

Critical Review: Do Speech-Language Pathologists Who Rapport Build Gain Better Outcomes for Clients with Communication Disorders and What Are the Essential Characteristics that Enable Them to Do So?

Jessica Dykstra
M.Cl.Sc SLP Candidate

University of Western Ontario: School of Communication Sciences and Disorders

This critical review examines the client-clinician therapeutic alliance and its impact on treatment outcomes in speech-language pathology. Studies designs reviewed include a qualitative study, mixed designs, and a longitudinal exploratory study. Though the level of evidence is low for these study designs, results suggest a relationship between therapeutic alliance and positive treatment outcomes that have compelling implications on clinical application. Recommendations for future research and clinical practice are provided.

Introduction

The therapeutic alliance is considered a single construct that refers to the collaborative, healthy, and trusting relationship between the client and clinician (Ebert & Kohnert, 2010). Currently, there are very few studies discussing the importance and efficacy of the therapeutic alliance in the treatment and outcomes in speech language pathology. Yet, rapport between client and clinician has been shown to have high impact on client motivation and has the ability to promote positive change (Shill, 1979; Freckmann, Hines, & Lincoln, 2017).

In the area of behavioural psychology counselling, research has determined that the therapeutic alliance or client-clinician relationship has a large effect on determining treatment outcomes (Wampold & Bahti, 2004). These individual clinician characteristics have not yet been identified and quantified in speech-language pathology. It is possible that these relationships play a much smaller role in speech and language treatment than in psychological treatment. Yet, many studies report that even in groups of specialists, some speech-language clinicians are more effective in bringing about a successful therapeutic outcome for their clients (Cooper & Cooper, 1985; Manning, 2010). Many other fields, such as occupational therapy and nursing, have endorsed the importance of the clinician-client relationship to the treatment progress and outcomes beyond the field of psychology (Eveleigh et al., 2012; Ferreira et al., 2013; Kim, Yates, Graham, & Brown, 2011).

Little is known about how the most effective therapeutic alliances are formed between SLPs and clients. There is currently a lack of empirical study that evaluates therapeutic alliance and its value and treatment efficacy may be underestimated.

Objectives

The primary objective of this paper is to critically evaluate existing literature regarding the impact of the therapeutic alliance on treatment outcome for clients with communication disorders in speech-language pathology and explore clinician characteristics that allow them to more effectively rapport build.

Methods

Search Strategy

A variety of computerized databases including: Scopus, Google Scholar, PubMed, and Western Libraries Database were searched using the following search terms:

(speech-language pathology) AND (rapport)
OR (therapeutic alliance) AND (treatment outcomes) OR (outcomes) OR (treatment efficacy).

Reference lists of previously searched articles were also used to obtain other relevant studies. The search was limited to articles written in English.

Selection Criteria

Studies selected for inclusion in this review were required to investigate effective and/or ineffective rapport building in speech-language pathologists and/or explore their effect on treatment outcomes in persons with communication disorders.

Data Collection

The results of the literature search yielded the following articles: Two qualitative studies (Fourie, 2009; Plexico, Manning, & Dilollo, 2010), three mixed designs (Ebert, 2018; Ebert & Kohnert, 2010; Washington, Thomas-Stonell, McLeod, Warr-Leeper, 2012), and one longitudinal exploratory study (Ebert, 2017). Levels of evidence is based on Archibald (2015).

Results

Qualitative Research

Qualitative research is typically exploratory in nature and does not provide generalizable information. It is also subject to biases. However, it may be appropriate when in the preliminary stages of research, in order to gather perspective material and information on relationships (cause and effect).

Fourie (2009) conducted a qualitative study that explored the therapeutic relationship in speech language therapy using personal experiences of adult clients with acquired communication and swallowing disorders.

Fourie recruited a total of 11 participants: five males and six females between the ages of 25 to 87 years of age (mean age= 62). The participants had a diagnosis of either head and neck cancer, stroke with accompanying mild and/or expressive aphasia, dysphonia, or mild dysarthria. In order to participate, the participants had to have completed (or were in the process of) a course of speech language therapy, have normal hearing and be sufficiently fluent for transcription purposes, be healthy enough to tolerate an interview, and not cognitively impaired or psychiatrically disturbed. Interviews were conducted and questions were open-ended and avoided theoretical and definitional questions (Ex: What were your expectations of speech and language therapy and were these expectations met?). The researcher followed the theory that participants should provide data not theoretical speculations.

