Early Intervention Providers' Knowledge of ASD Specific Strategies

LEND 2018-2019 | CAPSTONE

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Overview

- Problem Overview

- Background information

- Literature review

- Survey Overview
  - Qualitative analysis
 - Results

- Discussion

- Reflection

Problem Framing

- Children with ASD receive EI services
  - EI is considered best practice for children with ASD (Boyd, Odom, Humphreys, & Sam, 2010)
- EI providers may not be adequately trained in ASD specific strategies
- Survey to better understand EI providers' knowledge of evidence-based practices for ASD

Acronym Overview

- **Autism Spectrum Disorder--** (ASD)
- **Early intervention--** (EI)
- **Evidence-based practice--** (EBP)
- **Developmental Specialists--** (DS)
- **Speech-language Pathologist--** (SLP)
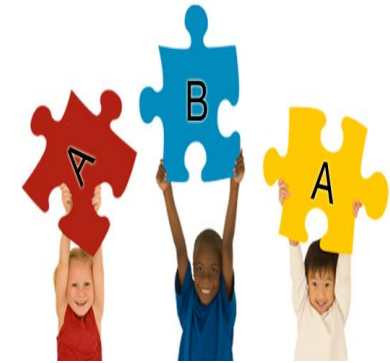
LEND Competencies

- 2.2 Demonstrate awareness of roles of various disciplines in service provision

- 3.6 Demonstrate knowledge/understanding of primary categories of NDD, including ASD

- 5.1 Critically review literature (evidence, design, sample size, CI's, statistical tests)
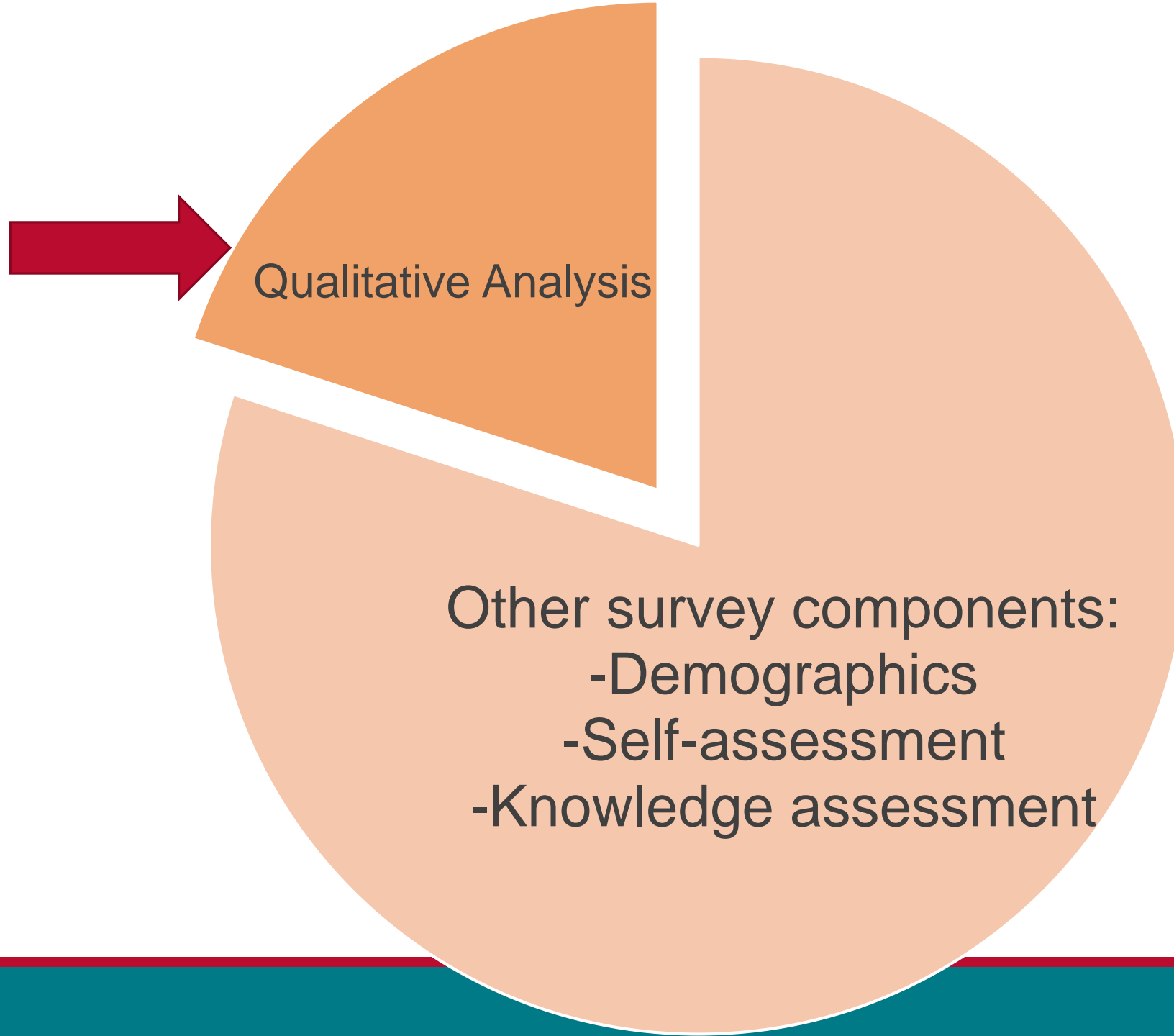
Background Information

