



# Stakeholders' Perspectives on Speech-Language Pathology Tele-Practice for Pediatric Populations: A Systematic Review

Megan Ray and Audrey McMillion

Division of Speech and Hearing Sciences, The University of North Carolina at Chapel Hill

## BACKGROUND AND OBJECTIVES

Tele-medicine or tele-practice has been in use for almost a century as a way to connect clients and patients with the necessary professionals (Strehle & Shabde, 2006). The use of tele-practice has been identified as a way for allied health professionals, including speech-language pathologists, to provide equitable services to individuals residing in rural communities or those who may be unable to attend appointments due to other barriers (Dew et al., 2013). In speech-language pathology, a wide variety of both positive and negative opinions from clinicians and caregivers have been identified on the acceptability of tele-practice for delivering SLP services (Lincoln et al., 2014; May & Erickson, 2014). The perceptions of these stakeholders (parents, clinicians, teachers, administrators) is especially important to understand, as their acceptance of this practice is essential to its successful implementation. Further, during the COVID-19 pandemic, SLPs internationally have been unable to meet with clients face-to-face, requiring tele-practice to provide services. As such, studying the use of tele-practice has become more relevant than ever before. Due to the likely dramatic increase in tele-practice and the need to better understand stakeholders' perceptions of tele-practice, this study sought to explore parents', clinicians', and other stakeholders' opinions on the feasibility and implementation of speech-language pathology tele-practice for pediatric populations via a systematic review of the published literature.

### Research Question:

- Regarding speech-language pathology for pediatric populations, what are parents and clinicians' opinions on the feasibility of tele-practice service delivery?

## METHODS

### Databases searched:

- PubMed, CINAHL, PsycINFO, ERIC

### Search Terms

- Speech\*
- Tele-practice, tele-therapy, tele-health
- Pediatric, child, toddler, infant, school-age, adolescent
- Opinion, perspective, satisfaction, feedback, social validity

### Inclusion Criteria

- English
- Peer-reviewed
- Involved caregivers' and clinicians' opinions
- Tele-practice services provided to a person aged 0 to 18 with a speech or language need.
- Non-experimental, experimental, controlled, uncontrolled studies, and systematic reviews about clinicians' and parents' opinions on speech-language pathology tele-practice service delivery (screening, evaluation, treatment)

### Exclusion Criteria

- Articles that did not include opinions on tele-practice

### Procedures

- Researchers completed title-abstract screening, full text screening, quality appraisal, and data extraction and were blind to each others' responses (Center for Evidence Based Management, 2019; LEGEND, 2020).
- Due to the range of study designs, a variety of quality appraisal forms were used (e.g. survey, interview, case study).

## RESULTS

Figure 1. PRISMA diagram.