Interviews were recorded and transcribed prior to the follow-up interview for the purpose of theoretical sampling. Theoretical sampling is recommended by Glaser and Straus (1967) as it allows the researcher to seek out sources of information that might generate theoretical leads. Interviews continued until theoretical saturation was reached. Action coding, which involves line-by-line analysis of data, was conducted using the Charmaz's method. This method was appropriate given the qualitative nature of the study. This process used software to generate action codes from the transcribed data (Ex: The therapist made the client comfortable) which separated the codes into various categories. Once the categories were established, the researcher used a methodology called Grounded theory which allowed him to describe, construct, and label each category and generate theories.

Two core categories emerged from the coding: therapeutic qualities and therapeutic actions. Therapeutic qualities being the perceived values, cognitive and emotional states of the SLP and therapeutic actions being the perceived manner in which therapy occurred. The author presents the theory that 'Restorative Poise' is the result of the interplay of these two categories. The core category

referring to therapeutic qualities consisted of the theoretical codes Being Understanding, Being Gracious, Being Erudite, and Being Inspiring. Therapeutic actions consisted of the theoretical codes Being Confident, Being Soothing, and Being Practical.

The major weakness of this study was that the researcher used a methodology, Grounded theory, that relies on the researcher alone to give meaning to the data and provide the theoretical framework. However, this method ensured some validity by following Glaser and Strauss' (1976) guidelines of fit, work, relevance, and modifiability in order to generate valid theories.

Overall, this study provides suggestive evidence that the theoretical codes are what contribute to the therapeutic relationship. Therefore, they may be useful in providing a model of what contributes to a therapeutic relationship in speech-language pathology and in reinforcing these clinical behaviours. They might also serve as an exploratory framework for reflecting on clinical practice.

Plexico, Manning, and DiLollo (2010) used qualitative methods to analyze clinician (SLP) characteristics that contributed to therapeutic interactions and that were effective or ineffective in promoting positive change in their clients. Plexico and colleagues recruited 28 participants who had received speech therapy treatment for stuttering. They were asked to provide a written response to questions which asked them to describe characteristics of SLPs that they felt were successful and unsuccessful in promoting change and how those interactions made them feel. A phenomenological analysis was conducted that required a part-to-whole analytical process of the participants' experiences, an approach often used in qualitative research. Qualitative Solution and Research software was used to organize the data into a hierarchy of categories. This was appropriate analysis given the study design. Through this method of analysis, researchers assembled fifteen categories that reflected participants' experiences with effective and ineffective clinicians (ex: "Clinicians who were perceived as ineffective failed to show patience, to actively listen to the client, and failed to focus on the client's goals and needs"). Researchers claimed that the categories represented the essential structure of an effective and ineffective therapeutic interaction and highlighted the importance of building a positive therapeutic alliance.

The researchers recruited most participants at an annual conference of the National Stuttering Association (NSA) or NSA support groups.

Although this study was qualitative, there were several strengths. Recruitment continued until saturation was achieved and as a result, it is less likely that important participant data was excluded. The authors stated that group discussions were held to address the personal and professional biases about specific characteristics that would be important for effective therapeutic interaction and change. This was done in an attempt to set aside these biases and approach the data from a fresh perspective. They also employed investigator triangulation so that the data was interpreted from more than one point of view. Finally, data was sent back to participants so that they could verify that the summary of their data written by the investigators were accurate and reflected their original answers.

Despite the weakness of the study, such as the small, unrepresented sample size and weak design, there is significant clinical implications and suggestive evidence from clients themselves: A well-functioning therapeutic alliance has a significant impact on treatment outcomes.

Mixed Design

A research approach where researchers collect and analyze both quantitative and qualitative data. It draws on the strengths of both qualitative and quantitative methods.

Ebert (2018) conducted a mixed (qualitative and quantitative) study that explored factors that may influence the strength of the clinician-client relationship. This was done by conducting an online survey that had 159 parents rate the SLP and child's relationship, provide information about the treatment, and answer questions about what enhanced the clinician-to-client relationship. This study included both a qualitative analysis of open-ended responses and quantitative analysis of differences in parent ratings of the clinician-client relationship according to treatment setting or length of treatment. This study design raised the level of evidence it provides.

