5 (23.8%)	1 (6.3%)	Child's Diagnoses		
Some college/tech school	11 (52.4%)	7 (43.8%)	Behavioral/emotional problems	2 (10.0%)	0 (0.0%)
≥ College graduate	5 (23.8%)	8 (50.0%)	Autism Spectrum Disorder	2 (10.0%)	1 (6.7%)
Parent Level of Depressive Symptoms (Beck Depression Inventory II)			Developmental delay	11 (55.0%)	8 (50.0%)
Mild	4 (19.0%)	1 (6.3%)	Intellectual disability	1 (5.0%)	1 (6.7%)
Moderate	0 (0.0%)	1 (6.3%)	Learning disability	4 (20.0%)	2 (13.3%)
Severe	0 (0.0%)	1 (6.3%)			

## Results, continued

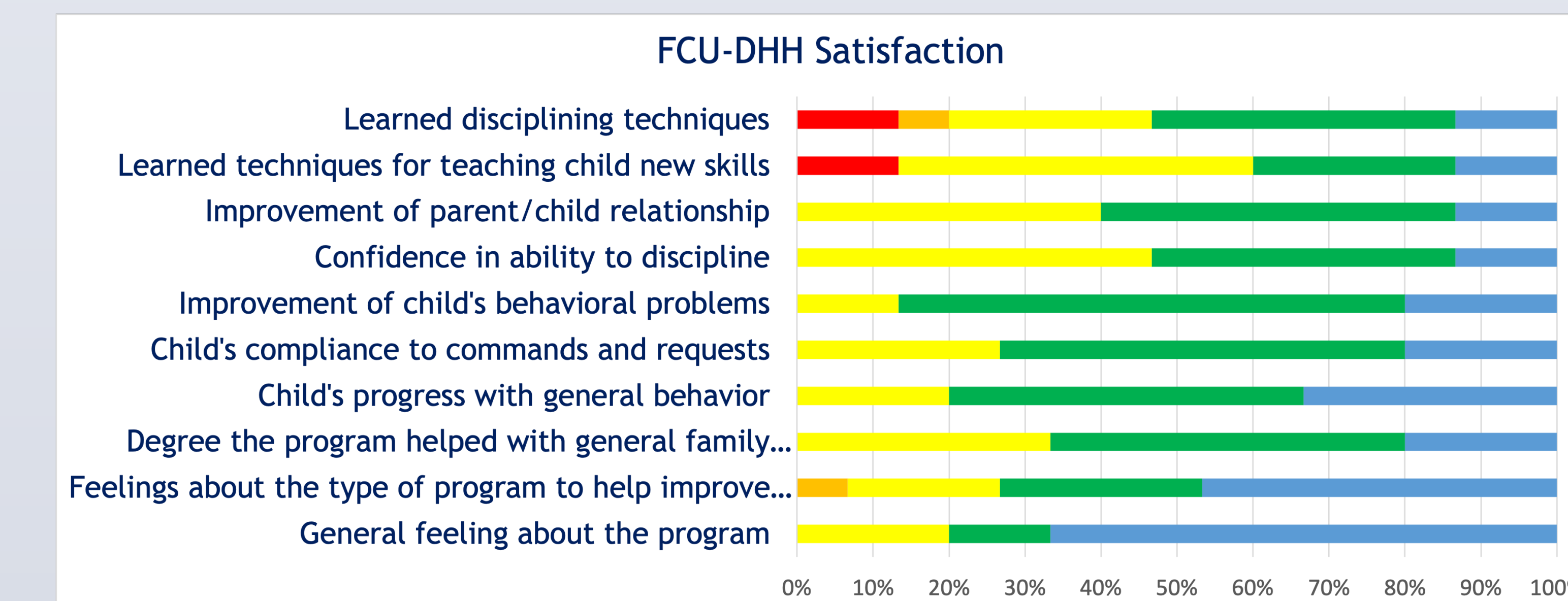


•Approximately one-third of families attended no sessions or only one session, while another third attended all or nearly all offered sessions.

•The average length of sessions was: 46 minutes for the Initial Interview (session #1); 57 minutes for Structured Feedback (#2); and 48 minutes for Skills Training (#3-6).

•The most frequently requested Skills Training topics were praising positive behavior; making clear and effective requests; identifying incentives and behavior plans (e.g., sticker charts); and setting limits.

*“My parent coach really did help me a lot. Not only did she help me with teaching me different strategies to discipline and parent in general, but she also reminded me that I was doing a good job with parenting.”*  
- Mother of 3-year-old with profound hearing loss



## Conclusions/Future Directions

•Preliminary results indicate high satisfaction among parents who attended FCU-DHH sessions. Session attendance was variable.

•Post-intervention outcomes will be compared across groups to examine the effect of the FCU-DHH program on positive parenting practices, children’s behavior, children’s consistent use of hearing devices, and improvements in children’s speech and language.

•Recruitment challenges are currently being addressed by expanding eligibility to all US states with active DHH parent referral networks.

## Acknowledgements

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