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Perspectives of Stuttering Treatment: Parents, Children, and Adolescents

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PERSPECTIVES OF STUTTERING TREATMENT:
PARENTS, CHILDREN, AND ADOLESCENTS

by

Heather D. Salvo

A Master's Thesis Submitted in

Partial Fulfillment of the

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August 2016

ABSTRACT

PERSPECTIVES OF STUTTERING TREATMENT: PARENTS, CHILDREN, AND ADOLESCENTS

by
Heather D. Salvo

The University of Wisconsin-Milwaukee, August 2016
Under the Supervision of Professor Carol H. Seery

Purpose. The main purpose of this study was to investigate whether age affects the perspectives of children (ages 8-12), adolescents (ages 13-17), and parents related to stuttering treatment experiences and outcomes. A secondary purpose of this study was to investigate whether the perspectives of children and adolescents regarding stuttering treatment experiences and outcome preferences differed from the perspective of their parents.

Participants. Participants required internet access and minors required parent/guardian consent to complete the Qualtrics survey. Eligible child and adolescent participants needed to be between the ages of 8-17 years old, with an onset of stuttering by age 12. They also needed to currently have a stuttering disorder and have a history of receiving treatment. Considering the two age groups, 11 children (ages 8-12) and 13 adolescents (ages 13-17) who stutter responded to the survey over a six-month period. These children and adolescents were unequally matched to 18 parents of children and 17 parents/guardians of adolescents who responded as well. This unequal matching was due to 24 instances in which parents and their children/adolescents responded to all their survey questions, while in 11 instances surveys were only filled in by parents and the child/adolescent portions contained no responses.

Methods. The online survey consisted of two sections of questions: one for parents and one for children/adolescents. Parents responded to 30 questions (two consent, four selection criteria, 10 demographic and treatment history, and seven perspectives of treatment) while children and adolescents responded to seven questions (perspectives of treatment).

Results. Given the limited number of completed surveys, responses were examined using descriptive statistics. No noticeable differences were observed between children and adolescents' in the three item ratings of treatment aspects that included satisfaction with treatment, perceived change in speech and perceived change in communication skills. Ratings of both children and adolescents revealed a modal response of 4 on a 5-point scale (5=most positive). Both parent groups also had modal ratings of 4 on these same items.

An examination of the data based on years in treatment without regard to participant age, suggested differences. A majority (80%) of participants who received less than five years of treatment gave positive ratings of treatment aspects (4's and 5's). Those who received more than 5 years of treatment gave ratings across the wider range of negative (29%), neutral (25%), and positive (46%). A similar pattern was seen in parent responses divided according to their child's years in treatment.

Children and adolescents did not differ on their preferences for treatment outcomes. Both groups' responses were equally divided between *speaking smoothly* (close to 50%) and *speaking freely, regardless of stuttering* (close to 50%). In contrast, parents' responses were not evenly divided between treatment outcome choices. Both parent groups showed a stronger preference for *speaking freely, regardless of stuttering* (close to 70%).

Discussion. Results of this study did not support the hypothesis that perspectives on stuttering treatment differ when comparing children and adolescents. The data indicated different perspectives of treatment may exist in relation to numbers of years in treatment. Also, parents' perspectives of treatment appear to differ from their child's perspectives, regardless of age.

Based on these results, speech-language pathologists should be aware that with greater years in treatment, there may be more parents and children/adolescents who stutter who feel dissatisfaction with aspects of treatment that may need more positive intervention to bring about improvement. Speech-language pathologists should also consider the different expectations for treatment clients and their parents may have and how that can impact treatment including education, goal development, interpretation of progress, and carryover. This study highlights the role of the speech-language pathologist in considering both client and, in the case of minors especially, family input with the intention of providing therapy that is effective in meeting the needs individuals.

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LIST OF ABBREVIATIONS

ACT	Acceptance and Commitment Therapy
ADHD	Attention Deficit Hyperactivity Disorder
ASHA	American Speech-Language-Hearing Association
BSA	British Stammering Association
CBT	Cognitive Behavioral Treatment
IRB	Institutional Review Board
NSA	National Stuttering Association
<i>OASES</i>	<i>Overall Assessment of the Speaker's Experience of Stuttering</i>
PVC	Parental Verbal Contingencies
SFA	Stuttering Foundation of America
SLP	Speech-Language Pathologist
SLT	Speech-Language Therapist
SRs	Stuttering Severity Ratings
Tx	Treatment
UWM	University of Wisconsin- Milwaukee

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CHAPTER 1

Introduction

The Population of People who Stutter

Onset, Prevalence, and Recovery. Developmental stuttering is a disorder that starts in early childhood with a majority of cases (80% to 90%) beginning prior to four years of age (Yairi & Ambrose, 2005). This speech disorder affects approximately 5.88% of individuals throughout the lifespan (Yairi & Ambrose, 2005). Prevalence statistics, the number of people affected by the disorder at the time in which the survey was distributed, tend to be much higher for young children, and are lower as individuals grow older (Yairi & Ambrose, 2013). This does not mean stuttering is just a disorder experienced by children alone as some cases do carry on into adulthood. The estimated percentage of adults who exhibit persistent stuttering beyond childhood in the U.S. is nearly 1% (Yairi & Seery, 2015) which comes to an estimated total of nearly 3 million people. The decline in numbers from childhood to adulthood can largely be attributed to recovery, either naturally or through clinical intervention (Yairi & Ambrose, 2013).

Natural recovery is the phenomenon in which young preschool age children (2-5 years) stop stuttering without speech therapy, often after having severe levels of disfluency. Natural recovery from stuttering typically occurs within 3–4 years post onset, usually by 7 years of age (Yairi & Ambrose, 1999, 2005). As people who stutter get older their chances of natural recovery decrease while chance of persistence increases (Yairi & Seery, 2015). For example, only 25% of children who stutter at 10 years will recover compared to 50% of the children who stutter at age 6 (Andrews & Harris, 1964). An estimated 84% of children experience natural recovery by 16 years of age (Andrews & Harris, 1964).

Aside from natural recovery, speech therapy also may contribute to the decline in stuttering as people grow older. Because the disorder can persist into adulthood, and given the importance of communication in child development, early intervention is especially important for children who stutter (Maguire, Yeh, & Ito, 2012). Based on research there is clinical knowledge about how SLPs can be equipped to serve children who stutter. According to Maguire and colleagues (2012) SLPs should apply their knowledge of evaluation procedures, risk prognosis, parental counseling, and therapy.

When it comes to the recommended knowledge SLPs should utilize while treating individuals who stutter, research is lacking in the area of fluency treatment preferences and perspectives of minors as a whole. For this reason, research is needed to gain a more in-depth understanding and knowledge about what specific kinds of therapy approaches are deemed effective for certain age groups. When considering what treatment is effective, the opinions and desires of children and adolescents who stutter should be considered. These considerations are important because successful therapy can be dependent on more than just superficial speech characteristics, including whether or not cognitive-emotional adjustments coincide with the adjustments to speech. Patients' views toward treatment and their expected treatment outcomes can be highly influential on therapy success (Cooper & Cooper, 1969). More research about the perceptions of therapy from a client standpoint is especially needed with children and adolescents due to the high prevalence of stuttering at younger ages. Improved understanding of this area may allow SLPs to provide better services improve the recovery statistics for children at younger ages.

Nature of the Stuttering Disorder

Speech Definition & Emotions. Fluent speech, or what is typically regarded as “normal” speech, is characterized by easy, flowing movements for spoken sounds. In contrast, stuttering, which is disfluent, is defined “an involuntary disruption of the smooth execution of a speaker’s intentional speech act” (Yairi & Seery, 2011, p.5). These two concepts may seem clear about the types of speech they refer to; however, it can actually be difficult to determine the level of fluency someone possesses. Variability may exist from the perspectives of both the speaker and listeners.

Stuttering is characterized by speech disruptions or disfluencies. The term “disfluencies” refers to all types of speech disruptions. Stuttering however is mainly characterized by a subset of disfluency types. Speech characteristics of stuttering may include, but are not limited to, whole word or part word monosyllabic repetitions, sound prolongations, or inaudible blocking of sounds during speech production (Maguire, et. al., 2012). Other non-speech symptoms of stuttering include overuse of interjections, avoidance of words through word substitution, as well as excessive physical tension, facial contortions, tremors of speech muscles, and eye blinks (Maguire, et. al., 2012).

Stuttering is not just characterized by the aforementioned physical disruptions of speech. It is important to be aware of and acknowledge the emotional component to this disorder as well. In the 1970’s Joseph Sheehan developed the Iceberg Analogy to explain the complicated components of a stuttering disorder (Sheehan, 1970). Today professionals like Russ Hicks have expanded upon Sheehan’s concept. Hicks has included an image of an iceberg for visual support with a written explanation of the Iceberg Analogy (Hicks, 2003). The tip of the

iceberg, above the waterline, is labeled as stuttering and represents physical characteristics. This tip is noted as only being 10% of the entire iceberg (Hicks, 2003). Meanwhile the remaining 90% is displayed as the portion below the waterline. This part is significantly larger and labeled with several words originally referenced by Sheehan, including fear, guilt, shame, anxiety, hopelessness, isolation, and denial (Hicks, 2003). Hicks explains that every individual's iceberg will be different from one person to the next.

The Iceberg Analogy highlights the importance in treatment of targeting the aspects of stuttering that are present both above and below the surface. Treatment goals should be chosen with the unique needs of the client in mind (Yaruss, Coleman, & Quesal, 2012). Failure to do so may lead to ineffective treatment and unsuccessful outcomes, which neither the SLP nor the client wants. For example, if only the physical components of stuttering are addressed, but not the emotional aspects, it is more likely that disfluencies will reemerge and relapse will occur (Hicks, 2003; Yaruss et al., 2012).

Description of Major Treatment Goals & Approaches

When it comes to treatment of persistent stuttering there are two categories of major treatment goals and approaches. One intervention approach category involves techniques for changing speech. The other approach involves changing the way one thinks as a result of their stuttering. This method includes approaches to address the cognitive-emotional aspects of stuttering.

These two general methods that approach stuttering treatment address two different aspects of intervention. Methods targeting change in speech and change in cognitive-emotional aspects in stuttering intervention may be used independently or in combination with one

another. As of now there is no standard for how little or how much each method should be implemented for effective treatment outcomes.