The distributed survey contained three sections that collected information including background (setting, purpose, length of treatment), A client-clinician rating scale (Likert scale), and an open-ended question concerning SLP characteristics that enhance and stand in the way of the relationship. 179 survey responses were collected over a 5-week period and 159 completed all parts, therefore, only descriptive statistics were provided for these responses. Though the sample size was quite substantial, it represented a small demographic.

To eliminate the effects of researcher's own bias, the primary coder of the data had minimal prior

experience with literature in this area, or with forming client-clinician relationships.

Appropriate statistical analysis for the study design was used and not modified post-hoc. These data analyses included The Kruskal Wallis, Post-hoc testing, and The Spearman's rho correlation.

Results indicated there was a significant relationship between treatment setting and clinician-parent relationship. Parents with their children enrolled in school speech-language services rated clinician-parent relationship significantly lower than those enrolled in hospital and private clinic settings. Finally, that the length of treatment did not correlate with the strength of the parent rated clinician-parent relationship. A thematic analysis of parent views on what enhances the therapeutic alliance resulted in four main themes: qualities of the speech-language pathologist (SLP), session characteristics, the child-SLP bond, and communication.

One major weakness of this study was that data was collected from parents, meaning that the relationship was measured from a second-hand perspective, not the client themselves and this may have had an impact on the validity of the results.

The level of evidence offered by this study is moderately suggestive. Though it included thorough analyses, it lacked a control variable and it was not based on a representative sample. Based on the results described, it provides insight on improving of the child-clinician relationships and the importance of that relationship.

Ebert and Kohnert (2010) Completed two studies using qualitative and quantitative methods to investigate common clinician characteristics of speech-language therapy and to describe their impact on treatment outcomes. Data was collected through two surveys completed by speech-language pathologists (SLP) and graduate students with SLP clinical experience. In Study 1, participants answered questions about the nature of effective clinicians in order to generate a list of effective and ineffective clinician traits. Data was collected from 79 adults, 46 (58%) of which were certified SLPs, three (4%) were clinical fellows and 30 (38%) were second-year graduate students. To ensure that data analysis was sufficiently rigorous, the responses were transcribed verbatim and subjected to a thematic analysis based on broad characteristics: behaviours, traits, and acquisitions designed using Braun and Clarke's tutorial (2006). This is a standard tool used to analyze qualitative data and was appropriately used due to the explorative nature of the study.

In Study 2, clinicians rated the importance of 25 clinical qualities generated from Study 1. In this study, 160 surveys were completed by SLPs (152),

clinical fellows (6), and SLP students (2). A survey based in this thematic analysis was generated. A trial version was piloted first so that problems with the survey could be identified before distribution. Also, foils (distractor items) were added to prevent a pattern of positive bias in responses. The qualities were analyzed based on broad characteristics: behaviours, traits, and acquisitions, and organized into a thematic map. Study 2 results for the 3 questions are as follows: In Question 1, functional context, rapport, and communication with clients were rated as the most important factors impacting treatment outcomes. The Question 2 results found that the factors rated as most important in Question 1 had the greatest positive affect on treatment outcomes. In Question 3, rapport, motivation, and communication with client were rated the three factors that most negatively affected treatment outcomes.

The major weaknesses of the study include the inclusion of participants with minimal clinical experience, the fact that no information on length of clinical experience was obtained from participants, and that the majority of participants in Study 1 and 2 worked in educational setting. All of these factors may have affected the type of clinical qualities that emerged.

A strength of this study was that each of the qualities received a median rating of three or lower and only two of the other qualities received median ratings in the same range, which speaks to the validity of the survey qualities generated.

Overall, this mixed research produced suggestive evidence regarding clinical characteristics that have an impact on treatment outcomes.

Washington, Thomas-Stonell, and McLeod, Warr-Leeper (2012) conducted a mixed study design in order to gain a better understanding of parents' perspective on the child-clinician relationship during intervention and the parents' perspective on the changes in functional communication from pre- to post-intervention.

Data were collected over 18-months. Seven SLPs from three sites recruited 67 parents (64 mothers and 3 fathers) of preschoolers with communication disorders to the study. Children were 36-60 months in age (mean age was 52 months). Participants came from a wide range of racial backgrounds though the majority were Caucasian. Children had either a communication disorder (n=43) or a communication disorder and developmental mobility impairment. Participants were separated into two groups; children who received intervention (n=52); and children on the waitlist for intervention (n=15). Each child received a total of 15.63 hours of direct group or

individual intervention once or twice weekly over 6 months.

