

Transforming Early Childhood Professional Development: The ECHO Model's Impact

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Introduction

- Online Communities of Practice (CoPs) have emerged as valuable platforms for:
 - educational professional development,
 - collaborative learning, and
 - resource sharing.
- Project ECHO (Extension for Community Healthcare Outcomes) offers a telementoring model originally designed for healthcare professionals in underserved and rural areas.
- Limited research exists on ECHO's effectiveness as a CoP specifically in early childhood development, health, and education.

Objective

This study examines the implementation of the ECHO model for early childhood (EC) professionals and families of young children in a predominantly rural Southeastern U.S. state by:

- Examining relationships between participant characteristics and professional development outcomes (Table 1).
- Evaluating the effectiveness of the model on self-reported self-efficacy, professional knowledge, and professional interactions before and after participation in ECHO sessions (Fig. 2), as well as content knowledge post session (Fig. 4).
- Identifying common themes in practice changes implemented following participation in ECHO sessions (Fig. 3).

Results (cont'd)

Figure 2. Outcomes

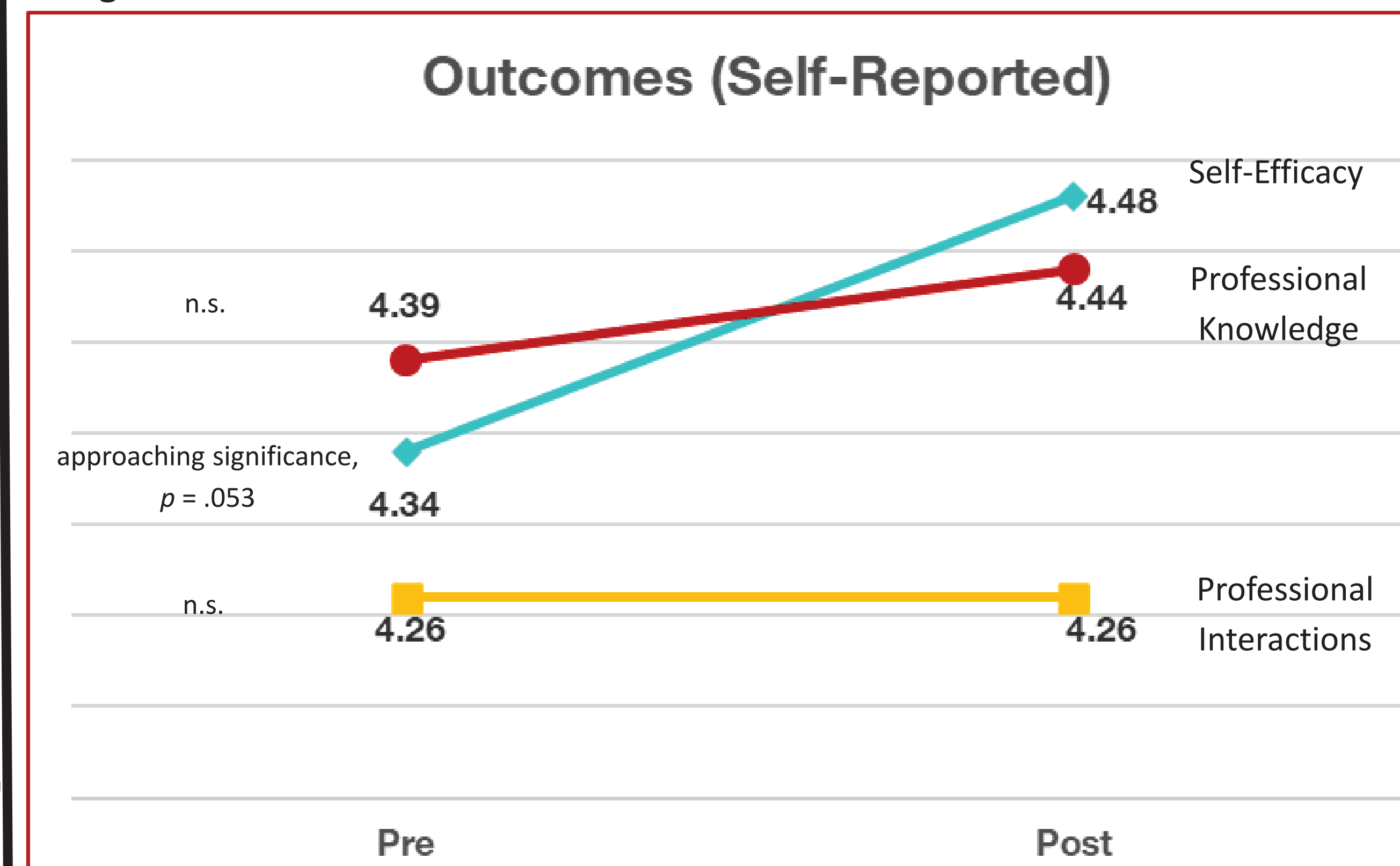
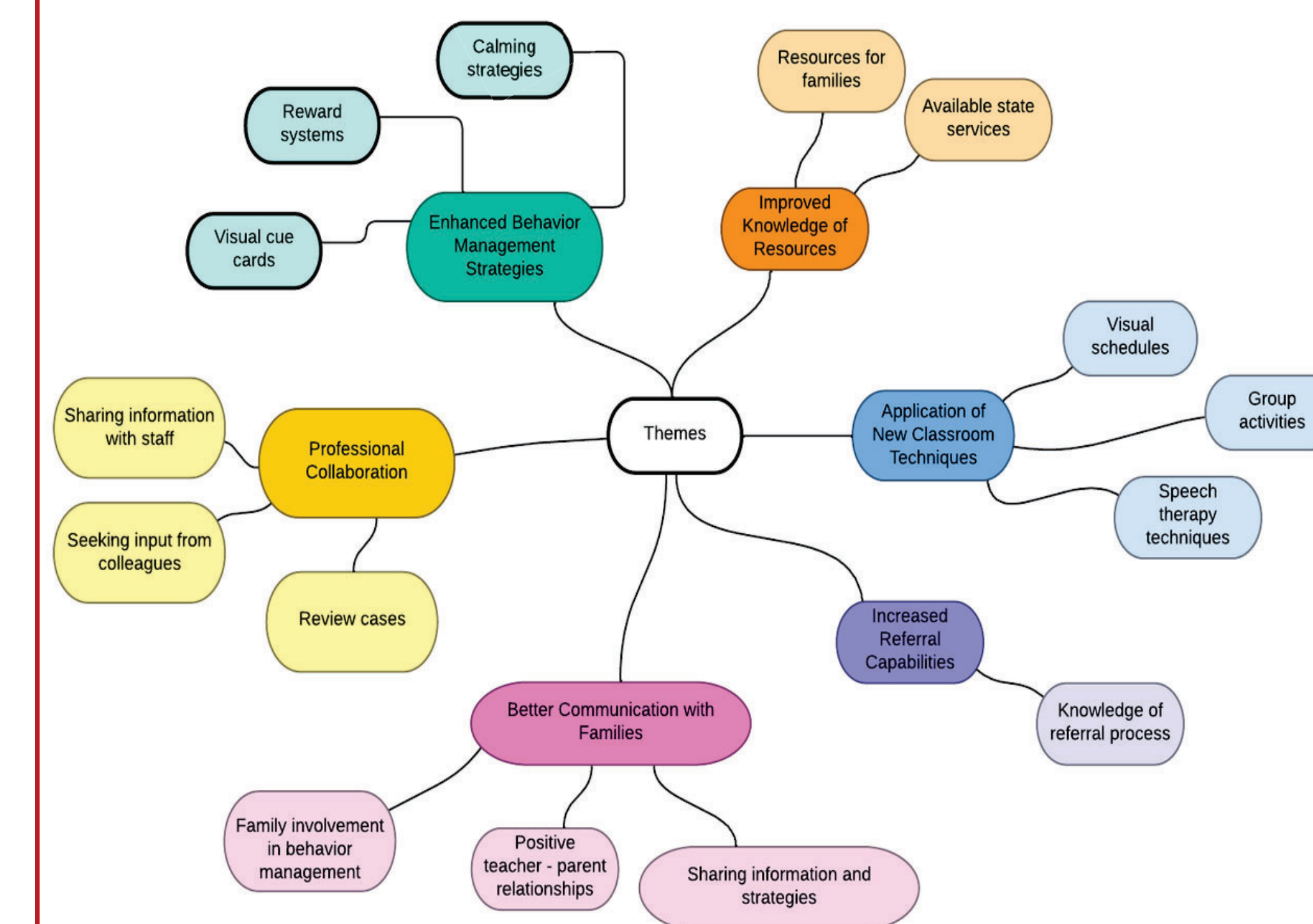
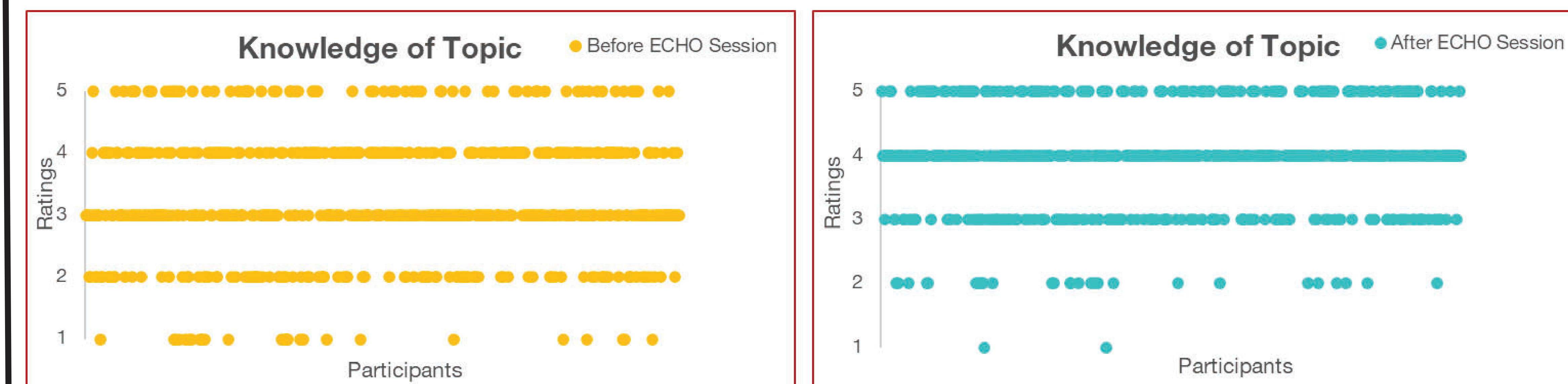