Approaches to Changing Speech. There are two main approaches to changing speech in intervention for those with persistent stuttering. The first is stuttering modification and the second is fluency shaping. The technique of stuttering modification is not meant to eliminate stuttering, rather its purpose is to make stuttering moments easier and more relaxed. By reducing the tension in the stutter, speech becomes more pleasing to both the speaker and their audience. This method also serves the purpose of giving people who stutter a feeling of power, a sense of control, and confidence for handling their disfluencies. The ultimate goal for stuttering modification is described as “fluent stuttering” (Van Riper, 1973).

Fluency shaping, another technique commonly used in stuttering treatment, approaches speech change from the opposite perspective of stuttering modification. The end-goal of this method is to help the client achieve entirely fluent speech free from disfluencies. In the beginning clinicians teach their clients to practice techniques like slow-stretched speech and gradual voice onset. Initially people who stutter may find these techniques generate speech that does not sound natural. With practice over time however, clients aim to achieve speech that sounds like any typical, fluent speaker. This sort of approach to stuttering does not acknowledge a need for coping with stuttering moments or the emotional aspects previously mentioned in the Iceberg Analogy (Yairi & Seery, 2015). Regardless of which type of therapy approach an SLP chooses to incorporate, failure to acknowledge the cognitive-emotional component of fluency disorders is likely to result in relapse.

SLPs often focus on a single approach, stuttering modification or fluency shaping, while providing treatment to people who stutter, although an integration of both approaches as a part of a treatment program has also been supported by research (Langevin & Kully, 2003). It is not uncommon for certain treatment approaches to be more popular with certain age ranges of clients. For example, treatment for children who stutter is more likely to address superficial speech characteristics through environmentally-based fluency shaping management with the end goal being naturally fluent speech (Yairi & Seery, 2015). Therapy for this age group does not typically address cognitive emotional issues that are expected to emerge later in life. Meanwhile, adults who stutter are more likely to receive treatment that targets cognitive-emotional adjustment and management of speech articulation when stuttering occurs (Yairi & Seery, 2015). Research shows this divide in use of treatment approaches exists, however it has not yet determined at what age range a transition may be needed to implement more adjustment-related interventions. More information about the perceptions of treatment and its aims from the perspective of children who stutter could help SLPs to better address the needs of their younger clients.

Failure to improve a client's cognitive-emotional adjustment can factor into the probability of relapse. Relapse can happen even after an extended period of fluency that may be mistaken as recovery by the client and even some clinicians. Relapse is a difficult but common challenge people who stutter often find themselves facing, especially if the treatment they received did not acknowledge all of the needs of their disorder including superficial speech characteristics and cognitive-emotional adjustment. This is because components indirectly related to speaking are not often targeted as they should be (Yairi & Seery, 2011). It is

recommended that SLPs provide therapy with three main focuses: improving client adjustment, reducing stuttering, and increasing fluency (Yairi & Seery, 2015).

The vast difference in the treatment goals of stuttering modification and fluency shaping indicates there is a need for criteria to decide which approach is best suited for individual clients. With more research and input from individuals who stutter, more light may be shed on this complicated clinical decision. SLPs need to better understand what clients truly want from therapy and whether there is variability in desires based on age, experience, or other factors.

Approaches to Changing Cognitive-Emotional Aspects. When providing treatment for a stuttering disorder some professionals choose to focus on acceptance of stuttering and the cognitive emotional components of the disorder. Common approaches utilized to address the cognitive-emotional aspects of persistent stuttering include desensitization, cognitive behavioral therapy (CBT), and acceptance and commitment therapy (ACT).

Desensitization is an approach that targets the anxiety people with persistent stuttering may have. Its purpose is to reduce negative emotional thoughts and diminish anxiety in situations over time (Yairi & Seery, 2015). These objectives are targeted in a hierarchy, just like many other treatment approaches SLPs are accustomed to. Since there is a hierarchy to this method, clients start out with smaller obstacles and work their way up to greater challenges. Challenges can be addressed through imagery or *in vivo* (i.e. in real life situations) (Yairi & Seery, 2015).

Clients may target desensitization by confronting the disorder, for example openly disclosing that they have a stutter (Yairi & Seery, 2015). Clients may also work on desensitizing themselves to their own stutter. They may target this with different methods, like recording

themselves or pseudostuttering (stuttering on purpose, contrasting hard and soft speech, etc.). They may also try to desensitize themselves to the reactions of others to moments of stuttering. This could be targeted through reflection, either in the moment or retrospectively (Yairi & Seery, 2015).

Desensitization is ultimately meant to serve two purposes. The first purpose is to decrease the amount of stuttering. This is because desensitization reduces internal anxiety and stress about stuttering; when individuals' fears are reduced stuttering is less likely to occur (Yairi & Seery, 2015). Secondly, desensitization is believed to be beneficial for reducing or coping with moments of stuttering as they occur. This is based on the idea that moments of stuttering are easier to manage and respond to when one is relaxed rather than anxious or in distress (Yairi & Seery, 2015). Desensitization as a whole is perceived as beneficial because it addresses emotions that can interfere with decreasing persistent stuttering (Yairi & Seery, 2015).

Cognitive behavioral therapy (CBT) was created based on the idea that one's thoughts largely influence their feelings and actions (Gladding 2005). Cognitive approaches to therapy were developed in the late 1950s, gained popularity in the 1970s, and have had increase in relevance in many treatment areas, including stuttering (Gladding, 2005). For this approach of treatment to be effective, SLPs need to collaborate with clients to set goals and determine strategies for change. According to Gladding (2005), CBT does not have a single definition. Gladding specifies CBT can be beneficial for a large amount of the population, including diverse population members, children, adolescents, and adults of any age.

CBT is flexible and it can include or omit many different components depending on what the client and clinician decide to target. CBT approaches start with clinician modeling or completion of tasks in unison. From there clients demonstrate independent use and transference of skills from treatment to the real world. Common interventions for this type of counseling include self-instructional training, stress- inoculation training, thought stopping, and cognitive restructuring (Gladding, 2005).

Self-instructional training involves client participating in appropriate behaviors while using self-talk that encourages and rationalizes what they are doing (Gladding, 2005). Stress-inoculation training is a three-step technique. It starts with teaching the client about the nature and physiology of stress and coping. Next the client learns strengthens their skills for identifying and coping with stress. Last, the skills developed to cope with stress are implemented in scenarios, either created in clinic or in real life (Gladding, 2005). Thought stopping is an approach in which clients vocalize their negative thoughts and clinicians force the clients to stop in a very dramatic way, like yelling “Stop!” (Gladding, 2005). Cognitive restructuring is a combination of stress-inoculation training and thought stopping. Typically, this approach involves clients vocalizing or writing their thoughts and then therapists stop them and provide input to put an end to the self-defeating thought process. Over time clients are expected to be able to identify moments of self-defeating thoughts and address or replace them with more rational ideas (Gladding 2005).

All of these treatment approaches are learned in therapy so that they can be generalized to the real world. CBT can be implemented in countless ways for treatment with a person who stutter. A few examples might include educating clients about the impact of stress,

addressing feelings about speech and stuttering, and helping clients approach intimidating speaking situations. In order for CBT to be effective however, patients must be willing to work on their own outside of therapy and have the ability to think clearly (Gladding, 2005).

Acceptance and Commitment Therapy (ACT) is a therapeutic approach that was developed in the 1990s and stems from CBT. It is composed of six core principles which are displayed and explained in **Table 1**. These six core processes combined are meant to result in physiological flexibility, or being open, present, and doing what matters to one's self.

These six core principles of ACT are meant to help clients develop mindfulness along with psychological flexibility. Clients also identify values that are important to them, and live their lives accordingly. According to Palasik and Hannan (2013) there is only one study on record involving ACT as an intervention method for people who stutter. The results of this study however support the implementation of ACT for stuttering treatment intervention. Benefit to patients who participate in ACT include psychological flexibility, improved self-perceptions of stuttering, being present in the moment, and using their value system to guide thoughts and behaviors (Palasik & Hannan, 2013).

Table 1. *The Six Core Principles of Acceptance and Commitment Therapy*

Contact with the present moment	Be in the now
Chosen Values	Knowing what matters in a person's life, what can guide their behaviors
Committed Action	Effective mental and physical values
Self as context	Observing self, pure Awareness of thoughts behaviors, and moods.
Thought Defusion	Observing thoughts as they come and go without attaching meaning or judgement, detaching from thoughts.
Acceptance or Willingness	Open to whatever comes

Controversy about how to Approach Stuttering Treatment. There is some debate in the world of speech-language pathology about the methods that target changing speech versus those that target cognitive-emotional aspects of speech methods of treatment. Part of this controversy stems from the fact that not all professionals agree with spending treatment time focusing on methods that do not directly facilitate production of fluent speech. Some also believe the aspects of cognitive-emotional treatment are more appropriately addressed by psychologists rather than SLPs (Yairi & Seery, 2015).

Clinicians who use approaches like desensitization, CBT, and ACT are treating the client as a whole rather than speech alone. They believe these approaches are important for benefits that cannot be measured in fluency but are reflected in client satisfaction and improved quality of life. SLPs who approach stuttering treatment with a cognitive-emotional component may also believe in the theory presented in Russ Hicks' Iceberg Analogy that proposes risk of relapse is greater without attentions to attitudes and emotions.

Impact of Approaches on Perception of Treatment Effectiveness. One might think the type of treatment an individual receives would hold significance in their perceptions of treatment. A manuscript by Zebrowski (2007) summarized the findings of a meta-analysis that indicated this is not the case.

In a chapter by Zebrowski (2007) key components of effective stuttering treatment were discussed through the extensive review of results of various studies. She highlighted the conclusions of Lambert (1992) and Asay and Lambert (2004) who, after analyzing the results of many psychotherapy and behavioral treatments, including stuttering treatment, deduced that there was a lack of significant variation among different therapy approaches. They concluded

that the treatment methods themselves did not play the most vital role in successful therapy outcomes. Instead, four elements were the most influential components for positive treatment outcomes, these included: extratherapeutic change, therapeutic relationship, client's theory of change, and expectancy. The proportion of certain components contributing to successful therapy outcomes can be seen in Figure 1. These were estimated to reflect the contribution of each element to successful treatment outcomes. It is important to note scientific procedure for deriving the percentages was not applied by the researchers.