Parental perspectives were gathered in two stages. In stage 1, all parents completed a 25-minute structured telephone interview (*Vineland Adaptive Behavior Scales-II (VABS-II)* and the *Focus on the Outcomes of Communication Under Six (FOCUS)*) pre- and post-intervention describing their children's functional communication. In stage 2 (post-intervention) parents of children receiving intervention (52) were asked to provide a rating of the child-clinician relationship established during treatment. Parents responded to the question "How would you rate your child's therapeutic relationship with his/her speech therapist?". Parents responded using a 5-point Likert scale and then were asked to describe why they gave the rating they did. Parents' comments were transcribed verbatim and kept confidential from the SLP that provided intervention. A content analysis on this data was completed to establish meaning and coded using the six themes. These themes have face-validity as they were previously developed from parent comments about building therapeutic relationships. SLPs who were not involved in the intervention and blinded to the study aims completed the content analysis. Interrater agreement for thematic coding of each comment was 90% and the SLPs compared and discussed until a 100% consensus was agreed upon.

On average most parents (94%) had positive or very positive perspectives on the child-clinician relationship. The other 6% provided a neutral or not very positive rating. The content analysis on the comments explaining why parents provided the rating they did, revealed the most to least frequent themes: rapport with child (55%), professional competence (27%), support of parental involvement (10%), approachability (5%), effective communicative skills (2%) and respect for parents' ideas and beliefs (1%). A further analysis of the written text from the two most frequently coded themes was completed. Nine additional themes were identified using this process (Ex: child liking SLP, therapeutic experience, etc.).

Parental descriptions of their children using the VABS-II and FOCUS suggested that parents of children in the treatment group observed significantly greater functional communication changes.

One major limitation of the study was the low sensitivity provided by the Likert rating scale used to measure parents' perspective on the client-clinician relationship, as it included only two positive rating options

Although this study utilized a small sample size and groups were not randomized it provides mildly suggestive evidence to support that parents value the SLPs' rapport with their child as well as the SLPs'

professional competence. Though more research is needed to confirm this in broader groups of communication impaired children.

Exploratory Research

Exploratory research is used to investigate a topic or develop a theory which is not clearly outlined. It is conducted to provide better understanding of the topic, but it does not provide conclusive results.

Ebert (2017) conducted a longitudinal pilot study that sought to develop and apply a scale for measuring client-clinician relationships in children's speech-language treatment because evidence suggests such relationships have an impact on treatment. Predictive relationships between that scale and treatment outcomes were also investigated. Ebert developed a relationship scale and administered it to the client (22 children), caregiver (22), and SLP (22) and measured treatment progress 4-months later and established psychometric properties of the scale.

The rating scales were adapted from a previously developed and validated tool: Therapeutic Alliance Scales for Children (TASC-r). TASC-r ratings have been shown to predict treatment participation and progress in children's psychotherapy. Appropriate statistical tests were employed and reported. Internal consistency reliability was investigated with Cronbach's alpha and test-retest reliability was calculated using Spearman's rho due to the small sample size and ordinal level of measurement. Convergence validity was measured using Krippendorff's alpha, which is appropriate with any number of raters and ordinal level data. Lastly, predictive validity was measured with nonparametric median tests. The statistical significance was set at p [less than or equal to] .10. Although this higher alpha does increase the likelihood of a Type I error, this was an exploratory study and therefore this alpha was adequate.

The results of the statistical analysis were as follows: There was test-retest reliability and correlations were significant for all three groups. Internal consistency reliability analysis indicated that all three values, for children, caregivers, and SLPs demonstrated acceptable values. Convergence validity between children and SLPs was moderate, Convergence between all three members of the trio and between SLPs and the caregiver were low, convergence between SLPs and caregivers was near zero. For predictive validity, caregivers' and SLPs' view of the client-clinician view related significantly to all three measures of the treatment progress and process four months later.

Some weakness of this study included few demographics reported and the limited setting

(private-practice was the only setting included). Although the study included a fairly small sample size, the children did represent a broad range of speech-language disorders including: speech sound, oral, and written language, fluency, auditory processing, and voice disorders. Although these various baselines and disorder types may impact treatment outcomes, the children had all received a similar amount of treatment pre-study.

