


5-2023

Evidence-Based Practice as an Undergraduate Clinician

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Evidence-Based Practice as an Undergraduate Clinician

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Honors Capstone

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May 15, 2023

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Abstract

Evidence-based practice consists of client perspectives, clinical expertise, and research evidence to make clinical decisions for client treatment. This project evaluated evidence-based practice in the field of speech-language pathology. One evidence-based treatment method was found for each of the Big Nine areas of treatment in speech-language pathology. More focus was put on the area of language, specifically late language emergence in pediatric populations. Late language emergence is a delay in language development that is not caused by any comorbidities. Children with late language emergence struggle in all areas of language. The three intervention strategies for late language emergence are family-centered, direct, and indirect intervention. The three treatment approaches for late language emergence are clinician-directed, child-centered, and hybrid approach. The research collected for this project can be used for future clinical decision-making. Participating in an undergraduate clinical practicum has led to greater self-confidence in clinical knowledge and skills. This project has provided a solid evidence-base that can be utilized with future clients.

Evidence-Based Practice as an Undergraduate Clinician

Introduction

A crucial part of the educational journey of speech-language pathology students is clinical education. As the American Speech-Language-Hearing Association (n.d.-a) explains, clinical education prepares students to deliver quality services to clients. Clinical education will teach students professionalism in the clinical setting, strengthen their knowledge, and develop their expertise to allow them to make clinical decisions (ASHA, n.d.-a). Furthermore, clinical education can help students make connections to the knowledge they have learned in the classroom. Benigno and colleagues (2019) found that when clinical education referenced material present in the students' classes, the students felt more confident in their clinical skills (Benigno, 2019).

As part of clinical education, students must utilize many different sources of information. This combination of knowledge is called evidence-based practice, and it helps speech-language pathologists make decisions about client treatment. ASHA (n.d.-b) defines evidence-based practice as combining clinical expertise, evidence, and client perspectives to make a decision that is best suited for the client's goals (ASHA, n.d.-b). Evidence-based practice provides clinicians with many different sources of knowledge to make clinical decisions. Students must learn how to integrate classroom knowledge, outside research, and client perspectives, which are all necessary for making informed clinical decisions. As such, clinical education offers students an opportunity to practice evidence-based practice and integrate knowledge.

Clinical education is an incredibly important part of the education process because student clinicians have the opportunity to work closely with a supervisor. As ASHA (n.d.-a) continues, having a certified speech-language pathologist as a mentor allows student clinicians to develop critical thinking and clinical decision-making skills. In addition, supervisors are a

resource for students to turn to when they need guidance (ASHA, n.d.-a). Specifically, supervisors are important for developing self-efficacy in student clinicians. Self-efficacy is defined as “a person’s belief that they can be successful when carrying out a particular task” (Cambridge Dictionary, n.d., para. 1). In other words, supervisors can build up a student’s confidence in their skills. According to Cassidy (2013), supervisors who act as a consultant through their students’ clinical experiences had students with greater growth in self-efficacy (Cassidy, 2013).

Clinical experiences provide speech-language pathology students with invaluable education experiences. It allows them to follow evidence-based practice and connect the classroom to their interactions with clients. Furthermore, clinical experiences allow students to work hands-on with knowledgeable supervisors to build their clinical skills and knowledge. During my undergraduate clinical experience, I will be able to work with my supervisor to build my clinical knowledge and skills, utilize evidence-based practice, and further my overall education as a Communication Disorders student at the University of Nebraska at Omaha.

I completed a capstone project that involved using evidence-based practice in a clinical experience. During my clinical experience, I was assigned to work with a pediatric client who presented with late language emergence. I followed the steps for evidence-based practice as outlined by the American Speech-Language-Hearing Association. I collected research to create an evidence portfolio tailored to my specific client, while also collecting evidence-based treatment techniques for other communication disorders. Finally, I did further research into my client’s communication disorder, and I completed a reflection about my experiences in clinic. This paper will evaluate the steps I took and the experiences I had while being an undergraduate student clinician.

Methodology

My capstone project consisted of three parts. The first part involved creating an evidence portfolio for each of the “Big 9” areas of communication: articulation, fluency, voice, receptive and expressive language, hearing, swallowing, cognitive aspects of communication, social aspects of communication, and augmentative and alternative communication (ASHA, n.d.-c).

For the second part of the project, I found evidence that applied to my client’s communication disorder. I did more background research on the disorder and found research on intervention strategies and treatment approaches for late language emergence.