- Wong et al. (2015) has identified 27 evidence-based strategies that have been successful for improving outcomes for children with ASD
  - **24** for children 0-5
  - Derived from Applied Behavior Analysis (ABA)
    - EI services do not explicitly include ABA services in NM (New Mexico Department of Health, 2017).

  - SLPs and DSs may not have knowledge or training of the ASD specific interventions

Literature Review

- 3 survey studies have examined **self-report measures of competency, confidence, or adequacy of training in ASD** (Mathews, 2011; Plumb & Plexico, 2013; Schwartz & Drager, 2008)

- Other research has shown that there is often a programmatic **research-to-practice gap** for community agencies serving young children with ASD (Stahmer, 2007)
  - Discrepancy between what is known and what is practiced

Survey

The present study involves a survey of EI providers (SLPs and DSs) that includes 4 sections:

1. Demographics
2. Self-assessment of capabilities in applying evidence-based practices identified by Wong et al. (Likert scale)
3. **Open ended responses (2 questions)**
4. Direct knowledge assessment of the strategies (scenario)

Capstone Focus

Purpose: Use results from qualitative analysis to:

- 1) Identify perceived barriers when working with children with autism

- 2) Identify areas of training interest/need

Survey Participants

- Survey distributed to **36** NM Early Intervention Program Directors
  - 21 directors (58%) forwarded the survey link

- 36 SLPs and 75 DSs completed at least part of the survey (111 total)

- 32 SLPs and 55 DSs (87) total completed the entire survey
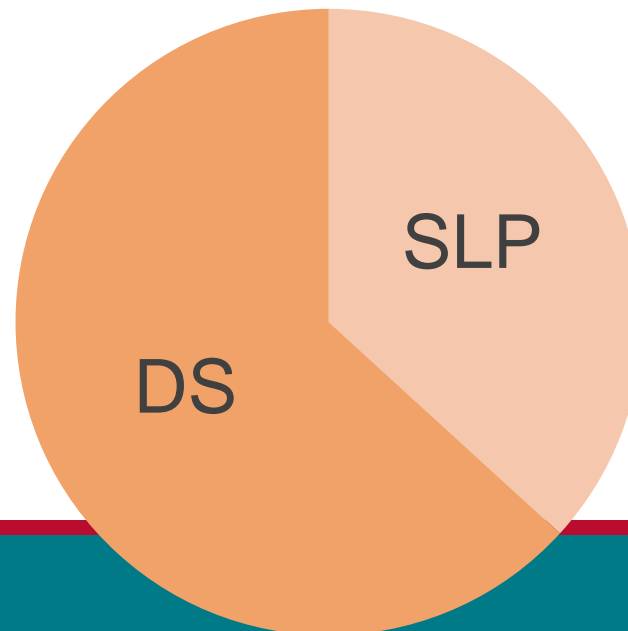
Methods

