

A Pre-Post Intervention Study:

Pediatric residents' Literacy Promotion attitudes, knowledge, and practices following Reach Out and Read online CME training course

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Introduction

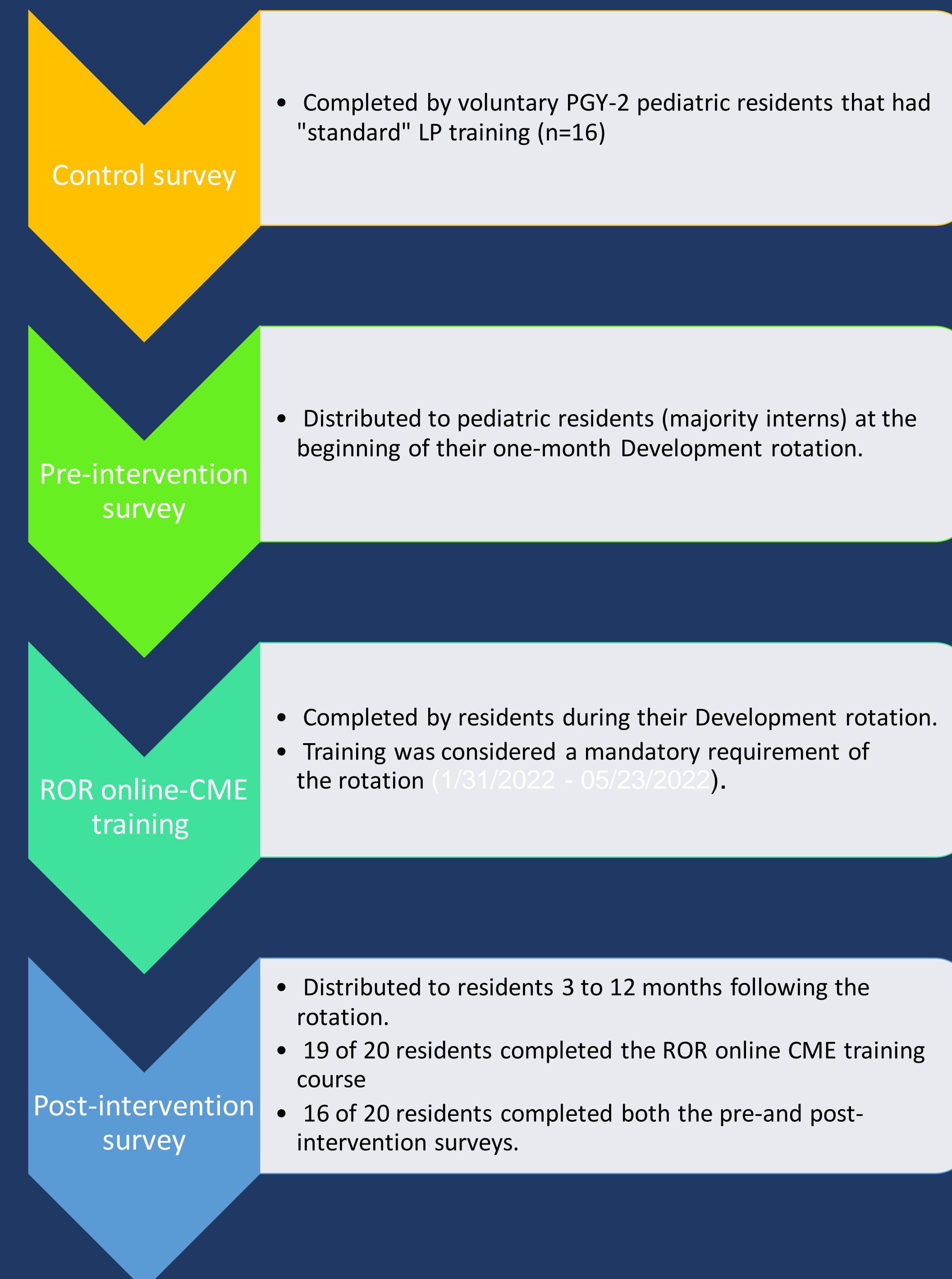
- Reach Out and Read (ROR) is an evidence-based literacy promotion (LP) intervention that integrates age-appropriate book distributions and literacy and early relational health guidance into routine well-child visits.
- Amongst pediatric providers, variability exists in LP training, confidence and behaviors, including implementation of ROR (Caldwell et al 2020).
- Online training may be able to address some gaps in LP training and serve as an adjunct to more traditional training methods (Caldwell et al 2020).
- In their role in training pediatric residents, developmental and behavioral pediatricians (DBPs) aim to impart understanding of child development, guidance and support in optimizing child development, and confidence in performing developmental screening. DBPs are naturally positioned to serve as a source of LP training.
- To our knowledge, assessment of the online training module has not been formally studied.