"Extratherapeutic change" accounts for 40% of the overall outcome of treatment. This term refers to aspects of the client and their environment that facilitate growth, including temperament and personality, locus of control and self-perception competence, phonological and language abilities, and congruence. The first two subcomponents of extratherapeutic change, that is, temperament and personality, affect a client's willingness and ability to take risks, which is important for progress in therapy (Yalom, 2002; Zebrowski & Kelly, 2002). The third and fourth subcomponents of extratherapeutic change, a client's personal locus of control and perceived self-competence, are important for maintaining a motivation, interest, and engagement (Harter, 1982). Congruence, the final subcomponent of extratherapeutic change, refers to the balance between instinct and logic (Luterman, 2001). In treatment for people with disorders like stuttering, the presence of congruence is important. When treatment is being conducted to benefit children congruence for parents is also important. When present, it can reduce the number of barriers to therapy, including a lower probability of withdrawal from treatment and allow the parent to act as a positive influence for change in their child's life (Armbruster & Kazdin, 1994).

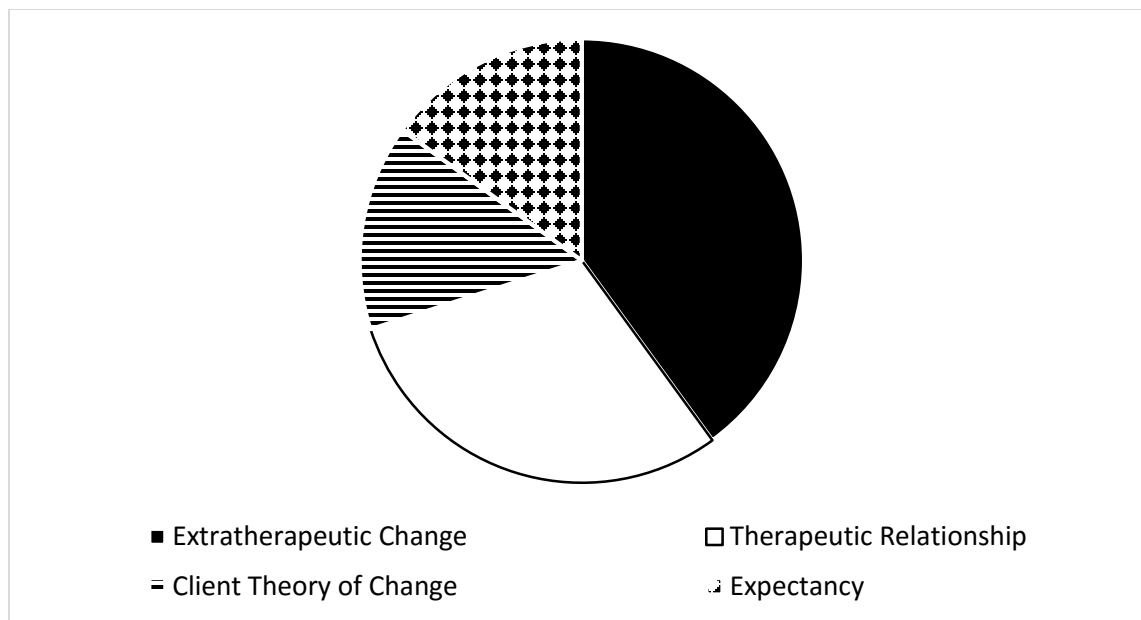


Figure 1. *Proportion of components to successful therapy outcomes.*

“Therapeutic relationship” was found responsible for approximately 30% of the overall outcome of treatment. Client education and preparation of both the child and their parent for stuttering treatment is a part of building a therapeutic relationship. Doing so can have a positive impact on parent knowledge and reduce the possibility of client withdrawal from treatment (Coleman & Kaplan, 1990).

“Client’s theory of change” accounts for 15% of the overall outcome of treatment, and is best defined in terms of the beliefs that a client has in regards to what will work in therapy (Hubble, Duncan, & Miller, 1999). When treating children who stutter a parent’s beliefs can be equally important. Considering what both the client and parent want is likely to decrease barriers to treatment, improve client and parent satisfaction, and in turn possibly lead to more positive treatment outcomes (Zebrowski, 2007). Parent perception of their child’s improvement early on is also important and indicative of successful treatment outcomes (Duncan, Miller, Sparks, Johnson, Brown, & Anker, 2004; Haas, Hill, Lambert, & Morrell, 2002).

“Expectancy” is responsible for 15% of the overall outcome of treatment. It refers to what the client anticipates will be the outcome resulting from treatment. The more positive one’s expectancy, the more successful the client is likely to be in therapy. The aspect of expectancy is important not only in mind of the client, but in the minds of the parent and the clinician (Frank & Frank, 1991; Snyder, Scott, and Cheavens, 1999).

Extratherapeutic change, therapeutic relationship, the client’s theory of change, and expectancy are all considered highly important to implementation of effective treatment of people who stutter. There has not been a specific study assessing whether any of these components hold additional significance for children, adolescents, or adults who stutter depending on their age. Having this information in general shows that there are many considerations to be made when deciding how to approach treatment with people who have persistent stuttering. Specific research in this area however is lacking and warranted to improve intervention methods for people who stutter.

CHAPTER 2

Literature Review

Client Perspectives on Therapy

There are three groups of individuals who should be considered when addressing perspectives of stuttering treatment. These groups include adults who stutter, parents of children and adolescents who stutter, and children and adolescents who stutter. Most studies of perspectives regarding treatment have been limited to adults who stutter. To date, perspective studies have been conducted almost exclusively with adults; studies of parents' and children's perspectives are very limited. The perspectives of these groups are important to consider though.

Research provides scientific evidence supporting the idea that additional factors may influence treatment outcomes and variations in opinions across age groups. The research literature on adult client perspectives of treatment reveals several topics of interest, including: client views of treatment effectiveness, client views of clinicians, and client views on the focus of therapy. These three topics will be discussed further as follows.

Adult Client Perspectives of Treatment Effectiveness. If an SLP were to give their perspective of treatment effectiveness for a person who stutters it is likely that they would use measurable data to support their opinion. For example, perspectives of stuttering treatment effectiveness may be influenced by the client's percentages of disfluency at the end of treatment. Clinicians may also gauge treatment and a clients' progress in social situations, their generalizations of techniques to everyday situations, or their acceptance of their speech disorder (Yaruss, et al, 2012).

What SLPs may not always consider is their own patient's interpretation of the effectiveness of treatment they received and the progress they feel they have made. These opinions are important to consider because even if a client's fluency has improved it does not mean those involved accurately perceive the changes. These individuals' thoughts about their treatment and how they think their speech has truly changed, if at all, is important. Perception of effectiveness may impact generalization of skills, willingness to seek future treatment if needed, and overall client satisfaction.

In 2002 Yaruss, Quesal, and Murphy surveyed the opinions of people who stutter and their family members about stuttering treatment, both past experiences and future hopes. Their survey was distributed through the NSA, an organization of support for people who stutter, their families, and professionals. The study also addressed topics such as appropriate treatment options and preferences for early intervention practices.

The selection criteria of the study required participants to be a person who stutters or a family member of a person who stutters. The age of individuals ranged from 18 to 89 with a mean age of 48.4 years. Among participants, 116 identified as male, while 72 identified as female, and 12 chose not to indicate a gender. Of the 200 people who responded to the study, 176 identified themselves as a person who stutters, 56 responded as a family member of a person who stutters, and 32 qualified as both.

The findings of the study strongly supported a need for SLPs to consider incorporating a broader range of program goals with a wider variety set of focus areas while delivering treatment. Both attitudes about communication and management of stuttering were considered equally important.

This study was limited in a few ways. It did not include open-ended questions to reveal why participants responded as they did. Also, responses were obtained only from adults who stutter and family members who were of legal consenting age to participate (i.e. 18 years of age or older). While adults, parents, and family members may provide general insight on what they feel makes treatment effective it is not appropriate to infer that these opinions represent those of all children and adolescents as well. Further studies involving children and adolescents are needed to better understand what aspects of treatment are important to individuals within a younger age. A focus on younger ages is important because this is when prevalence is higher and when treatment can be extremely beneficial. Incorporating questions that provide more in-depth answers may also yield additional insight.

A retrospective study was conducted in 2002 by Rosemary Hayhow, Anne Marie Cray, and Pam Enderby. They specifically sought out the opinions of people who stammer about their previous therapy experiences. For clarification purposes, stammer is the British terminology for stutter. The investigators conducted their study of therapy views through paper form questionnaires. These questionnaires were distributed to the British Stammering Association, (BSA), a charity organization known for providing advice, support and information to people who stammer, as well as friends and family of people who stammer, speech-language therapists, and other professionals. The survey was also sent to Speech-Language Therapists (SLTs) who were asked to pass the materials passed on to their clients who met the selection criteria. The only criterion for the study was that individuals had to be a member of the BSA and to have stammered themselves.

A total of 1,058 surveys were mailed to BSA members and 118 surveys were sent to practicing SLTs. The SLTs were not asked to notify the researcher how many surveys they distributed to clients. There were 332 total survey responses received from BSA members and patients of SLTs with an age range of 16 years to 86 years (mean age of 38 years).

Almost half of the participants (49%) felt therapy was unhelpful during their childhood (16 years or younger). Many other respondents however, wished they had received support and therapy earlier. Some participants reported the usefulness of different therapy approaches varied throughout life depending on personal experiences and needs. Participants identified two therapy techniques as most beneficial: rate control and block modification.

As mentioned before, responses in this retrospective study were limited to an older age group of teens and adults. While retrospective insights are interesting, it would be informative to gain perspective on the feelings and opinions of children while they are actually receiving stuttering treatment. Research with school-age children and adolescents could provide responses with more detail and improve the overall validity and reliability of the results. It would be of interest to learn which specific aspects of treatment clients found unhelpful relative to the general attitude that therapy as a whole was ineffective. Better understanding of the specific areas in which clients would have liked support and the personal goals individuals had as children would have also been helpful.

Adult Client Views of Clinicians. It is rational to suspect that clients' feelings toward therapy and their opinions about its potential effectiveness could be influenced by their relationships with their clinicians. This concept has not been tested in a study with children or

adolescents; however, a study of the attitudes of adults who stutter toward their clinicians was conducted by Crystal and Eugene Cooper in 1969.