Overall, the data this study provides is suggestive evidence that this scale can be used to measure client-clinician relationships and possibly predict treatment outcomes based on these measures. However, additional work is needed to test the scale's performance in larger groups and within more diverse populations and environments.

Discussion

The six studies in the critical review explored various perspectives of those involved in the speech and language therapy therapeutic alliance: Clients (Ebert, 2017; Fourie, 2009; Plexico et al., 2010), clinicians (Ebert and Kohnert, 2010; Ebert, 2017) and care-givers (Ebert, 2017; Ebert, 2018; Washington et al., 2012). Through the explorations of these perspectives, researchers were able to provide suggestive evidence to support that rapport building has positive treatment outcome effects (Ebert and Kohnert, 2010; Plexico et al., 2010). The studies also identified various factors and/or characteristics that enable SLPs to more effectively build rapport (Ebert 2018; Ebert and Kohnert, 2010; Fourie, 2009; Plexico et al., 2010; Washington et al., 2012). In addition, Ebert (2017) developed a scale which could possibly help clinicians directly measure the effect of these characteristics on treatment outcomes.

Critique

Generally, these papers provide a low-modest level of evidence. In speech-language pathology the question of how the therapist cultivates the relationship, how clients perceive the relationship, and how the relationship effects treatment outcomes are under-researched. Due to this, the studies in the critical analysis are generally qualitative in nature and as such, lack control variables, randomization, and findings are not based on representative samples. As with any preliminary exploration in research, a broad and open-ended approach is important for identifying and flagging potentially relevant information (Ebert & Kohnert, 2010). Also, a qualitative approach allows researchers to better study and capture the complex facets of human meaning, experience, and consciousness. With this

approach, researchers can avoid over-quantification and inappropriate meaning identification that fails to address the human experience (Fourie, 2009).

The majority of the studies included measured perspectives on the therapeutic alliance by representing only one member within the clinical equation. For example, researchers Ebert (2018) and Washington et al. (2012) relied on care-givers alone to rate the child-clinician relationship. Not recording the perspectives of other members within the clinical triad is a threat to the level of evidence provided by these papers. However, parents play an important role in interpreting the client-clinician relationship. Children with typically developing language have difficulty articulately expressing their views on a relationship and this is especially true in the communication disordered population (Ebert, 2017). In addition, the care-giver's perspective on the child-clinician relationship significantly predict the child's attendance in therapy. In turn, attendance has an impact on treatment outcomes (Ebert, 2017). Ebert and Kohnert (2010) also omitted the perspective of the client when they investigated clinician characteristics that drive a positive treatment outcome. However, it is possible that the clinical experience may have brought about greater insight into the factors that drive successful treatment.

Several of the studies in the critical analysis allowed for a selection bias to occur when recruiting participants, which may have led to an under-representative population. In the Plexico et al. (2010) study, it was noted that most of the participants (clients who had undergone stuttering therapy) came from a similar education background. Most of the participants held a graduate degree, while the rest held either an undergraduate degree, college degree, and only a few held only a high school diploma. It was also noted that eight of the 28 participants held an occupation as a SLP. All these factors may have led to a selection bias. In Ebert's (2018) study, the survey for parents was presented in an online format, wherein participants were able to freely join the sample. Therefore, this format may have led to the selection of participants who already felt positively about the client-clinician relationship. Similarly, in Washington and colleagues' (2012) study collected participants who, all but one, gave positive ratings about their child's therapeutic alliance with the SLP. It is possible that the participants who agreed to participate, agreed because they felt positively about the relationship. This may have resulted in a selection bias.

Future Research

Future research should include:

- i. Confirming and clarifying the relationship between SLPs rapport building with patients and better treatment outcomes that includes:
 - a. Larger sample sizes
 - b. Randomization
 - c. Control variables
- ii. Measure outcomes of clinicians that embody effective rapport building characteristics and those that **do not** and objectively measure those treatment outcomes
- iii. Exploring these treatment outcomes in a wider range of the patient population with communication disorders (neurological, social communication, voice, etc.)
- iv. Continue to develop and establish a tool (Ebert, 2017) that will allow SLPs to measure the therapeutic relationship in all communication disorder populations that will allow clinicians to improve such relationships.
- v. Further explore why good therapeutic relationships result in better treatment outcomes.
- vi. There are instances where the client-clinician therapeutic alliance may be threatened due to behaviour of the client. This is common in the population of traumatic brain injury, where inhibition is often a weakness, as described by Kovarsky, Schiemer, and Murray, (2011). It can be difficult to maintain rapport while also demanding a level respectful and professionalism when the client makes inappropriate comments or behaves inappropriately. Research is needed to guide and support clinicians in these circumstances.