Objectives

- Assess the impact of the ROR online Continuing Medical Education (CME) training course on pediatric residents' LP attitudes, knowledge, confidence, and practices.
- Compare impacts following ROR online CME training course to "standard" LP training.
- Identify perceived barriers to LP implementation.

Methods

- A prospective pre-post study was conducted within BCM/TCH Developmental and Behavioral Pediatrics
- Control and pre- and post-intervention surveys were developed in collaboration with ROR Texas and ROR National Center.
- The 20-question survey comprised of Likert scale, true/false, multiple-choice, and free-text questions.
- Survey links were sent via e-mail with reminder emails throughout the study period. A paper survey was later provided. Gift card incentive was offered.
- Descriptive statistics and paired/unpaired sample t-tests were performed.



Results

Pre-Post and Control-Post Results

Attitudes	Pre	Post	p-value	Control	Post	p-value
Promoting Positive Parent-Child Interactions through sharing books is an integral part of pediatric primary care.	2.81	4.75	0.0001	4.50	4.75	0.2066
Literacy assessments and related anticipatory guidance tips are only necessary when children are close to school age.	2.75	1.75	0.0522	3.06	1.75	0.0108
Knowledge						
Composite score	1.31	2.06	0.0015	1.50	2.06	0.0426
Confidence						
I feel confident promoting positive parent-child interactions through the delivery of ROR during WCC.	3.38	4.25	0.0001	3.69	4.25	0.0514
I feel confident giving literacy-related counseling and anticipatory guidance to parents concerning their young children.	3.31	4.38	0.001	4.06	4.38	0.2162
I feel confident using a book as a tool in performing a brief developmental assessment.	3.13	4.38	0.0005	3.25	4.38	0.0004
Implications on Practice						
How frequently do you implement ROR and/or LP in your daily practice?	3.87	3.93	0.8275	4.00	3.93	0.8588
How often do you give out a book?	4.07	4.67	0.0697	4.07	4.07	1.0000
How frequently do you provide counseling to parents about the importance of shared reading?	3.33	3.87	0.0061	3.87	3.87	1.0000
How frequently do you model shared reading during the visit?	2.07	2.87	0.0281	2.33	2.87	0.1628
How frequently do you use a book as a tool for developmental assessment?	2.47	3.53	0.0045	2.87	3.53	0.0463
When do you most often give out a book?	3.2	2.13	0.0045	3.33	2.13	0.0004

Attitudes and Confidence based on Likert scale: 1 = strongly disagree to 5 = strongly agree; Implications on Practice based on Likert scale: 1 = never to 5 = always; Timing of book distribution based on Likert scale: 1 = not giving books, 2 = when first in room, 3 = after history/physical, 4 = after staffing, and 5 = before patient leaves

Qualitative Statements on practice changes following course:

- "Give book at the beginning and try to model reading to parents more."
- "Demonstrating reading with families and using book to assess development."
- "Use book to evaluate development. Read to baby to show parents who might be skeptical or hesitant."
- "Explain why reading and books are important even if the child can't read yet"

Barriers and Benefits

- Barriers to Implementation included:
 - Time
 - Language
 - Family literacy
 - Funding/lack of books
 - Clinic support
- Benefits to Implementation included:
 - Provider satisfaction and fulfillment
 - Increased confidence in LP practices
 - Ability to incorporate LP with other anticipatory guidance
 - Use as a developmental tool
 - Incorporation easier with more practice

Conclusions

- Although residents were aware of the purpose of ROR before training, significant improvements in LP knowledge, confidence, and implementation of the ROR program following educational intervention has been demonstrated, including in comparison to those that had received "standard training."
- Findings give support to the effectiveness of the online training as an adjunct to resident training in LP.
- Time is a perceived drawback to implementation of LP behaviors.

Future Directions/Next Steps

- The ROR online CME training course should be considered as a standard component of medical school and pediatric residency curricula
- Encourage DBPs to incorporate books to facilitate LP counselling, promote positive parenting interactions, and developmental assessment for family and resident learners
- DBP rotation to provide residents with opportunities for direct observation of practicing LP behaviors.