Cooper and Cooper were most interested in discovering whether client affect toward their clinicians was influenced by what stage of therapy the client was in. Client affect in this study referred to positive or negative attitudes. The researchers correlated clients' attitude ratings with each of four stages of Inter-Personal Communication Therapy (identification and structure, examination and confrontation, introspection and testing, and symptom modification) to see whether the client's attitudes toward their clinician varied across stages. The two research questions addressed the clients' stages in therapy and affect score as well as whether a common pattern of client affect variation existed for each stage of Inter-Personal Communications Therapy.

In total, 28 individuals with stuttering that was classifiable as vocationally handicapping were recruited to take part in the study. They were enrolled in the Adult Therapy Program at the Pennsylvania State University Speech and Hearing Clinic. The participants included 25 males and 3 females, ranging in age from 16 years to 38 years and 7 months. Each client was paired with two clinicians over the 20-week period. The clients' stage in therapy was gauged and affect was measured in relation to the four stages throughout the course of the 20 weeks.

Stages were measured once a week with the Snyder Client Affect Scale, a 200-item true/false questionnaire meant to determine the client's affective attitudes towards the clinician. Of the 28 individuals that participated in the study, 22 completed their survey for one 10-week period while six completed their surveys for both 10-week terms.

Clinicians gauged the clients' stage in therapy once a week as well by completing a summary and evaluation. The clinicians included behaviors and statements exhibited by both the client and clinician and also noted what stage they felt their client fit on a separate form. The investigators reviewed the weekly summaries and decided what stage of therapy best fit the client as well. The investigators then compared their choice in stage to the choice of the clinician. If the choices for stage did not match, the clinician, investigator, and Adult Therapy Program Supervisor met to discuss the rationale for the choices and determine which stage was most appropriate. Of the 496 judgements there were only 21 disagreements that called for a committee meeting and discussion.

The analysis revealed significant differences between the affect scores of all four stages of therapy, regardless of whether the participants completed all 4 stages of therapy or not. The numbers showed clients were more positive toward their clinicians during the fourth stage of therapy, which focused on symptom modification. Client ranking of each treatment stage preference is provided in **Table 2**.

This was comparable to the less positive attitudes reflected in the first stage known as identification and structure. The stage of introspection and testing (stage three), was ranked more positively than the first (identification and structure) and second (examination and confrontation) stages as well. The fourth stage typically received the most positive scores but there was a common variation to this pattern in which the third stage of therapy ranked better.

Table 2. Client Ranking of Treatment Stage Preference

Ranking of Stages Inter-Personal Communication Therapy	Stages of Inter-Personal Communication Therapy	Stages Inter-Personal Communication Therapy Explained
#4	Stage 1 Identification & Structure	Identifying behavioral traits that constitutes stuttering and discussing the structure of treatment to follow. Stage in which client rapport is to be built.
#3	Stage 2 Examination & Confrontation	Clinician directs client in the addressing stuttering behaviors by facilitating change. Clinician examines and confronts client resistance to changes they are asked to make.
#2	Stage 3 Introspection & Testing	Clinician encourages client to reflect and address their own feelings about their stutter to improve self-concept. Clinician continues to confront client resistance to challenges when appropriate.
#1	Stage 4 Symptom Modification	Instructional activities result in the client developing of a feeling of control over their speech even when moments of disfluency occur.

Knowing what stages of treatment correspond with positive affect towards clinicians could be valuable to consider when providing treatment to clients. This information can inform professionals about what treatment targets may require further client education. This improved understanding may be beneficial to increase client motivation to participate. It is of particular interest to know how younger clients perceive treatment objectives and how this corresponds with ratings of treatment outcome and satisfaction.

Adult Client Views of the Focus of Therapy. Studies of therapy preference in terms of stuttering modification and fluency shaping are not too common in literature. The previously mentioned study by Rosemary Hayhow, Anne Marie Cray, and Pam Enderby (2002) however, is one of the few exceptions. In addition to learning about retrospective views of childhood

therapy, the opinions of people who stutter were assessed related to their experiences in life and therapy, alternative remedies for stuttering that individuals have tried, and individuals' hopes for the future of speech therapy in regards to stuttering.

As previously described, 332 questionnaires were completed and received by Hayhow, Cray, and Enderby. Respondents' ages varied from 16 to 86 years, with a mean age of 38 years. The three main questions of the study included: What areas of life are most and least affected by stammering, what therapy approaches respondents found helpful, and if there were any alternative remedies individuals had tried to alleviate their disfluencies.

Leisure activities, friendships, and relationships were categorized as difficult during earlier years of life from most respondents. School and work were the second most commonly addressed areas of concern for survey respondents. These responses indicated potential areas of focus for therapy from a client standpoint.

The two most frequently referenced therapy techniques that clients identified as beneficial were rate control of speech, a fluency shaping technique, and block modification, a stuttering modification technique. Some participants also felt different therapy approaches were useful at different times in their lives. Unfortunately, no detail was given about how benefits of the approaches varied with life circumstances or age were included with this study. It would be interesting to know more specifically which parts of treatment the respondents found beneficial during the different times in their lives, including childhood compared to adolescence.

The findings of Hayhow and colleagues overall had both positive and negative aspects worth mentioning. The surveys distributed were able to reach a wide range of individuals and

gave the researchers access to many individual viewpoints. The study included questions with choices for responses but did not provide any opportunity for optional comments. This may have been somewhat limiting for gaining an in-depth understanding of why participants responded the way they did. An optional comment section may have been beneficial to include. The responses were also limited to BSA members and individuals currently receiving therapy. The input and opinions of young adults were underrepresented and those of children were completely omitted. It is important to keep in mind that a study conducted at the time when children are receiving treatment would provide results of great interest.

In 2008 Hearne, Packman, Onslow, and Quine investigated the opinions of treatment from the perspective of young adults who stuttered. The study examined the individual participants' experiences, reasons for seeking therapy, rationale for avoiding therapy, obstacles to finding therapy, experiences of therapy, and suggested improvements for therapy. The qualitative study incorporated feedback from 13 participants, 12 males and 1 female, ages 13 to 26 (mean of 17.15 years). Responses were obtained through in-person, semi-structured interviews and focus groups. The results revealed three key factors that the young adults believed therapy should incorporate, including: transfer tasks (generalization), working with different clinicians, and scheduling more follow-up appointments (Hearne, Packman, Onslow, & Quine, 2008).

The information provided is helpful in understanding what clients might view as effective for treatment. However, the factors listed do not provide a direct indication of whether a preference or even a need exists for specific therapy approaches, including stuttering modification or fluency shaping. While Hearne and her colleagues did not specify directions for

future studies it would be wise for further research to be done with a goal of obtaining responses from more participants overall. In an effort to increase the total number of participants, future studies may also want to consider widening the age range criteria to include younger individuals.

An important study that influenced development of the current research investigation was conducted by Venkatagiri in 2009. Venkatagiri was interested in gaining insight about whether adults who stutter prefer therapy focused on freedom versus therapy focused on fluency. The survey was open to adults and children as young as 13 years with parental consent. A history of receiving stuttering therapy was not listed as a requirement in the selection criteria.

The study was conducted through an online survey advertised by the NSA, American Speech-Language-Hearing Association (ASHA) announcements, and on both organizations' websites. The survey included personal questions, stuttering related questions, and questions about how one would manage stuttering if it were to occur in different scenarios. The questions came with answer choices that when chosen could be categorized as a selection of treatment oriented toward an outcome of fluency or freedom. The survey participants were not made aware of the classification system within the answers. The purpose of having questions with answers discretely characterized as fluency or freedom oriented was to determine if individual people who stuttered preferred one option over another. An example of a question from this survey would be "I feel that my interpersonal relationships would be much better:" with the answer choices "If I did not try to hide my stuttering" vs. "If I did not stutter", the first answer

choice being a “freedom” option and the latter being the answer choice for individuals who preferred fluency.

Venkatagiri received 216 completed surveys from a total of 152 males and 64 females. The age range of respondents was 19 to 60+ years. Interestingly, those who had attended therapy for less than five years answered the questions in a way that reflected a preference for an outcome of fluency; meanwhile those who had received therapy for more than five years were equally divided between a desire for fluency and freedom.

Item 1 of the survey asked participants what they wanted most, fluent speech or freedom to speak freely regardless of fluency. In response to this question 54% of participants chose the answer that correlated with a desire for fluency while 46% chose freedom to speak regardless of their fluency. Of the individuals who stated they had a preference for one outcome over another more than half (57%) showed ambivalence in their answers following Item 1. Individuals who received less than 5 years of therapy responded to questions in a way that indicated a preference for fluency. Participants who had received more than 5 years of therapy however were equally divided in preference for fluency vs. freedom.

Venkatagiri speculated the variation in adult response based on number of years in therapy could be attributed to the fact that many people who stutter who have had a longer history of therapy also have had longer history of repeated therapy failure. After experiencing repetitive treatment failure these individuals may develop a preference for speaking freely rather than continuing to try to speak fluently. It seems reasonable to hypothesize that years of experiences with stuttering therapy may also affect the views of younger clients. Venkatagiri’s findings are beneficial for understanding the views of adults who stutter. These results however

are not generalizable to younger children. Whether number of years in treatment or age impacts treatment outcome preferences of children and adolescents, is unknown. More research is needed to investigate this topic.

Parent Perspectives of Stuttering Treatment. In general, parents' participation in speech-therapy has not been researched immensely (Glogowska & Campbell, 2000). Correspondingly, parent perspectives about stuttering treatment are also very limited. A few surveys mention opening their response criteria to parents, along with SLPs and adults who stutter. These studies however, did not differentiate among the populations when reporting the response data. Parents' opinions of treatment are important to consider because these individuals often play influential roles in their child's treatment (Hayhow, 2009). Parents may be responsible for taking the child to and from treatment, practicing at home, and payment for services. If parents are dissatisfied, uninformed, or not involved in the treatment their child is receiving, it may be detrimental consequences to the treatment process.

A qualitative study of parents' experiences using the Lidcombe Program of Early Stuttering Intervention was conducted by Rosemarie Hayhow in 2009. The Lidcombe Program is a behavioral treatment approach for parents to implement. Parents are expected to give their children Parental Verbal Contingencies (PVCs) dependent on their speech fluency. They also rate the stuttering severity (SRs) of their child's speech daily. SLPs do measure the child's stuttering severity when visits are made to the clinic.