The final part of the project was reflecting on my clinical experiences. I specifically reflected on my first-time coordinating therapy for a client, on the assessment and intervention phases of therapy, and on what worked with my client and what did not. I also reflected on my personal challenges and my successes. Finally, I reflected on what I have learned during this experience and described how I have grown as a clinician.

My professor mentor for this project was my clinic supervisor, Kristina Peterkin, M.S., CCC-SLP. Throughout the semester, we worked closely every week to discuss the treatment of my client.

The “Big Nine” of Speech-Language Pathology

The field of speech-language pathology covers a wide range of disorders, from ones that affect communication to those that affect swallowing. ASHA (n.d.-c) explains that within the scope of practice, speech-language pathologists (SLPs) have a responsibility to assess and treat the following areas: articulation, fluency, voice, swallowing, hearing, social communication, cognitive communication, and augmentative and alternative communication (ASHS, n.d.-c). Each area of practice is unique, with different characteristics, disorders, assessments, and

therapies in each. As such, SLPs go through extensive education to become knowledgeable about each area. Graduate SLP students must gain clinical experience in each area before they are able to graduate and become fully certified. However, more is needed than just clinical hours to be adequately prepared to treat communication disorders. Students and clinicians alike must adhere to evidence-based practice and remain up to date on current research in the field. Assessments and interventions must have research to back them up. The evidence students collect during graduate studies can be used to support future intervention, so it is important to build a strong evidence-based portfolio. The following sections will review research from the field for each of the Big Nine areas. The sections specifically focus on intervention efficacy research.

Articulation

SLPs are arguably best known for their treatment of speech impairments, otherwise known as articulation disorders. Evidence-based practice for articulation disorders includes research for specific intervention strategies. Intervention strategies for these disorders will focus on how to teach correct production of phonemes.

An example of research comes from McReynolds and Bennett (1972) who conducted a study that used distinctive features generalization to specifically target the missing phonemes in the participating children's phonological system. The goal of the study was to promote generalization of these missing phonemes. The children were first taught the phoneme in the initial position of a nonsense word, followed by the sound in the final position. The missing phoneme would be paired with another phoneme to highlight the distinctive differences between the speech sounds. The missing phoneme was practiced to 90% accuracy. Once the children reached that level of accuracy, they were tested to determine if the phoneme could be generalized to real words. The study found that distinctive features training reduced articulation errors up to

84%. It was also found that children could generalize the learning across other sounds and others (McReynolds & Bennett, 1972).

Language

Beyond articulation, SLPs treat all areas of language, including phonology, morphology, syntax, semantics, and pragmatics. Language disorders affect a person's ability to understand and use language, which in turn affects a person's ability to successfully communicate with others. Intervention for language disorders focuses on improving a person's ability to functionally communicate with multiple language partners.

An example of language research comes from Benham and Goffman (2020) who conducted a study that determined whether adding a referent to a novel word led to more stable word forms. Twenty-one children aged 4;1 to 5;11 with developmental language disorder (DLD) and 21 peers with typical language development (TDL) imitated novel words, with half of these words being presented with a visual referent. Children with DLD have variability and poor accuracy in their phoneme productions when compared to children with TDL. However, when a visual referent was added to a novel word, children with DLD were able to stabilize their word forms. Phoneme accuracy was still poor, but word imitations contained repeated errors. The researchers concluded that visual referents aid with phonological organization in children with DLD (Benham & Goffman, 2020).

Fluency

Fluency relates to the forward flow of speech. Fluency disorders create dysfluency, which is the uneven rate of speech. SLPs will treat those with fluency disorders, like stuttering.

Stuttering is often one of the most difficult communication disorders to treat, as it can never be

fully remediated and can often reemerge after someone has been discharged from therapy. Evidence-backed treatment is especially important for these disorders.

An example of research by Arnott and colleagues (2014) evaluated the efficacy of the Lidcombe Program, a program that attempts to reduce stuttering in young children. Specifically, parents are trained by an SLP to deliver the intervention to their children in the home environment. Parents provide feedback called “contingencies.” The child is praised for fluent speech and asked to try again if their speech is dysfluent. Parents then rated the child’s speech. The Lidcombe Program can be delivered in individual or group sessions. The researchers found that while there was not a difference in outcomes between the two types of sessions, group therapy reduced the number of SLP treatment hours while maintaining positive client outcomes. SLPs were able to spend less time consulting parents while still helping clients. In addition, the participating SLPs reported that group sessions offered the participating children an opportunity to praise and work with another to reduce stuttering. The parents of participants also rated the group session experiences as positive (Arnott et al., 2014).