Figure 3. Qualitative Themes



Notes: Means are based on a rating scale from 1 = strongly disagree to 5 = strongly agree to a battery of 13 statements.

Figure 4. Post Session Immediate Feedback

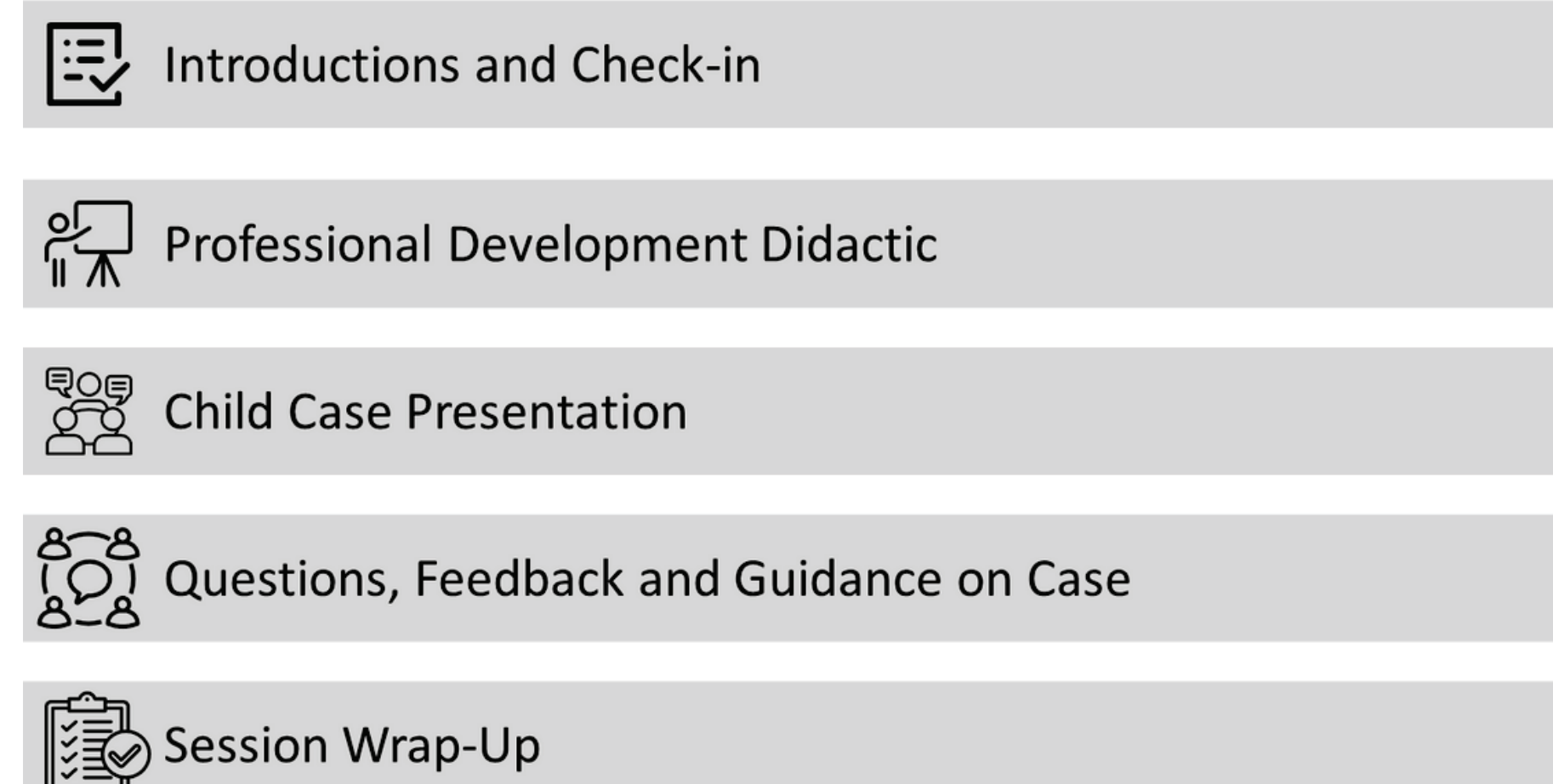


Notes: Rating scale measured from 1 = not at all knowledgeable to 5 = extremely knowledgeable of each session's topic. $M_{pre} = 3.24 \pm 1.01$, $M_{post} = 3.89 \pm .80$, $t(586,1) = 19.11$, $p < .001$, $d = .84$.

Methodology

EC ECHO Model Implementation:

- Four cohorts of EC professionals and families - SP '24, SU '24, FA '24, SP '25.
- Participant groups: Head Start, Child Protection Services, Part C Early Intervention, Nurturing Homes Initiative (Figure 1).
 - 8 one-hour sessions per group.
- Pre-Post measures and in-depth discussion guide customized to this study.
- One-hour sessions consisting of the following structure:



Mixed-Methods

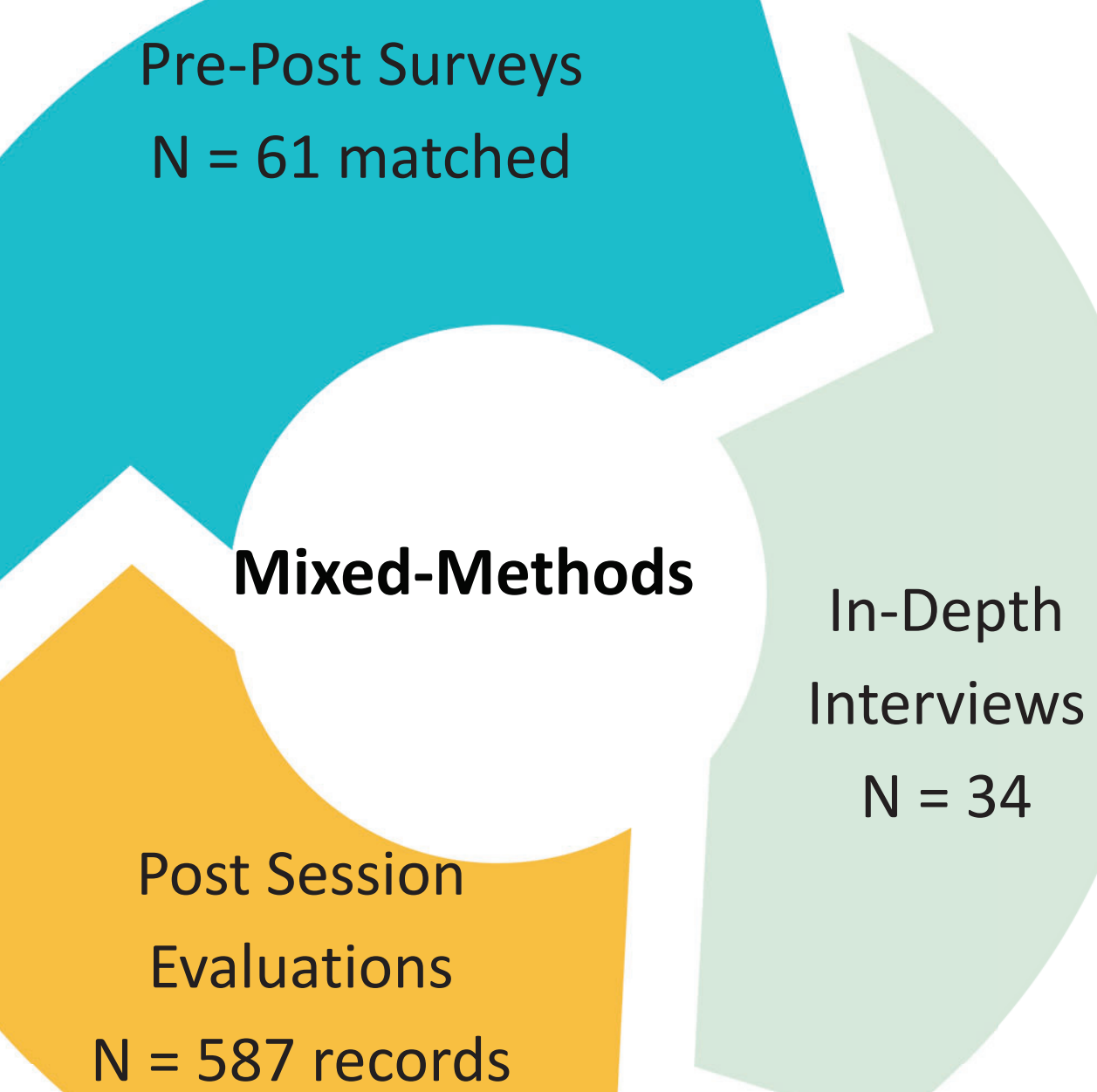