The sample population included 21 parents of 14 children who stutter. These parents were pursuing the Lidcombe Program and interested in participating in the study. The qualitative study was conducted through interview by one of five clinicians. Of the parents, 6

were interviewed twice about their overall experience with the treatment program. These interviews were conducted at the start of treatment and again throughout the study. The interviews were transcribed verbatim and then coded and analyzed using computer software. Responses were divided into three categories: *The Lidcombe Program as a straightforward Journey*, *The journey starts well but hits problems*, and *A problematic journey from the start*.

There were comments from seven parents categorized under *The Lidcombe Program as a straightforward Journey* were the most abundant. Parents whose perspectives fit this theme reported their child's stuttering became more predictable to them, making it easier to provide feedback and PVCs. Parents also thought that implementation of the Lidcombe program in their daily lives became easier. They reported their children were taking responsibility for their talking, meaning parents' roles became less necessary. Some parents reported they were skeptic of the program initially because they expected the SLP to provide the treatment. Many also said however it felt nice to be able to reassure their child, to help their child, and to hold a part of the responsibility in their child's treatment. One mother, however, did mention feeling like it would have been beneficial to have a support group of other parents trying to provide their child with the same treatment.

There were three comments from parent expressing their perspectives that were in the theme of *The journey starts well but hits problems*. These parents reported difficulty continuing with the program when disfluencies reoccurred or increased in severity. Respondents would have liked more guidance for how to use the program at home. Some also mentioned the responsivity of their child to PVCs decreased while annoyance increased.

Only two parents had perspectives that fell under the category of *A problematic journey from the start*. These parents did not trust their capability to use the program in a beneficial way for their child. They had a hard time implementing the program and their children dominated the experience of the home therapy treatment.

This qualitative study provided a great amount of detail regarding a specific treatment approach. While the researchers themselves state the findings of the study cannot be directly generalized to other parents implementing the Lidcombe Program, the results they found are interesting to think about in the context of parents and their involvement in their child's stuttering treatment in general. Hayhow's finding suggest parents who are involved and informed of their child's treatment are better able to help with generalization in daily life. Parents involved in their child's treatment felt it was beneficial in the long-run, even if it did not match their own beliefs about treatment initially. Responses suggest that some parents may be more comfortable addressing their child's speech than others. They also indicate some parents may need more information and support from SLPs than others.

Child Perspectives of Stuttering Treatment. There is a lack of investigations that have focused on the perspectives of children toward their stuttering treatment. In fact, no research whatsoever was found that addressed the attitudes of children and adolescents while they are still relatively close in age to when they received services. With how significant early intervention can be, it is quite surprising more research has not been done in this area. There was one study however that addressed adult attitudes toward stuttering treatment through reflection on childhood experiences. While the findings of retrospective studies may lack a high level of validity and reliability they do provide a certain amount of insight into this area.

Children & Adolescent Attitudes toward Stuttering Therapy. In 2014 a small scale pilot study was conducted by Salvo who surveyed 12 children who stutter, 6 who were under age 13, and 6 who were over age 13, to better understand the feelings of children and adolescents in regards to stuttering treatment. The Qualtrics survey was open to children between the ages of 8 to 17 years. Participants were required to have had a history of receiving speech therapy for stuttering and access to the internet. Information about the survey was sent to a long list of Wisconsin school SLPs, board recognized stuttering specialists throughout the United States, SLPs listed on the Stuttering Foundation of America (SFA) referral page, college professors, and NSA Family Chapter Leaders throughout the country. The survey was also promoted by the NSA through email and advertised on the NSA webpage.

Parental consent was obtained orally through a telephone conversation. The investigator asked for the parents' email addresses during the telephone conversation and then sent the survey link to the parent. The parents then gave written consent by checking a box and were then guided to a page for the minor to read. This page explained the purpose of the study, that the child was not obligated to participate, and that they could withdraw from the survey at any time without penalty. If the child clicked the box indicating they gave assent they were then directed to the next page with the survey questions.

Responses were categorized into two groups, one group for children ages 8 to 12 years, and one group for adolescents 13 to 18 years. A total of 12 participants responded, and were equally divided into two groups of six based on age. There were 11 boys and one girl. The one female participant was 10 years old meaning her responses fell into the younger age group.

The online survey was composed of 14 questions, including 5 about demographics, 4 about stuttering history, 4 about attitudes toward stuttering therapy, and 1 as confirmation that the individual was ready to submit their answers. Four main questions were of interest in the survey including: how helpful do you believe therapy has been, how much have you enjoyed stuttering therapy, how much has stuttering therapy affected the way others view you, if at all, and what outcomes would you want most from your stuttering therapy?

Based on descriptive statistics, no differences were found between age groups in response to how helpful therapy was believed to be or in how much therapy was enjoyed. Eleven of the 12 children and adolescents positively rated how helpful therapy was and how much therapy was enjoyed (rated 4 or 5). There was one outlier in the adolescent group who negatively rated how helpful therapy was and how much therapy was enjoyed (rated 1). There were differences found between groups in terms of how others viewed them as a result of therapy and what outcomes they desired from therapy. A majority of the adolescents (5 out of 6) felt therapy had no impact on how others viewed them while the younger children's responses varied widely. When asked what outcome they would want most from their stuttering therapy, a majority of the younger children (four of six) preferred to "feel ok if I stutter". In comparison, a majority of the adolescents (five of six) indicated what they wanted most was to "not stutter".

While this study provided an initial glimpse into the feelings of children and adolescents about their therapy there were several limitations. Although close to 1,000 professionals were contacted in efforts to increase participant numbers, the overall participant total was still small. This may have been attributed to the short timeframe of 2 to 3 months the survey was

available and the complicated consent process. Such a small sample size could not be seen as representative of the entire target population.

Also, participants were not required to have had stuttering therapy in recent years, only to have had a history of receiving service. The survey did not ask how long it had been since the participants last received services which may have negatively impacted the reliability of responses. For example, if the participants had not received therapy for a significant period of time, but responded to the questions, it is possible they may not have recalled their initial feelings and experiences accurately. It is recommended that future studies obtain a larger sample population. Revisions to the consent process and a longer survey period may help increase response totals. Including questions about demographics location during treatment, ethnicity, and more details about treatment history are also recommended as they may help better understand factors that could contribute to responses.

There remains a need for research of these questions. Doing so will improve SLPs understanding of the attitudes and needs of children and adolescents. As a results SLPs may be able to provide better services, improve overall therapy experiences, and decrease the number of stuttering disorders that persist into adulthood.

Central Factors Affecting Child and Adolescent Perspectives on Stuttering Therapy

Children and adolescents may have several different factors that impact their attitude toward stuttering treatment compared to adults. Examples of these factors include: neurological elements such as the extent of brain development, individual personality, temperament, and self-esteem, any concomitant speech or language disorders with stuttering, the amount of client acceptance, as well as social support and quality of life one has. It is

important to consider how these factors can affect clients' feelings about treatment and what is wanted from treatment overall.

Neurological elements. When it comes to the human brain there are many neural changes constantly occurring, starting in the womb and continuing throughout life. These changes that occur over time, including childhood, may also affect the experiences and perceptions of therapy in children and adolescents (Giedd, 2015). These neural changes include progressive development of parts of the brain, myelination of neural connections, and pruning of unnecessary networks (Giedd, 2015). All of these changes are meant to contribute to improved neural function. All of these changes do not occur simultaneously however meaning there is often an imbalance in the extent of their development, especially during the transition from childhood to adolescence (Giedd, 2015). Understanding neural development, and its possible impact on children and adolescents who stutter, provides insight into the child's experience of therapy and their views of it.

The imbalance among components in neural development previously mentioned is partially due to changes in white and gray matter that are occurring during the transition through adolescence. White matter and gray matter are two types of neural fibers, white matter and gray matter, which make up the brain (Webb & Adler, 2008). White matter is made up of groups of neural bodies coated in a substance called myelin. Myelin is what gives white matter its white color and is important for coordinating the timing and transmission of messages throughout the brain (Webb & Adler, 2008). Gray matter is made of neural fibers, similar to white matter, however it is not coated in myelin. The lack of myelin means gray matter is less efficient in the transmission of neural messages (Webb & Adler, 2008).

At approximately 10 years of age children typically have the highest amount gray matter in comparison to any other stage in life (Giedd, 2015). Adolescence is the time when gray matter begins to be pruned away while white matter increases in amount and strength (Giedd, 2015). The white matter that is developed and strengthened improves connections for things like using one's best judgment, getting along with other people, and long-term planning (Giedd, 2015). Improved connections that develop in teenage years from pruning and myelination also help the brain specialize in tasks like complex thinking and exhibiting appropriate social behaviors (Giedd, 2015). The younger someone is, the weaker their neural connections are expected to be. As a result, they are not as capable of using what is referred to as best judgment or to consider things like long-term planning. It is important to remember these connections do not all increase and improve at once (Giedd, 2015).

Age and correlated neural development may be important to consider when evaluating the opinions of children and adolescents and deciding what sort of treatment approach is best suited for the client. These differences in the development and strengthening of neural connections of children and adolescents can lead to differences in opinions, both in terms of desires for treatment outcomes and in overall response to treatment. Depending on neural development, one age group may show a stronger preference for treatment focused on fluency, while the other may prefer treatment focused on prevention of stuttering. One group may also have a more positive opinion of their therapy experiences compared to the other age group for the same reason.

During adolescence two main parts of the brain, the limbic system and the prefrontal cortex, begin develop to higher functioning levels. The growth in these areas account for

another neurological reason adolescents' views of treatment might vary in comparison to children (Giedd, 2015). The limbic system shows the most growth early on. This part of the brain responsible for increasing emotions. It is also the system that encourages teens to socialize with peers, develop relationships, pursue novel experiences, and explore new environments (Giedd, 2015). The prefrontal cortex develops much later and is the area responsible for controlling impulses, judging risks versus rewards, and navigating complex social relationships (Giedd, 2015). Based on the order of neural changes that occur within the brain systems, it is rational to hypothesize these changes may impact adolescents' expectations of treatment. Adolescents may experience an increase in emotions or emotional intensity as a result of these neural changes. They may also find themselves in complex situations that they are physiologically incapable of handling in reasonable or appropriate ways. Emotions, which are impacted by neural changes, play an important role in the later stages of persistent stuttering. The neural developmental factors governing emotional responses may impact adolescents differently from children, and thereby effect treatment expectations differently.