Voice

A voice disorder affects the quality of one’s voice, specifically affecting their voice’s pitch, resonance, and intensity. Many diseases, disorders, and actions can cause damage to the vocal folds, the structures responsible for creating the soundwaves for voices. Diseases and disorders that lead to paralysis can also affect a person’s ability to use their vocal folds, as it becomes impossible to move one or both vocal folds. As such, SLPs are responsible for treating voice disorders. SLPs can instruct clients on vocal health to protect the vocal folds and prevent vocal damage. SLPs then can teach strategies to improve a person’s ability to vocalize.

An example of voice research by Darling-White and Huber (2017) examined the effect of expiratory muscle strength training on individuals with Parkinson's Disease (PD). PD affects a person's ability control the outflow of speech, leading to lower expiratory air pressure. A lack of proper airflow through the respiratory system can lead to utterances being cutoff mid-speech. For this study, 12 participants aged 66 to 82, all diagnosed with PD, were trained to strengthen their expiratory muscles by breathing out into a spring-loaded valve. Once a specific air pressure was reached, the participants had to maintain that pressure. Participants were trained over the course of 4 weeks. The researchers found that at the time of speech initiation, participants had higher air pressure and lung volume after training. The participants' lung volume measures resembled volumes found in adults without PD. Expiratory muscle strength training improved speech breathing in participants (Darling-White & Huber, 2017).

Swallowing

One of the lesser-known areas of treatment by SLPs is dysphagia, or swallowing disorders. When an individual has dysphagia, they are unable to effectively swallow liquids and solids, increasing a person's chance of aspirating. It is important that swallowing disorders are addressed, as aspiration can lead to serious complications, like aspiration pneumonia or death. Since SLPs are already experts in the musculature and anatomy of the oral cavity, pharynx, and larynx, SLPs are best able to evaluate and treat difficulties in swallowing.

An example of a dysphagia study from Dietsch and colleagues (2019) wanted to determine if different flavors affect swallowing abilities in patients with dysphagia. Eighteen participants with sensory-based dysphagia were given three different taste stimuli. An unflavored stimulus, water, was compared to two flavored stimuli: sour and sweet-sour. Videofluoroscopy was used to observe the patients' tongue base retraction, hyoid elevation, and pharyngeal

shortening during swallowing. The researchers found that sweet-sour flavors had the best swallowing outcomes, including lower rates of aspiration. Sour had the next best swallowing outcomes followed by the unflavored stimulus (Dietsch et al., 2019).

Hearing

SLPs are not directly involved in the prescription and fitting of hearing devices, but they do have a role in helping those with hearing loss communicate. Children born with hearing loss often experience articulation errors due to being unable to hear phoneme production. Adults who experience hearing loss later in life often need to be taught communication repair strategies, as it is common to experience difficulties in conversation, both with family members, friends, and coworkers.

An example of hearing research from Lucía and Kelly-Campbell (2015) wanted to examine the effect of group aural rehabilitation on adults with hearing loss who did not use any form of hearing amplification. Group therapy came in the form of including the adult's spouse in the therapy session. Twenty-four couples participated in weekly sessions that addressed communication difficulties both in the workplace and in the home. The researchers found that group therapy improved the communication skills of adults with hearing loss. Specifically, adults with hearing loss were more likely to engage in conversation both at home and at work. The adults' spouses reacted positively to their spouses' improvements (Lucía & Kelly-Campbell, 2015).

Social Aspects of Communication

Speech, language, and communication happen in interactions with other people. Many communication disorders, like autism spectrum disorder (ASD), can lead to difficulties in

pragmatics, or social communication. SLPs will target social skills in intervention, like turn-taking and topic maintenance, to help clients be able to function in communicative situations.

One example of social communication research comes from Ingersoll and colleagues (2012) who conducted a study to examine the effect of three different intervention approaches on pragmatic skills in children with ASD. The researchers evaluated developmental social-pragmatic interventions, naturalistic behavioral interventions, and a combination of these interventions. This study had 5 participants with ASD between the ages of 3;0 and 6;6. Baseline measures of the children's pragmatic abilities were collected. The participants had two sessions a week for three weeks. Each week focused on one of the intervention approaches. The researchers found that the participants had better pragmatic and expressive language outcomes from the naturalistic behavioral interventions that offered direct elicitation and the combination method, than the developmental social-pragmatic intervention alone. Overall, the researchers concluded that using multiple intervention approaches in natural settings can enhance language learning in children with ASD (Ingersoll, 2012).