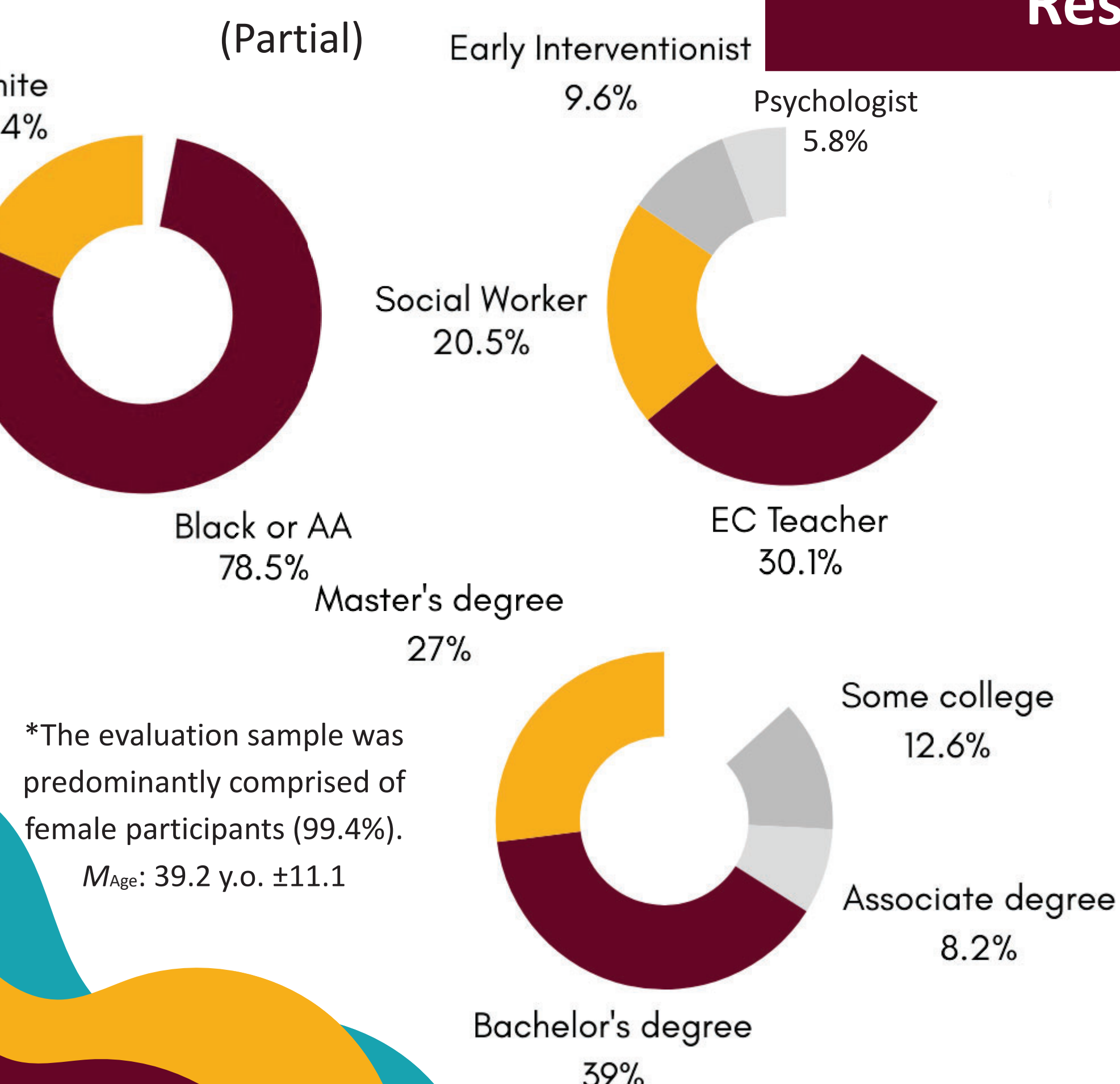