The study completed by Hearne, Packman, Onslow, and O'Brian (2008) that was described earlier aimed to determine what kind of treatment might be most beneficial for teenagers. Their conclusions speculated adolescents may lack motivation and foresight to see the future benefits of long-term participation in treatment homework tasks. Their findings also suggested foresight could be transferable to motivation if teenagers possessed the capabilities to use it. Although their study needed improvements in terms of selection criteria and total number of participants it is especially noteworthy that their findings fall in line with the physiological and cognitive changes adolescents experience.

Personality, temperament, and self-esteem. As previously mentioned, temperament and personality fall within the realm of extratherapeutic change, a factor responsible for nearly half (40%) of treatment outcomes (Lambert, 1992; Lambert & Asay, 2002). Temperament and personality affect a client's willingness and ability to take risks, which is important for treatment outcomes (Yalom, 2002; Zebrowski & Kelly, 2002).

Self-esteem refers to the judgments one makes about themselves and the resultant value they place on themselves. Self-esteem typically improves with age and tends to be at its lowest point during late childhood and early adolescence (Oswalt & Zupanick, 2015). Until self-esteem improves, children in the early stages of adolescence may encounter significant, new challenges during this particular time period in life (Steinberg & Sheffield Morris, 2001). Self-esteem improves with age because youth begin to understand that outcomes can rely on many different factors like hard work, perseverance, natural talent, and ability (Oswalt & Zupanick, 2015).

Regardless of age, self-esteem has been found to correlate with factors including the support and approval of peers and parents, the ability to adjust to situations, and the extent of success in school (Steinberg & Sheffield Morris, 2001). Self-confidence, a quality that emerges as a result of self-esteem, has been found to be a prominent feature in overcoming some of the challenges associated with treatment in a study of adolescents who stutter and treatment outcomes (Hearne, Packman, Onslow, & O'Brian, 2008). Knowing the importance of factors such as self-esteem, approval of others, capability to adjust, and academic success in treatment indicates areas of concern for treatment. While Hearne and colleagues (2008) stress these factors are important at any age, knowing if and when any may take precedence for children or

adolescents is relevant for SLPs to consider as it may influence their opinions toward treatment and therapy success overall.

Concomitant Speech or Language Disorders. It is important to be aware of the number of children with fluency disorders who experience co-occurring speech or language disorders as well. Studies suggest that nearly half of children with fluency disorders often experience co-occurring disorders of phonology and/or articulation, as well as language disorders, learning disabilities, and reading disabilities (Blood, Ridenour, Qualls, & Hammer, 2003; Arndt & Healey, 2001). Recognizing the presence of concomitant disorders is important because it may mean different assessment and treatment approaches are necessary (Wolk, Edwards, & Conture, 1993). Co-occurring disorders may also negatively impact the rate of treatment progress and overall treatment outcomes (Arndt & Healey, 2001).

When addressing the opinions of children and adolescents who stutter it is important to know if treatment received was for stuttering as well as other co-occurring speech disorders. A concomitant disorder may impact therapy and as a result, the opinions of children and adolescents about the treatment they've received as well. Opinions of children who received treatment for concomitant disorders as well as fluency may differ as a result of the variation in treatment they receive compared to peers who stutter but do not have concomitant speech disorders.

Client Acceptance. Client acceptance refers to one's willingness to acknowledge a problem, experience it for what it is, and address it in new ways. Its importance in stuttering treatment is debated by clinicians and experts in the field (Yaruss et al., 2012). Acceptance of stuttering may vary for people who stutter depending on how their speech disorder impacts

their life (Yaruss, et al., 2012). Other aspects that are important to treatment success include clients' attitude towards themselves, motivation, feelings about communication, self-acceptance, and self-confidence (DiLollo, Neimeyer, & Manning, 2002; Guitar 1976; Guitar & Bass, 1978; Plexico, Manning, & DiLollo, 2005). These factors may be impacted by individual differences like age, number of years in treatment, and personal goals for treatment outcome (Beilby, Byrnes, & Yaruss, 2012).

Social Support and Quality of Life. Fluency can be highly important when it comes to an individual's development socially, educationally, and personally (Yaruss, 2010). This can be especially true for elementary, middle, and high school individuals. As stuttering disorder has the potential to hinder academic as well as occupational achievement and social communication (Yaruss, 2010). Social support for children and adolescents who stutter can consist of many different people, including, family, teachers, stuttering support group members, SLPs, and peers. Stuttering and the support a person has can both impact a person's overall quality of life. Quality of life refers to the amount of satisfaction one has with their life or their general sense of well-being (Yaruss, 2010). The impact of speech on quality of life varies for children who stutter compared to their nonstuttering peers. Quality of life scores, obtained through self-reporting of a modified version of the *Overall Assessment of the Speaker's Experience of Stuttering (OASES)*, have been found to be significantly lower for children and adolescents who stuttered compared to those who do not (Beilby, Byrnes, & Yaruss, 2012). Self-awareness and knowledge of stuttering experiences, two components of quality of life assessed in the *OASES*, have also been found to correlate with stuttered speech frequency (Beilby, et al., 2012).

The difference in quality of life between peers who stutter and those who do not may have been related to the lack of self-awareness and knowledge peers who do not stutter possess regarding their speech. Meanwhile the correlation between frequency of stuttering and knowledge and self-awareness of speech suggests that as children continue to stutter over time their negativity in response to their speaking skills increase (Beilby, et al., 2012).

One concern with the *OASES*, as well as any other assessment that involves child self-reporting, is the question of validity of the data obtained. This issue was examined when 426 children and adolescents, ages 7 to 18, were surveyed (29 questions) regarding their emotional and behavioral tendencies (McMillan & Abell, 2006). The results indicated both children and adolescents were capable of self-reporting valid responses to questions regarding their emotional and behavioral state.

Studies have shown it's not uncommon for children who stutter to be viewed as lower in terms of social status compared to their nonstuttering peers (Davis, Howell, & Cooke, 2002). These negative attitudes or feelings of nonstuttering children toward their fellow nonstuttering peers have been seen in children as young as preschool age due to lack of understanding (Weidner, St. Louis, Burgess, & LeMasters, 2015). This can be especially significant when working with adolescents who stutter because adolescence is the stage in life when not being different from peers and acceptance by peers is extremely important (Hearne et al., 2008).

Children who stutter are also more likely to be excluded socially compared to nonstuttering peers. When asked to rate their peers, children who do not stutter are more commonly labeled as leaders than children who stutter (Davis et al., 2002). Children who stutter are also more likely to be the victims of bullying. Lack of social support can exacerbate

symptoms of anxiety and reduce self-confidence (Liddle, H., James, S., & Hardman, M., 2011) which can lead to lower quality of life. Meanwhile, having adequate social support from one's environment can improve quality of life as well as treatment outcomes (Yaruss, et al., 2002; Lambert & Asay, 2004; Swartz, Irani, & Gabel, 2012).

Research shows children who stutter commonly seek help when bullying occurs (Davis et al., 2002). Studies have shown however that SLPs are often uncomfortable and feel they lack competence when treating fluency disorders (Yaruss, Coleman, & Quesal, 2012). Children who stutter may be hesitant to seek support from adults in their educational community if they feel the adult is uninformed about their speech disorder. If children or adolescents feel uncomfortable approaching an adult in their life it may indicate an even larger lack of social support beyond peers.

If SLPs had a greater understanding of the quality of life and social support needs of children and adolescents who stutter they would be able to provide better services geared toward what is important to youth. Improving the information available to SLPs may increase the amount of trust a child has in their SLP. Increasing trust gives children a person to confide in and leads to an increase of social support. An improvement of understanding about what children and adolescent needs in treatment, including social support, can lead to improved quality of life, client-clinician relationships, and treatment outcomes overall.

Summary

Through analysis of the published articles available on preference for stuttering treatment it is evident that there has been a lack of research on the opinions of school-age children, adolescents, and parents of children who stutter. This lack of research may partly be

due to how difficult the consent process is for minors compared to the consent process for adults. Another factor that may contribute to the lack of research in this area is the possible sensitivity children and adolescents may have when responding to questions about the topic at hand. Eligible participants may be reluctant to participate if they are sensitive to survey questions of this nature. Also the wide range of language comprehension that may exist for the age groups of interest may lead to some difficulty in terms of word choice during creation of the survey instrument for the population of interest.

Several studies have had adults respond to surveys retrospectively about their own past speech therapy experiences as children. While data from adult clients reflecting on their past experiences as children or surveys of parents of children who stutter may be helpful, they cannot be reliably generalized to the population of children and adolescents who stutter currently. It is important to gain insight about the perspectives of children and adolescents while these individuals are still within the actual age range of interest. Time can have an impact on the answers given, whether positively or negatively, we do not know. The recollections of adults over time may also be very different from what they actually felt or experienced during their younger years.

While parents may be able to provide some insight into the possible feelings their children may have it would be of great value to learn if any preferences for treatment outcomes exist for children and adolescents from these individuals themselves. Adults may not be fully aware of all of the thoughts and feelings their child has. Parents can also be vulnerable to concern about how certain responses could reflect on their child. This may result in inaccurate answers in attempt to sound more socially acceptable rather than honest. Children

may be more honest with their answers and less likely to consider whether their answers will reflect poorly on them, which they would not. Honest, reliable answers are what the researchers seek and no repercussions will occur for responding to survey questions in such a way.

Statement of Purpose

The main purpose of this study therefore, was to investigate whether age makes a difference in the perspectives of children (ages 8-12 years old), adolescents (ages 13-17 years old), and parents related to stuttering treatment. Specific research questions included whether age impacts: 1) the extent of satisfaction with stuttering treatment? 2) the extent stuttering treatment is thought to have improved speech fluency? 3) the extent stuttering treatment is thought to have improved one's skills as a communicator? and 4) the preferences for the specific stuttering treatment outcome?

The perspectives of participants are important to obtain while they are still young and much closer age-wise to the time of treatment because responses can be expected to be more accurate and representative of their views when compared to retrospective reflection later on when they are adults. A better understanding of these perspectives is important for SLPs who work with children and adolescents who stutter, because it may impact the selection of goals, treatment activities, and interpretation of progress.

