

# The CATHI pilot study: Evaluating the acceptability for delivering parent skills training using an interactive voice recognition system

Meredith Whitney<sup>1</sup>, Vanessa Varalli<sup>1</sup>, Cyndi Brannen<sup>1,2</sup>, Patrick McGrath<sup>1,2</sup>, Charles Cunningham<sup>3</sup>  
 1. IWK Health Centre 2. Dalhousie University 3. McMaster University

## Background

The CATHI Pilot Study delivered a parent skills training program for children with ODD to moderate disruptive behaviour with an interactive voice response (IVR) system.

### Parent Skills Training Program: Family Help

Family Help is an evidence-based program for children with mild to moderate disruptive behaviour.

### Each week parents in the program:

- Watch instructional videos.
- Practice skills on the phone with a trained coach (audiofeedback).
- Parents made an appointment to reduce Oppositional Defiant Disorder (ODD) in children aged 3-4 years.
- 50% of children in the program group no longer met diagnostic criteria for ODD after 1 year vs. 30% in the wait-list group.
- To maximize file costs and maximize access, we programmed an IVR system to deliver Family Help.

### IVR System: The Computer Automated Telephone Help and Interactive System (CATHI)

- CATHI makes outgoing calls and receives incoming calls.
- Speech is generated by pre-programming recorded human speech.
- CATHI recognizes words pre-programmed into the system (this system can).
- Clear parents reports of ODD behaviour.
- Review Family Help material.
- Provide tips and support.

### Family Help + CATHI: Advantages of this Innovative Model

1. Personal costs are decreased.
2. CATHI can be accessed 24/7x/365, 7 days/week, 12 lines. It can be used at one time.
3. Self-administered programs reduce barriers associated with family stress responsiveness.
4. CATHI encourages active participation and learning takes place in the child's environment.

## Research Questions

1. Are parents satisfied with the services provided by CATHI?
2. Do parents find CATHI easy to use?
3. Does the amount of coach contact impact parent satisfaction?

## Research Design

### Participant Sample

- Participants (27 female, 2 male) were parents of 4 to 12 year olds (M=7.18, SD=2.17) with mild to moderate behaviour problems.
- The Brief Child and Family Phone Interview<sup>1</sup> was used to evaluate disruptive behaviour.
- Participants were recruited from the Halifax Regional Municipality through presentations, internet announcements, and posters.

### Method

- All participants were provided with four Family Help sessions (handbook and videos).
- CATHI supported participants (N=16) phoned CATHI at the end of each week.
- Coach and CATHI supported participants (N=11) received one call from a coach at the end of the first week and phoned CATHI the remaining three weeks.
- CATHI tracked parents' responses to questions.
- CATHI provided reminder calls to parents before a weekly session and if they missed a weekly session.
- Parents received two progress reports (1) after two sessions with CATHI, (2) at the end of the program.

### Outcome Measures

- CATHI System Survey (CS), 15-item scale designed for this pilot study. Parents rated aspects of the CATHI system and the program.
- Client Satisfaction Questionnaire (CSQ), 8-item scale that evaluates consumer satisfaction with mental health services.<sup>2</sup>

## Results

Question	CATHI	Coach + CATHI	Total Sample	Significant Difference?
CSQ	M=3.004, SD=0.69	M=3.364, SD=0.74	M=3.194, SD=0.82	No (p=0.24, p=0.81)
"Did you get the kind of service you wanted?"	M=3.554, SD=0.62	M=3.364, SD=0.74	M=3.474, SD=0.77	No (p=0.85, p=0.65)
"If you were to seek help again, would you come back to our program?"	M=3.284, SD=0.53	M=3.354, SD=0.64	M=3.324, SD=0.61	No (p=0.26, p=0.80)
Total Score	M=4.335, SD=0.85	M=4.325, SD=0.86	M=4.429, SD=0.88	No (p=0.88, p=0.28)
CS	M=4.365, SD=0.92	M=4.195, SD=1.36	M=4.265, SD=1.10	No (p=0.62, p=0.80)
"Overall, each time I called CATHI the system was easy to use."	M=4.375, SD=0.59	M=4.125, SD=0.56	M=4.375, SD=0.58	No (p=0.36, p=0.98)
"I would recommend the program to other parents."	M=4.415, SD=0.58	M=4.295, SD=0.69	M=4.315, SD=0.60	No (p=1.84, p=0.12)
Total Score				

<sup>1</sup>Selected questions from program evaluation measure.

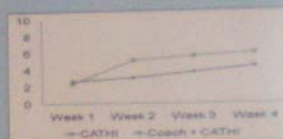


Figure 1. Parent self-report of behaviour improvement.  
 \*No significant difference between groups (p=0.27, p=0.78)

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## Conclusions and Future Directions

### Are parents satisfied with the services provided by CATHI?

Parents were satisfied with the services they received (M=3.324, SD=0.81, Table 1).

CATHI helped them deal more effectively with their child and to remember to practice the skills (Table 2).

Parents reported similar weekly improvements in ODD behaviour in both groups.

Do parents find CATHI easy to use?  
 Parents in both groups found the system easy to use (M=4.365, SD=0.82, Table 1).

Does the amount of coach contact impact parent satisfaction?  
 There was no significant difference between groups reporting satisfaction (Table 1).

Limitations

• Small sample size.

• Participants were from the general population.

### Next Step

• Grants recruited for the future RCT will be on waiting lists for evidence based, health, health services.

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