- Online survey using Qualtrics
  - *Questions:*
  1. What **topics** would you MOST like to see included in an autism spectrum disorder intervention **professional development training program?**

  2. What are the **biggest challenges** in working with children with autism spectrum disorder, and/or children suspected of having autism spectrum disorder?

Qualitative Analysis Process

- Descriptive Coding- process in which the coder **assigns labels to data to summarize** using a word or short phrase, most often a noun (Miles, Huberman, Saldaña, 2014).

- Responses- analyzed using NVivo

  - Examples of coding process:
  - Supporting Parents
    - "Helping parents through the acceptance process--accepting their autistic child"
    - "Discussing potential Autism diagnosis with parents and how the conversation looks with the family."

Outline of coding process

Files\\DS s14
1 reference coded, 100.00% coverage

Reference 1: 100.00% coverage

Default Report
ASD early intervention FINAL
September 10th 2018, 9:27 pm MDT

S14 - What topics would you MOST like to see included in an autism spectrum disorder
intervention professional development training program? Please list between 1-3 topics of
your choosing (they can be topics listed above, or any other topic related to autism).

What topics would you MOST like to see included in an autism spectrum disorder
intervention professional development training program? Please list between 1-3 topics of
your choosing (they can be topics listed above, or any other topic related to autism).
How to help families help their kids.
some of the traditioanal cultural pieces
Social Stories, PECS, and Extinction
Communication, Basic Knowledge, Parental Support
functional behavior and communication assessments and strategies, how to get more
resources and services available to families in a rural area
Relating to under age 3, functional communication
visual supports, functional communications
ALL evidence based strategies
Modeling, Prompting, and Reinforcement
Increasing social cimmunication, increasing sensory processing and learning what
community resources are available for children with ASD.
Social skills interactions, basics if communication skills for children with Autism, cargiver
parent support strategies
I'm interested in intervention strategies in the home, especially those around behaviors
parents need help with (hitting, screaming, frequent meltdowns, etc).
PECS, video modeling, FBA
Parent implemented interventions, FBA, FCT
redirection
Functional Behavior Assessment

Assign a code (broad or sub)

Major Category Results

Nodes	DS s14	SLP s14	Total
Challenging Behavior	44	14	58
General Formats	16	11	27
General Strategies	15	2	17
ABA in general	1	5	6
Evidence based interventions	10	4	14
Individualizing i...entions to child	1	1	2
Parental support coping	9	3	12
Strategies and r...ome community	6	3	9
Routine Strategies	1	1	2
diagnosis	5	1	6
engaging children with asd	2	1	3
floor time	1	0	1
multidisciplinary training	1	4	5
sensory processing	2	2	4
Social Communication	23	6	29
Total	**137**	**58**	**195**

CENTER FOR DEVELOPMENT & DISABILITY

Results

◦ Providers are most interested in **receiving training** in the following areas:

1. **Challenging Behavior**
2. Social Communication
3. General Formats
4. General Strategies
5. Evidence Based Interventions (any)
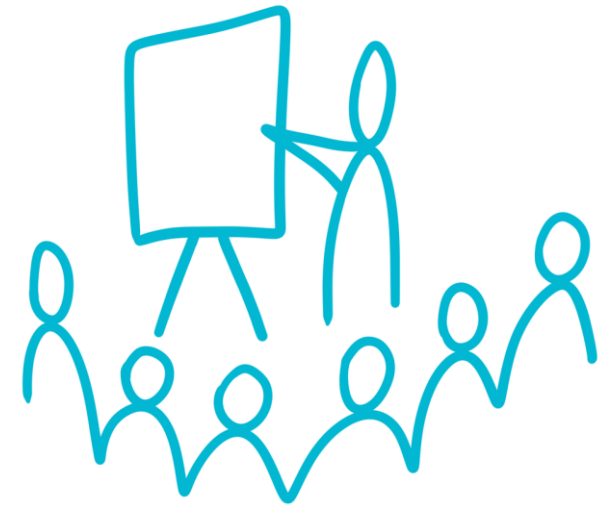
Results

◦ **Biggest challenges** in working with children with ASD:

1. Working with Parents
2. **Challenging Behavior**
3. Attention and Engagement
4. Communication
5. Diagnosis

Discussion

- Challenging behavior as a main area for both questions
  - How can we provide better training surrounding behavior supports?

- EI is primarily focused on parent training and support
  - Resources for SLPs and DSs

Discussion continued..

- **How do we address the lack of resources in rural communities**?

- Should there be an ASD specific certification for all EI providers?

- Would the results of this study be similar in another state?

Dissemination

- Research
  - Poster- UNM Shared Knowledge Conference on November 7th
  - Poster- American Speech-Language-Hearing Association National Convention in Boston, MA on November 17th – Thank you LEND

Early Intervention Providers' Knowledge of Evidence-based Practices for Working with Children with Autism

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Introduction

- Limited research on speech-language pathologists' (SLP) knowledge of evidence-based strategies for autism spectrum disorder (ASD)
  - A few studies have examined SLPs' self-reported ASD knowledge (Mathews, 2011; Plumb & Plexico, 2013; Schwartz & Drager, 2008) and Ray (2010) directly assessed knowledge.
  - No studies focusing specifically on early intervention providers
- Even less research with early intervention generalists
- Evidence-based strategies for ASD have been systematically identified (Wong et al., 2015)

Methods

- Online survey with demographics, self-report ratings of knowledge of evidence-based practices for ASD (from Wong et al., 2015), self-reported training needs, and a direct knowledge assessment of evidenced-based strategies for ASD (Wong et al., 2015)

- Survey developed and reviewed by experts in the field, and piloted with a small group

- Grouped strategies in 4 broad topic areas:
  - (a) general instructional formats
  - (b) general instructional strategies
  - (c) strategies for challenging behavior
  - (d) strategies for social communication

- Survey distributed via email to 36 NM early intervention program directors.

- 21 directors (58%) forwarded survey link to developmental specialists (DSs) and SLPs in their agency.

Participants
- 36 SLPs and 75 DSs completed at least part of survey (111 total); 32 SLPs and 55 DSs (87 total) completed entire survey

- Range of experience, prior ASD course work, and educational backgrounds

- Providers reported that there were more children on their caseloads who had characteristics of ASD than those who had received a formal diagnosis

Research AIMS

- Determine early intervention SLPs' and developmental specialists' (DSs') self-reported knowledge of evidence-based strategies for ASD and their self-reported training needs.

- Determine the proficiency of SLPs and DSs in answering questions about the application of evidence-based strategies for ASD.

Results

- Across topics SLPs had higher average self-ratings and higher average percentage correct than DSs
- Training interests sometimes matched to self-ratings and direct knowledge
- Broad topics with overall lowest self-rating scores:
  - **Challenging behaviors, Instructional formats**
- Broad topics with lowest overall knowledge assessment scores
  - **Challenging behaviors, Social communication skills**
- Specific topics with low percentages (<60%) correct are highlighted in the table below