A secondary purpose of this study was to investigate whether the perspectives of children and adolescents differ from their parents. After performing a search of previous studies very little literature could be found assessing the view of parents regarding their child's stuttering treatment. Specific research questions included whether parents and children differ in their views of: 1) the extent of satisfaction with stuttering treatment? 2) the extent stuttering treatment is thought to have improved speech fluency? and 3) the extent stuttering treatment is thought to have improved one's skills as a communicator? 4) the preferences for the specific stuttering treatment outcome?

The comparison of perspectives between parents and their children is important to SLPs because it may impact the extent and focus of counseling and education with parents and their children during discussions about treatment goals and interpretation of progress.

Demographics including geographical location, ethnicity, gender, and language/s stuttered, were obtained so the nature of the sample population would be interpreted appropriately. For similar reasons, background history of the stuttering and stuttering treatment, including age of stuttering onset, number of years in treatment, treatment setting, additional areas of treatment need, the goals of stuttering treatment, and the number of years since last stuttering treatment session, were obtained.

Survey responses were assessed for trends in number of years spent in stuttering treatment and whether differences appeared to impact responses to questions about stuttering treatment satisfaction, perceived benefits of stuttering treatment, and preferred treatment outcomes. In the study by Venkatagiri responses were seen to vary for participants who had less than 5 years of therapy compared to those who had more than 5 years. It was of interest to see if a response pattern existed for adolescents, children, and parents, as this information may have provided insight for SLPs when considering the structure of treatment intervention and goals.

The comparison of perspectives between parents and children and adolescents who stutter, with consideration to the impact of age and number of years in stuttering treatment, is important to understand. This understanding is important because it may impact the selection of goals, treatment activities, and interpretation of progress. These factors may also provide valuable information that may impact the extent and focus of counseling and education with

parents and their children during discussions about treatment goals and interpretation of progress.

Based on previous research it is hypothesized that children who stutter (ages 8 to 12 years) and their parents will hold more positive views about stuttering treatment, including how helpful it has been. This is expected because children who stutter are likely to have experienced less time in therapy with unmet success (Yaruss, et al., 2002). Children are also less likely to have as much concern for negative peer reactions compared to adolescents as adolescence is the time when being different is least desirable (Hearne, et. al., 2008). As a result, children and their parents are expected to respond in favor of treatment geared toward outcomes of “freedom”, or saying what they want regardless of fluency. Variability may be seen in responses however with consideration to number of years in therapy. If children have had less than 5 years of treatment a preference for therapy targetinng fluency may exist, similar to the finding of Venkatagiri (2009).

Contrastively, the adolescent participants who stutter (ages 13 to 17 years) and their parents are suspected to have negative attitudes about stuttering treatment they have received compared to the other respondents. This is expected based on the anticipated concern for negative reactions from peers (Hearne et al., 2008) and discouragement that therapy has not met with more success sooner (Venkatagiri, 2009). This discouragement for the adolescent participants could result from the lack of maturity to rationalize expectations of outcomes that depend on one’s capabilities compared to outcomes that can be influenced by hard work alone (Oswalt & Zupanick, 2015). The adolescents and their parents are also expected to have a preference for treatment targeting fluency above all else. This is based on the knowledge that

those transitioning from childhood to adolescence have an increase in concern about fitting in with their peers and being disconnected or excluded based on differences (Hearne, et al., 2008).

CHAPTER 3

Methods

Participants

Selection Criteria. To be eligible for the study, participants had to: 1) have a history of diagnosed stuttering disorder 2) have a history of receiving speech therapy for stuttering, and 3) be between the ages of 8 and 17 years. Participants also needed 4) to have internet access and 5) begin stuttering at 12 years of age or younger. Another requirement for data obtained to be analyzed was 6) parental consent. The age groups of interest were children (ages 8 to 12 years) and adolescents (ages 13 to 17 years).

Rationale for Selection. Participants were required to have had a history of receiving therapy in order to ensure the responses received were truly reflective of stuttering therapy experiences. Participants were also required to have experienced onset of stuttering by 12 years of age to reduce concern for the presence of stuttering cases that were not developmental. Participants were required to be between the ages of 8 and 17 years. These criteria were established to limit the perspectives to treatment of minors rather than adults, and to lessen the possibility of reduced response reliability by very young participants.

A requirement for a timeframe in which treatment for stuttering was last attended was not included in the selection criteria to avoid limiting the number of survey participants. Parent/guardian participants were however asked how long it had been since their child last received therapy in the survey questions. The responses to this question were taken into consideration when reviewing the participant responses as extended gaps of time between treatment and survey completion may have had an impact on the reliability of the response.

Recruitment. Study announcements providing the web link to the online survey were sent to Wisconsin school speech language pathologists, board-certified stuttering specialists, SFA referrals, college professors, Stuttering Day Camp coordinators, ASHA Special Interest Group (SIG) 4 Fluency and Fluency Disorders members, and NSA Family Chapter Leaders throughout the country. After approval by the NSA research committee, the survey was promoted by the NSA through webpage and social media announcements as well as emails to members. Notifications for the survey were also posted to webpages and social media sites geared toward stuttering support and intervention.

Contact efforts for recruitment were made via email using public email addresses. The initial email informed individuals and the clientele they served of the research opportunity. Professionals were asked to pass along the request to any parents or guardians of individuals they felt qualified for the study based on the eligibility criteria. In the recruitment email parents and guardians were made aware of the selection criteria necessary for their child to participate. The original recruitment Email is shown in **Appendix A**.

As the study progressed, and numbers of participants failed to increase, revisions were made to the introduction of the recruitment email and the study announcement. These revisions were constructed with the intention of increasing researcher to email-recipient rapport and easing the understanding of information about the study. Once the revised recruitment email was submitted and approved by the University of Wisconsin-Milwaukee (UWM) Institutional Review Board (IRB), emails were sent again to the aforementioned professionals to remind and encourage recruitment of potential participants. The modified recruitment email can be seen in **Appendix B**. The modified recruitment email and webpage

study announcement were sent to the SFA and international Stuttering Association in June; there was a substantial increase in participant responses after these modified recruitment efforts were distributed.

Survey Responses Received & Considered. At the time that the Qualtrics survey closed 58 surveys had been started but 23 had to be disqualified. Seventeen surveys were eliminated because responses were only completed through the initial consent and selection criteria questions. Four additional surveys were disqualified because the participants did not meet the selection criteria of receiving treatment, either currently or in the past. Finally, two adolescent surveys were not included in the data because they did not provide the required parental consent. There were a total of 24 surveys with both the parent and child ($n=11$) or adolescent ($n=13$) portions completed as intended. There were 11 surveys with only the parent portion of the survey completed but missing the child/adolescent portion of the questions.

All parent surveys that were completed and met the selection criteria ($n=35$) were included in the parent response data set, even if their child/adolescent did not participate. The reason these data were included was because research regarding parent/guardian perspectives has been limited and so it was believed to be important to include the maximum amount of data obtained. These parent responses were therefore unequally matched to a total of 24 children's survey portions, consisting of 11 by children (ages 8-12) and 13 adolescents (ages 13-17). Therefore, the analysis of the overall data set consisted of 35 total parent participants, 18 parents of children and 17 parents of adolescents, as well as 11 child participants and 13 adolescent participants.

Overall Demographics of Sample Population

Descriptive statistics were used to examine the participant demographic information collected from the 35 parents/guardians in the initial portion of the survey. Information regarding parent/guardian relationship to their child was collected in the consent process. Their child's age was reported in the selection criteria component. All other standard demographic information (i.e. gender, ethnicity, and location of residency) was collected in the initial survey questions. Overall participant demographic information is represented in **Table 3**.

Demographics by Age Group

As previously mentioned, parent surveys that were complete and met the selection criteria ($n=35$) were also analyzed descriptively, even if their child/adolescent did not participate. This meant that survey responses were collected from four unequal participant groups: 1) Parents of children ages 8 to 12 years ($n=18$), 2) Parents of adolescents ages 13 to 17 years ($n=17$), 3) Children who stutter ages 8 to 12 years ($n=11$), 4) Children who stutter ages 13 to 17 ($n=13$). As explained earlier, all demographic information was collected from the parent/guardian concerning their children. Parent/guardian participants' ages and demographic data were not collected; the only information gathered about the parents themselves, was their relationship (mother/father/other) to their child/adolescent.

Table 3. Overall Frequency & Percentage of Parent/Guardian Responses for Demographic Variables of Children and Adolescents

	Number (N=35)	Percent
Parent Relationship		
Mother	30	86%
Father	4	11%
Other Guardian	1	3%
Child Age		
8-12 years	18	51%
13-17 years	17	49%
Gender		
Male	26	74%
Female	9	26%
Other	0	0%
Ethnicity		
Caucasian/White	26	74%
Multi-Racial	4	11%
Black or African American	2	6%
Hispanic/Latino	1	3%
Asian/Pacific Islander	1	3%
European	1	3%
Country		
USA	31	88%
Europe	2	6%
South America	2	6%
U.S. Region		
Midwest	12	39%
West	8	26%
South	7	23%
Northeast	4	12%

Specific numbers and percentages regarding demographic variables of the children and adolescents can be found in **Table 4**. The columns on the left describe demographics of the children and adolescents for the entire group of 35 parents (“All Parent Surveys”). The columns on the right describe the children and adolescents who completed their portion of the survey questions (“Child/Adolescent Surveys”).

Table 4. Frequency & Percentages for Demographic Variables by Participant Group: All Parent Surveys vs. Child/Adolescent Surveys.