Cognitive Aspects of Communication

Neurocognitive conditions can affect speech and language functions. Conditions like traumatic brain injuries, cerebrovascular attacks, also known as strokes, and dementias can negatively affect or damage the areas of the brain responsible for speech and language. One type of dementia that SLPs often encounter in the field is primary progressive aphasia (PPA). Henry and colleagues (2019) define PPA as “a neurodegenerative disorder in which speech and language abilities deteriorate over time” (Henry, 2019, p. 2723). PPA is a form of dementia that originates in the areas of the brain responsible for speech and language. Eventually, the

deterioration will spread to other areas of the brain. As such, SLPs must provide intervention to individuals with PPA to help them regain or compensate for lost language and speech abilities.

Henry and colleagues (2019) conducted a study to determine efficacy of word retrieval intervention in participants with PPA. There were 18 participants with a mean age of 65;3. The participants received language therapy that specifically focused on word retrieval skills and difficulties. Ten of the participants received intervention once a week and 8 received biweekly intervention with another session 3 months after the intervention ended. Intervention took 4 to 8 weeks. Each session trained the participants on specific retrieval strategies. The participants' word retrieval abilities were reevaluated at 3, 6, and 12 months after intervention finished. The study found that the participants had significant improvements in word retrieval up until 6 months post treatment. Improvements were seen across all participants, regardless of how many sessions they had. It was also found that participants were able to generalize their word retrieval skills to words they had not been trained on in intervention (Henry, 2019).

Augmentative and Alternative Communication

The last major area that SLPs evaluate and treat is augmentative and alternative communication (AAC). Some individuals are not capable of using verbal communication. These individuals need special supports to be able to communicate with others. AAC can be as simple as pointing to pictures with fingers. More complex AAC systems can follow a person's eye gaze on an electronic device and change their selections into a voiced response.

An example of research in the area of AAC comes from Fallon and colleagues (2001) who conducted a study to determine how to best select vocabulary for a child's AAC device. The researchers gathered 45 individuals who worked with AAC users. The 45 individuals were in trios that consisted of SLPs, teachers, and parents of the AAC users. Each trio completed *The*

Vocabulary Selection Questionnaire to decide which vocabulary terms they would use for their client. The 15 trios produced a mean of 584 vocabulary terms. The researchers found that getting input about vocabulary from multiple sources leads to a more comprehensive vocabulary. Each source can contribute unique words that other sources may not consider. In addition, the trios were able to finish the questionnaire in under an hour, making this a convenient and efficient method to use (Fallon et al., 2001).

Late Language Emergence

Late language emergence, also known as late talking, is defined by ASHA (n.d.-d) as “a delay in language onset with no other diagnosed disabilities or developmental delays in other cognitive or motor domains” (ASHA, n.d.-d, para. 1). Around 13.5% of children aged 18 to 23 months have been diagnosed with late language emergence. Late language emergence affects both language expression and comprehension in children. These children have simpler and shorter utterances, with small vocabularies and phonological differences in their speech. Late language emergence can also affect gestural use in these children, as they will begin to over-rely on gestures to communicate. Many children diagnosed with late language emergence, 50-70%, will catch up to typically developing peers’ language development. However, they continue to show poorer language performance than peers who had typical language development. In school, children with late language emergence often struggle with spelling, reading comprehension, grammar, and vocabulary. The effects of late language emergence can even be seen in 13-year-old students. It is critical that SLPs provide language services for children who have or at-risk for late language emergence. Early intervention that involves the child’s family is key for positive language outcomes. Intervention for these children will help facilitate language development, thereby reducing the long-term effects of late language emergence (ASHA, n.d.-d). When

thinking of the Big 9 areas, late language emergence would be categorized as a language impairment. Late language emergence will impact all five areas of language, phonology, morphology, syntax, semantics, and pragmatics.

Evidence-Based Practice for Late Language Emergence

Intervention Strategies for Late Language Emergence.

Intervention strategies are the remediations and facilitations SLPs use to target language behaviors. There are three main strategies that SLPs can use to conduct intervention for children with late language emergence. These strategies are: family-centered intervention, indirect intervention, and direct intervention.