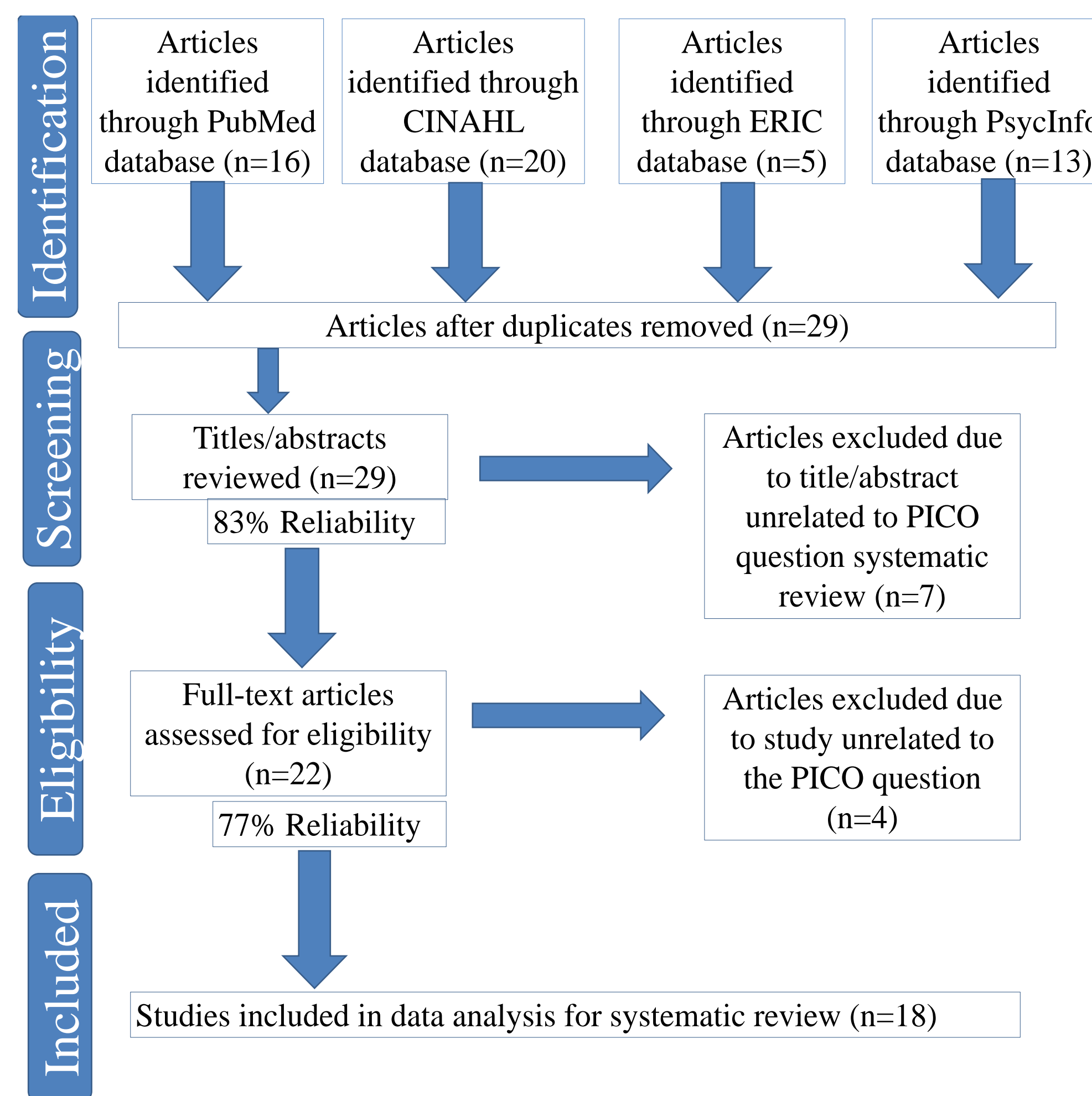


Figure 3. Positive and Negative Themes

Positive Themes	Negative Themes
<ul style="list-style-type: none"><li>Easier to build rapport with students and parents (Akamoglu et al., 2018)</li><li>Technology motivates children (Lincoln et al., 2014)</li><li>Convenient- "a million times easier." (Thomas et al., 2018)</li><li>More inclusive for parents during sessions (Anderson et al., 2015)</li><li>Just as efficient, if not more, than face-to-face therapy (Hughes et al., 2018)</li><li>Access to bilingual services (Pham, 2012)</li><li>More professional opportunities outside of the geographic area** (Pham, 2012)</li><li>Elimination of potential costs of travel, additional childcare, and more (Goehring et al., 2017)</li><li>Engaging with clients in creative and flexible ways (Akamoglu et al., 2018)</li></ul>	<ul style="list-style-type: none"><li>Technical difficulties (Anderson et al., 2015)</li><li>Greater chance of overwhelming families** (Anderson et al., 2015)</li><li>Time constraints (McCullough, 2001) &amp; Scheduling Conflicts (Duncan, 2008)</li><li>Children's fear of the camera (McCullough, 2001)</li><li>Lack of availability of a quiet, private space for sessions (Lincoln et al., 2014)</li><li>Lack of proximity can be a barrier to building relationships (Akamoglu et al., 2018)</li><li>Difficulties establishing strategies to involve all parties in the session** (Hines et al., 2016)</li><li>Less controlled environment; behavior management (Baharav et al., 2016)</li></ul>

\*\*SLP perspectives only

- International Locations: Australia, United States, Taiwan, and Ireland.
- Many of the studies involved opinions on how tele-practice compares to traditional, face-to-face therapy.
- Studies that were labelled as low quality were given this ranking because of small sample sizes and more limitations. Because these studies provided valuable information, they were included in the systematic review.
- Quality appraisals were completed with 89% reliability. Data extraction was completed with 90% reliability.