Clinical Implications

Although only modest evidence exists that there is a relationship between positive client-clinician relationship and good treatment outcomes, it is possible that SLPs who build better rapport and place a significance on these relationships see better outcomes for clients. It is also possible the characteristics that enable SLPs to effectively do so can be identified.

The research providing evidence for better treatment outcomes with positive therapeutic relationships can be used to demonstrate that speech and language therapy requires a shift in perspective. A shift from a focus on medical and clinician competence factors alone to one that also values the client-clinician relationship could have considerable positive effects. Valuing the client-clinician

relationship within therapy may result in better treatment outcomes for clients with communication disorders.

The research that addresses specific characteristics important to effectively building rapport can serve as a framework for reflecting on practice and for reinforcing and valuing these clinical behaviours and attitudes.

References

- Cooper, E. B., & Cooper, C. S. (1985). The effective clinician. *Personalized fluency control therapy-Rev.*
- Ebert, K. D. (2017). Measuring clinician–client relationships in speech-language treatment for school-age children. *American journal of speech-language pathology, 26*(1), 146-152.
- Ebert, K. D. (2018). Parent perspectives on the clinician-client relationship in speech-language treatment for children. *Journal of communication disorders, 73*, 25-33.
- Ebert, K. D., & Kohnert, K. (2010). Common factors in speech-language treatment: Exploring qualities of effective clinicians. *Journal of Communication Disorders, 43*, 133–147.
- Eveleigh, R. M., Muskens, E., van Ravesteijn, H., van Dijk, I., van Rijswijk, E., & Lucassen, P. (2012). An overview of 19 instruments assessing the doctor-patient relationship: different models or concepts are used. *Journal of clinical epidemiology, 65*(1), 10-15.
- Ferreira, P. H., Ferreira, M. L., Maher, C. G., Refshauge, K. M., Latimer, J., & Adams, R. D. (2013). The therapeutic alliance between clinicians and patients predicts outcome in chronic low back pain. *Physical therapy, 93*(4), 470-478.
- Fourie, R. J. (2009). Qualitative study of the therapeutic relationship in speech and language therapy: Perspectives of adults with acquired communication and swallowing disorders. *International journal of language & communication disorders, 44*(6), 979-999.
- Freckmann, A., Hines, M., & Lincoln, M. (2017). Clinicians' perspectives of therapeutic alliance in face-to-face and telepractice speech–language pathology sessions. *International journal of speech-language pathology, 19*(3), 287-296.
- Kim, S. C., Yates, A. D., Graham, P., & Brown, C. E. (2011). Family-provider alliance program in intensive care units. *Clinical Nursing Research, 20*(3), 245-262.
- Kovarsky, D., Schiemer, C., & Murray, A. (2011). Humor, rapport, and uncomfortable moments in interactions with adults with traumatic brain injury. *Topics in Language Disorders, 31*, 325–335.
- Manning, W. H., & DiLollo, A. (2017). *Clinical decision making in fluency disorders*. Plural Publishing.
- Plexico, L. W., Manning, W. H., & DiLollo, A. (2010). Client perceptions of effective and ineffective therapeutic alliances during treatment for stuttering. *Journal of fluency disorders, 35*(4), 333-354.
- Shill, M. A. (1979). Motivational factors in aphasia therapy: Research suggestions. *Journal of Communication Disorders, 12*(6), 503-517.
- Straus, A. L., & Glaser, B. G. (1967). The discovery of grounded theory: Strategies for qualitative research.
- Wampold, B. E., & Bahti, K. S. (2004). Attending to the omissions: A historical examination of evidence-based practice movements. *Professional Psychology: Research and Practice, 35*, 563–570.
- Washington, K. N., Thomas-Stonell, N., McLeod, S., & Warr-Leeper, G. (2012). Parents' Perspectives on the Professional-Child Relationship and Children's Functional Communication Following Speech-Language Intervention. *Canadian Journal of Speech-Language Pathology & Audiology, 36*(3).