Family-Centered Intervention.

ASHA (n.d.-d) explains that working with the family is key when treating late language emergence in young children, as a child's successes are a family's successes, and vice versa. Professionals must identify the parents' concerns about the child's language development when designing an intervention plan for a child. Family-centered approaches are successful at improving language skills because the parents are highly involved, and the intervention happens in the child's natural environments, activities, and routines (ASHA, n.d.-d). Parents and caregivers spend more time with the child than the SLP. As such, it is critical that the child's caregivers implement intervention into their family's everyday activities. By including the parents and their concerns in the intervention plan, parents will be more willing implement strategies. Family engagement is critical for child language gains. Evidence has been found to support the efficacy of family-centered intervention on child outcomes. Zhang and colleagues (2021) found that in low to mid socioeconomic status (SES) families, group therapy sessions

with other low to mid SES parents led to improvements in the children's cognitive and language outcomes (Zhang et al., 2021).

Indirect Intervention.

ASHA (n.d.-d) describes indirect intervention as providing language exposure without eliciting behaviors from the child. Indirect intervention approaches generally facilitate language growth in a child, rather than trying to remediate a specific behavior. Often times, the clinician is the one who engages in specific behaviors so as to be a language model for the child. Some examples include recasting, expansion, and parallel talk (ASHA, n.d.-d). Gladfelter and colleagues (2011) found that "expansion, recasting, parallel talk, child-directed speech, visual cues, feedback, and increasing interaction opportunities showed large effects on increasing the mean length of utterances, the total number of words, the number of different words, and the percentage of intelligible utterances" (Gladfelter et al., 2011, p. 1).

Direct Intervention.

ASHA (n.d.-d) explains that direct intervention involves the clinician eliciting behaviors from the child. The child is actively participating in intervention when a clinician uses a direct approach. Whereas indirect intervention is designed to facilitate language, direct intervention is working to implement, change or elicit a communication behavior (ASHA, n.d.-d). While indirect and family-centered intervention focus more on a facilitation of language, direct intervention is used when clinicians want to teach a client a specific skill. Direct intervention is likely to only happen in shorter instances of therapy, whereas indirect can occur throughout a session.

Treatment Approaches for Late Language Emergence.

Treatment approaches are the methods SLPs use to deliver intervention during an individual therapy session. There are three main treatment approaches speech-language pathologists can take to deliver therapy for children with late language emergence. These three approaches are: clinician-directed therapy, child-centered therapy, and hybrid therapy.

Clinician-Directed Therapy.

ASHA (n.d.-d) explains that clinician-directed therapy sees the clinician choosing the activities that happen in a therapy session (ASHA, n.d.-d). When a clinician controls all aspects of a therapy session, the session becomes less like the child's natural environment. When environments are not natural for a child, it will become harder for the child to generalize skills outside of the therapy room. DeVeney and colleagues (2017) found that for late talkers, parent-implemented intervention may be more effective than clinician-directed service provision" (DeVeney et al., 2017).

Child-Centered Therapy.

ASHA (n.d.-d) describes client-centered therapy as play-based activities that are led by the child's interests (ASHA, n.d.-d). An example of child-directed therapy is to follow a child's conversational lead. Any topic a child wants to discuss will receive the adult's full attention. This gives the child opportunities to communicate. Kong and Carta (2013) found that when an adult is responsive to a child's communication attempt, the child's social communication and cognitive skills improve (Kong & Carta, 2013).

Hybrid Therapy.

ASHA (n.d.-d) explains that hybrid approaches combine elements from both clinician-directed and client-centered therapies (ASHA, n.d.-d). One specific hybrid technique clinicians

use is dialogic reading. Zevenbergen and colleagues (2003) conducted a study that evaluated the effect of dialogic or shared-reading on child literacy outcomes. Shared-reading occurs when an adult sits with a child during a story and holds a discussion about the story with the child. The researchers found that dialogic reading improved narrative language and emergent literacy skills in participants. The researchers believe that targeting these skills in early childhood could have future academic and social gains (Zevenbergen et al., 2003). Dialogic reading is considered a hybrid approach because it contains adult elicitations, but also child-directed activities like reading.