Figure 2. Included Studies.

Citation	Study Design	Setting	Participants	Evidence Level
Akamoglu et al., 2018	Questionnaire, Interview	18 states across US; school and home	15 SLPs	High Quality
Anderson et al., 2015	Interview, Focus Groups	metropolitan Australia; services home	13 SLPs; 7 caregivers	High Quality
Baharav et al., 2010	Case Study	Western Washington state; home	2 children; 2 caregivers	High Quality
Cassel et al., 2016	Survey (Likert scale)	Suburban southern New Jersey; university clinic	4 student clinicians	Low Quality
Chen et al., 2017	Retrospective cohort study; questionnaire	Taiwan; home	10 children; 5 caregivers; 4 therapists	High Quality
Duncan, 2008	Case Study; interview	Taiwan, Australia	1 child; 1 caregiver	High Quality
Fairweather et al., 2016	Interview	Rural Australia; school	16 children; 5 caregivers	High Quality
Fitton et al., 2017	Quantitative survey	Northern Florida, Michigan, Illinois; home?	79 parents	High Quality
Freckmann et al., 2017	Online survey	Australia; school, home	32 SLPs	High Quality
Goehring et al., 2017	Case study; Questionnaire	United States	19 children; 19 caregivers	High Quality
Hines et al., 2015	Interviews	Australia; in person, by phone	15 SLPs	High Quality
Hughes et al., 2018	Case study; questionnaire	United States	17 children; 17 caregivers	High Quality
Hodge et al., 2019	Questionnaire (Likert Scale)	Rural Australia; school	37 children; caregivers; teachers	Low Quality
Lincoln et al., 2014	Semi-structured interviews	Rural Australia, school	9 children; 3 principals; 7 facilitators, 6 caregivers	High Quality
McCullough et al., 2001	Questionnaire	Belfast, Northern Ireland; school	4 children; 4 caregivers	Low Quality
Pham, 2012	Case study; interview	Northeastern United States	1 child; 1 caregiver	High Quality
Thomas et al., 2018	Semi-structured interviews	Australia; clinic	10 caregivers	High Quality
Vivian, 2012	Case study; interview	Rural Vermont	1 child; 2 caregivers	High Quality

## DISCUSSION

### Summary of Evidence

- Overall, this systematic review showed that caregivers appreciated the convenience of tele-practice, were able to build relationships with their child, and recommended tele-practice to other caregivers as an alternative to face-to-face therapy.
- SLPs indicated tele-practice was a way to provide consistent therapy and build rapport with clients and caregivers.
- A few caregivers preferred in-person therapy instead of tele-practice. While some SLPs showed initial uncertainty about tele-practice, they were open-minded to learning more.
- SLPs and clinicians had similar opinions regarding advantages and disadvantages of tele-practice services.
- One theme encompassed both advantages and disadvantages of tele-practice: SLPs found that tele-practice allowed them to engage with clients in more creative and flexible ways, but they also indicated that tele-practice required more flexibility and creativity for planning and facilitating sessions.

### Clinical Implications:

- The overall positive attitudes of both caregivers and clinicians indicate the acceptability of tele-practice as a service delivery method.
- Concerns with tele-practice, including technical difficulties, behavior management, and time restraints should be addressed for the most successful implementation.

### Limitations :

- Many of these studies were done in Australia, and, thus, they may not generalize well to other countries.
- Grey literature was not included, so information from unpublished studies was not provided here.
- This review did not include any articles that were not in English.

### Future Directions:

- It would be valuable to explore the effectiveness of tele-practice by examining quantitative intervention studies in a systematic review or meta-analysis.
- Future research should explore opinions on tele-practice for more specific populations like early intervention or autism.
- Future research should investigate ways to train clinicians, family, and support staff on the use of tele-practice, as well as further investigation of services that can be delivered via tele-practice.

## REFERENCES

References give upon request. Contact Audrey McMillion ([audrey\\_mcmillion@med.unc.edu](mailto:audrey_mcmillion@med.unc.edu)) or Megan Ray ([megan\\_ray@med.unc.edu](mailto:megan_ray@med.unc.edu)).

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