Topic	Average self-reported knowledge ratings on a scale of 1-5 (least to most knowledgeable) for each strategy		Percentage of participants answering strategy questions correct on knowledge assessment		Percentage of participants who reported strategy as their top training interest for the selected broad topic	
	DSs	SLPs	DSs	SLPs	DSs	SLPs
General Instruction Formats						
Discrete Trial Teaching*	2.09	2.65	58.18%	46.88%	7.46%	20.59%
Naturalistic Intervention*	2.50	3.18	27.27%	56.25%	25.37%	23.53%
Parent-Implemented Intervention	3.07	3.35	94.55%	90.32%	52.24%	38.24%
Peer-Mediated Intervention	2.33	2.32	50.91%	81.25%	8.96%	5.88%
Pivotal Response Training	2.00	2.18	54.72%	65.63%	5.97%	11.76%
Average	**2.40**	**2.74**	**57.13%**	**68.07%**		
General Instructional Strategies						
Modeling	3.57	4.35	80.00%	96.88%	19.40%	2.94%
Prompting	3.47	4.32	59.26%	75.00%	5.97%	14.71%
Reinforcement	3.50	4.06	69.09%	87.50%	14.93%	11.76%
Task Analysis	2.72	3.09	76.36%	68.75%	20.90%	23.53%
Time Delay	3.32	4.09	75.93%	93.75%	0.00%	2.94%
Video Modeling	2.41	2.85	56.36%	75.00%	14.93%	23.53%
Visual Supports	3.43	3.88	80.00%	96.88%	23.88%	20.59%
Average	**3.20**	**3.79**	**71.00%**	**84.82%**		
Decreasing Challenging Behavior						
Antecedent Based Intervention	2.39	2.62	78.18%	87.50%	11.94%	17.65%
Differential Reinforcement*	2.42	2.21	41.82%	31.25%	7.46%	2.94%
Exercise	2.55	2.29	74.55%	81.25%	8.96%	11.76%
Extinction	2.27	2.50	42.59%	62.50%	4.48%	2.94%
Functional Behavior Assessment *	2.55	2.94	12.73%	31.25%	29.85%	14.71%
Functional Communication Training	2.24	2.62	54.55%	75.00%	20.90%	35.29%
Response Interruption and Redirection	2.72	2.62	80.00%	100.00%	16.42%	14.71%
Average	**2.45**	**2.54**	**54.92%**	**66.96%**		
Social Communication Strategies						
Picture Exchange Communication*	3.00	3.76	16.36%	56.25%	22.39%	29.41%
Scripting	2.55	3.18	61.82%	75.00%	7.46%	26.47%
Social Narratives	2.99	3.62	72.73%	81.25%	10.45%	11.76%
Social Skills Training	2.81	3.47	83.33%	87.50%	49.25%	26.47%
Speech Generating Devices*	2.31	3.35	18.87%	40.63%	10.45%	5.88%
Average	**2.73**	**3.48**	**50.62%**	**68.13%**		

*= topics <60% in both groups

Discussion

- Early intervention providers in NM have strengths related to knowledge of general instructional strategies (e.g. modeling, prompting)
- Providers may benefit from further training in strategies relating to challenging behaviors, AAC, and instructional formats such as naturalistic intervention.
- Developmental specialists may have additional areas of need compared to SLPs
- Findings have implications for both professional development and initial certification programs
- Research is needed to explore the application of different training approaches

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Dissemination

- Email to survey participants
  - Summary of results (areas of highest need for training, barriers)

- Products:
  - Handouts with resources to address the areas of need

- Contribution to manuscript (in progress)

Training Development

- PECS and FBA training
  - AFIRM modules (follow up study) – IRB submitted

- Training study with local EI agency (PB&J)
  - Training EI provider naturalistic intervention
  - EI provider trains the parent—child increased communication opportunities

What I Learned?

- ASD specific strategies are not widely known
  - Don't be afraid to share strategies with other professionals.
- The importance of staying current with evidence-based practices
- The importance of meaningful *self-reflection*

- How to use Qualtrics and NVivo software
- Time management!!!

Thank you

Dr. Cindy Gevarter

Dr. Chris Vining

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