Clinical Reflections

This semester, I had a pediatric client who presented with late language emergence. With the research I did for this project, I was able to identify an intervention strategy and a treatment approach that would be most effective for them. I chose to pursue indirect intervention with some direct intervention when I wanted specific phrases to be produced. I used indirect intervention because I believed it would lead to functional communication use in my client. I chose to pursue the client-centered treatment approach with my client. I believed this method would lead to more client engagement and attention, since children need highly engaging activities to hold their attention and ready them for learning.

These two strategies were very effective for my client. Indirect intervention led to a very natural environment for my client to practice language skills. Because of this low-structure environment, many natural communication opportunities were elicited organically. For example, asking for help and talking about books were natural communication events that transpired because of indirect intervention. When I wanted my client to specifically ask for help, I would prompt that phrase. That was where the elements of direct intervention came in. Client-centered

intervention led to client engagement in sessions. By choosing activities and toys the client was interested in, I was able to hold onto their attention for entire sessions. In addition, my client had a chance to generalize the language skills we reviewed in the activities they chose. For example, functional phrases, like “help me,” could be used during session activities. I noticed lots of generalization of phoneme production in client-chosen activities. Overall, my semester of therapy with my client was successful, and led to many language gains for them.

This semester greatly enhanced my clinical decision-making skills. This was my first time treating a client, and I learned many things. I learned how to choose and administer assessments. I had the chance to review many assessments and interpret their results. This semester, I also had the opportunity to create goals for my client to accomplish in therapy. Making goals was very hard. It was hard to translate your knowledge from the assessments into goals that would promote functional communication for my client. How would I decide what was important to target? How would I promote and elicit functional communication? These challenges led to more difficulties. I had to plan each therapy session I had with my client. What activities would be engaging for my client? What activities would elicit the communication opportunities I needed to keep data on my goals? Moreover, I had to come to terms with the fact that my client was not going to respond to my sessions the way I planned. I had to allow my control of the session to lessen. I could not thoroughly plan a session.

I had to be flexible and adaptable to meet my client’s language and behavioral needs. Sometimes this was easy. I could bring in toys and books my client had enjoyed in previous sessions. I could structure sessions in a way where the “boring” therapy came first, and the “fun” therapy came second. However, there were times where my client would not respond to my prompts and cues how I wanted. There were times where my client needed to take breaks I did

not account for. I had to go with these changes and do what was best for my client. I collected data where I could and provided many prompts in the hope that some would elicit communication. When my client needed a break, we took a break. I wanted therapy to be a positive experience for client. I wanted to make learning and coming to UNO's clinic a fun event.

I believe that I made therapy a positive experience for my client. My client was always excited to start our sessions. Sometimes, my client would run down the hall to the therapy room. Sometimes, they would walk next to me. Sometimes, they would hold my hand as we walked. My client engaged in activities with me. We shared high fives when my client conquered a hard skill. We played and read together. At the end of the session, we would grab candy from the candy jar because we worked so hard. Getting to interact with my client and watch them grow session to session was the highlight of my weeks.

I was very nervous to start clinic in January. I doubted myself and did not always believe I could do it. It only took one session for me to realize that this was what I wanted to do with my life. I want to be a speech-language pathologist because of this. I want to form those connections. I want to celebrate with my client when they succeed. I want to work with them when they struggle. This is the career I want, and I do not doubt that or myself anymore.

Conclusion

This semester, I treated a pediatric client in UNO's Speech and Language Clinic. I focused my project on evidence-based practice, as it is an important part of my clinical education. I found one research article on intervention for each of the Big Nine areas of treatment in speech-language pathology. I conducted more research on the area of language, specifically late language emergence, as my client presented with it. I utilized my research in my

clinical decision-making. I used indirect intervention and client-centered therapy to create engaging sessions with opportunities for functional communication. This semester saw many challenges, including planning assessments and intervention, making goals, and finding research to support what I wanted to do with my client. This semester also saw achievements, including facilitating language growth, building my knowledge and confidence, and forming a relationship with my client.

This project has helped me build an extensive knowledge base. I can refer back to the articles I have found when I encounter clients with those communication disorders. In addition, I learned where I can find accessible evidence to back up my intervention. This semester in clinic has helped me grow greatly as a clinician. I learned much about every step of the intervention process. I learned about materials and strategies that I can use with future clients. I learned from graduate students and professors in the clinic. All of this information and my experiences with my client have built up my self-confidence. I feel that I will be able to confidently approach my next client this fall when I join UNO's Speech-Language Pathology Graduate Program in the Fall 2023 term.

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