Figure 1. Participant Demographics (Partial)



*The evaluation sample was predominantly comprised of female participants (99.4%).
 $M_{Age} = 39.2$ y.o. ± 11.1

Results

Table 1. Correlations

	1	2	3	4	5	6	7
1. Self-Efficacy PRE	--						
2. Self-Efficacy POST	.57**	--					
3. Interactions PRE	.35**	-0.02	--				
4. Interactions POST	.27*	.39**	.41**	--			
5. Knowledge PRE	.74**	.50**	.45**	0.11	--		
6. Knowledge POST	.59**	.70**	0.12	.36**	.73**	--	
7. Age	-0.1	0.06	0.11	0.15	-0.02	0.03	--
8. Education	0.05	-0.15	.21*	.36**	-0.01	-0.02	.16*
9. Cohort	0.12	-0.002	-0.04	-0.06	0.09	0.16	-0.05

** $p = 0.01$ (2-tailed).
* $p = 0.05$ (2-tailed).

*References available upon request

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Conclusions

- Self-Efficacy Shows Consistent Improvement:** Consistent, close to significant increases across all measured items (4.34 to 4.48). The greatest improvements were seen in participants' confidence in "meeting client needs" (3.80 to 3.97) and "successfully supporting children" (4.22 to 4.33).
- Knowledge Gains are Most Substantial:** An overall improvement of 4.39 to 4.44 (Fig. 2), particularly in areas related to "informed decision-making with non-typical cases" (4.44 to 4.51) and "understanding best practices in early childhood development" (4.39 to 4.47).
- Professional Inclusion Shows Notable Growth:** While the interactions domain remained stable (4.26 overall construct mean), the specific item measuring "I am professionally included" showed considerable improvement (3.48 to 3.53), suggesting the ECHO model may have particular value for reducing professional isolation among EC professionals and families.

Significance

- Implications for Practice:** ECHO's case presentation format effectively builds practical knowledge.
- Implications for Policy:** Allocate funding to establish sustainable telementoring networks for professionals and families especially in rural or underserved areas.



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Early Childhood ECHO