	All Parent Surveys (N= 35)				Child/Adolescent Surveys (n=24)			
	Children		Adolescents		Children		Adolescents	
	N= 18	51%	N= 17	49%	n=11	46%	n=13	54%
Parent Relationship								
Mother	17	94%	13	76%	11	100%	9	68%
Father	1	6%	3	18%	0	0%	3	24%
Other Guardian	0	0%	1	6%	0	0%	1	8%
Child/Adolescent Age								
8 Years Old	3	17%	N/A	--%	2	18%	N/A	--%
9 Years Old	5	28%	N/A	--%	2	18%	N/A	--%
10 Years Old	1	6%	N/A	--%	1	10%	N/A	--%
11 Years Old	4	21%	N/A	--%	3	27%	N/A	--%
12 Years Old	5	28%	N/A	--%	3	27%	N/A	--%
13 Years Old	N/A	--%	3	18%	N/A	--%	3	24%
14 Years Old	N/A	--%	4	24%	N/A	--%	2	15%
15 Years Old	N/A	--%	5	29%	N/A	--%	4	31%
16 Years Old	N/A	--%	2	11%	N/A	--%	2	15%
17 Years Old	N/A	--%	3	18%	N/A	--%	2	15%
Gender								
Male	13	72%	13	76%	9	82%	10	76%
Female	5	28%	4	24%	2	18%	3	24%
Ethnicity								
Caucasian/White	13	72%	13	77%	8	70%	10	76%
Multi-Racial	2	11%	2	11%	1	10%	1	8%
Black or African American	1	6%	1	6%	1	10%	1	8%
Asian/Pacific Islander	1	6%	0	0%	1	10%	0	0%
Hispanic/Latino	1	6%	0	0%	0	0%	0	0%
European	0	0%	1	6%	0	0%	1	8%
Country								
USA	16	88%	15	89%	10	90%	11	85%
South America	2	11%	0	0%	1	10%	0	0%
Europe	0	0%	2	11%	0	0%	2	15%
U.S. Region								
Midwest	6	38%	6	35%	3	27%	6	60
West	5	21%	3	19%	6	53%	1	8%
South	2	13%	5	29%	1	10%	3	24%
Northeast	3	19%	1	6%	1	10%	1	8%

Parent Participants & Relationships by Age Group. Of the 18 who identified as parents of children, there were 17 mothers and 1 father. The 17 parents/guardians of adolescents included 13 mothers, 3 fathers, and 1 guardian who did not specify their relationship. As shown in **Table 4**, parents of children had less father participants ($n=1$) than the parents of adolescents ($n=3$).

Ages of Child & Adolescent Participants by Age Group. The mean age of the child group was 10.17 years, with a range from 8 to 12 years. The mean age of the adolescent group was 14.88 years with a range from 13 to 17 years. The most commonly reported age for children was 9 years old (28%) and 12 years old (28%). Meanwhile, the age of most adolescents was 15 years old (29%).

Gender by Age Group. Parents of children identified 72% as male and 28% as female. Parents of adolescents reported a similar number of males (76%) and females (24%). The proportion of males to females reported for the children and adolescents who stutter was fairly consistent with the research regarding the gender ratio. An approximate 3:1 ratio of males to females can be expected based on the gender ratio that exists for children who stutter (Yairi & Ambrose, 2005).

Ethnicity by Age Group. The most commonly reported ethnicity for both child and adolescent participants was Caucasian. The parents of children identified Caucasian (72%), Multi-Racial (11%), and several other minorities (18%). Adolescents paralleled the child participants: 77% Caucasian, 11% Multi-Racial, and 12% other minorities.

Location of Residency by Age Group. As seen in **Table 4**, more than 80% of parents of children and adolescents reported the United States as their child/adolescent's country of

residency. For reporting purposes, demographic information regarding U.S. location of treatment was grouped into four regions. The four regions of the United States are listed with their coinciding states in **Table 5**. For the children residing in the United States, 38% live in the Midwest, 31% in the West, 19% in the North East, and 13% the South. There were 2 children and 2 adolescents identified as living outside the United States. Of the 17 adolescents who reside in the United States, a majority (35%) are from the Midwest. The remaining adolescent participants include 6% from the North East, 29% from the South, and 19% from the West.

Table 5. *Regions of the United States Explained*

North East	Midwest	West	South
Connecticut	Illinois	Alaska	Alabama
Maine	Indiana	Arizona	Arkansas
Massachusetts	Iowa	California	Delaware
New Hampshire	Kansas	Colorado	Florida
New Jersey	Michigan	Hawaii	Georgia
New York	Minnesota	Idaho	Kentucky
Pennsylvania	Missouri	Montana	Louisiana
Rhode Island	Nebraska	Nevada	Maryland
Vermont	North Dakota	New Mexico	Mississippi
	Ohio	Oregon	North Carolina
	South Dakota	Utah	Oklahoma
	Wisconsin	Washington	South Carolina
		Wyoming	Tennessee
			Texas
			Virginia
			Washington D.C.
			West Virginia

Overall Stuttering and Treatment History

Parents and guardians completed questions related to their child's stuttering and stuttering treatment history to improve understanding of the sample population. Questions of this nature included items such as age of stuttering onset, age their child started treatment, and the language in which stuttering treatment was delivered. Parents/guardians also

responded to questions regarding the length of time their child spent in stuttering treatment, how long ago their child last received stuttering treatment, locations of stuttering treatment, and other concomitant treatment areas. Refer to **Table 6** for data regarding overall participant stuttering and treatment history.

Age of Stuttering Onset by Age Group. Age of stuttering onset as reported by parents of children alone was fairly similar to the results of the overall sample population, as shown in **Table 7**. The most reported onset age was Preschool age (56%), followed by Kindergarten age (33%), and then Primary School age (11%). The age of onset parents of adolescents most commonly reported was Kindergarten age (53%), followed by Preschool age (29%), and then Primary school age (18%). This data aligns with research that states a majority of stuttering onset occurs by 48 months of age (Yairi & Ambrose, 2005).

Language of Treatment by Age Group. English was the main language selected by parents of children (88%). Other languages reported included Spanish (6%) and Portuguese (6%). The majority of parents/guardians of adolescents group (88%) also selected English, however a few also selected Portuguese (6%) and Multi-Lingual (6%). This information regarding treatment language by age group can be seen in **Table 7**.

Age Treatment Started by Age Group. A majority of parents of children reported treatment began during Preschool age (39%). As seen in **Table 7**, 6 children were identified as receiving treatment during Kindergarten age (33%). A few parents of children selected Primary school age (28%). Most parents of adolescents reported treatment began during Kindergarten age (47%), followed by Primary school age (35%) and Secondary school age (18%).

Table 6. Total Frequency & Percentage of Parent/Guardian Responses for Stuttering and Treatment History Variables.

	Total (N=35)	Percent
Age of Stuttering Onset		
Preschool Age	15	43%
Kindergarten Age	15	43%
Primary School Age	5	14%
Secondary School Age	0	0%
Age Treatment Started		
Preschool Age	7	20%
Kindergarten Age	14	40%
Primary School Age	11	31%
Secondary School Age	3	9%
Treatment Language		
English	31	89%
Portuguese	2	6%
Spanish	1	3%
Multi-Lingual	1	3%
Years in Treatment		
Less than 2 years	6	17%
3-4 years	8	23%
5-8 years	17	49%
More than 8 years	4	11%
Years Since Treatment		
Currently enrolled	26	75%
Less than 2 years	5	14%
3-4 years	4	11%
Treatment Location		
1 Location	12	34%
2 Locations	18	51%
3 Locations	3	9%
4 Locations	2	6%
Other Concomitant Treatment Areas		
0 Concomitant Tx Areas	10	27%
1 Concomitant Tx Area	17	49%
2 Concomitant Tx Areas	3	9%
3 Concomitant Tx Areas	3	9%
4 Concomitant Tx Areas	1	3%
5 Concomitant Tx Areas	1	3%

Table 7. Frequency & Percentage of Stuttering and Treatment History Responses by Participant Group: All Parent Surveys vs. Child/Adolescent Surveys.

	All Parent Surveys (N= 35)				Child/Adolescent Surveys (n=24)			
	Children		Adolescents		Children		Adolescents	
	N= 18	51%	N=17	49%	n= 11	46%	n= 13	54%
Age of Stuttering Onset								
Preschool Age	10	56%	5	29%	5	46%	5	38%
Kindergarten Age	6	33%	9	53%	4	36%	6	46%
Primary School Age	2	11%	3	18%	2	18%	2	15%
Secondary School Age	0	0%	0	0%	0	0%	0	0%
Age Treatment Started								
Preschool Age	7	39%	0	0%	4	36%	0	0%
Kindergarten Age	6	33%	8	47%	3	28%	6	46%
Primary School Age	5	28%	6	35%	4	36%	5	38%
Secondary School Age	0	0%	3	18%	0	0%	2	15%
Treatment Language								
English	16	88%	15	88%	10	91%	11	84%
Spanish	1	6%	0	0%	0	0%	0	0%
Portuguese	1	6%	1	6%	1	9%	1	8%
Multi-Lingual	0	0%	1	6%	0	0%	1	8%
Years in Treatment								
Less than 2 years	3	17%	3	18%	2	18%	3	23%
3-4 years	3	17%	5	29%	2	18%	3	23%
5-8 years	11	61%	6	35%	6	55%	4	31%
More than 8 years	1	5%	3	18%	1	9%	3	23%
Years Since Treatment								
Currently enrolled	15	83%	11	65%	9	82%	8	62%
Less than 2 years	1	6%	4	24%	1	9%	3	23%
3-4 years	2	11%	2	11%	1	9%	2	15%
Treatment Location								
1 Location	8	44%	4	24%	4	36%	3	23%
2 Locations	8	44%	10	59%	5	46%	7	54%
3 Locations	1	6%	2	11%	1	9%	2	15%
4 Locations	1	6%	1	6%	1	9%	1	8%
Other Concomitant Treatment Areas								
0 Concomitant Tx Areas	4	21%	6	35%	3	28%	3	23%
1 Concomitant Tx Area	10	56%	7	42%	7	63%	6	46%
2 Concomitant Tx Areas	1	6%	2	11%	1	9%	2	15%
3 Concomitant Tx Areas	2	11%	1	6%	0	0%	1	8%
4 Concomitant Tx Areas	1	6%	0	0%	0	0%	0	0%
5 Concomitant Tx Areas	0	0%	1	6%	0	0%	1	8%

Years in Treatment & Years since Treatment by Age Group. The total number of years in treatment reported by parents of children ranged from 1 to 10 years, with a majority falling in the 5 to 8-year range (61%). Years since last treatment experience for parents of children also varied with a range of less than 2 to four years. Most children were reported as currently enrolled in treatment (83%). Parents of adolescents reported a range of total years in treatment from less than 2 to more than 10 years, with most in the 5 to 8 year (35%) range. **Table 7** shows the amount of time since last treatment experience for adolescents ranged from less than two years to four years. Similar to the children, most adolescents were identified as currently enrolled in treatment (65%).

Stuttering Treatment Locations by Age Group. Of the child participants, most received treatment in a school ($n=15$), although a substantial amount also reported receiving services with private speech clinicians ($n=8$). Other locations children received treatment included University clinics ($n=5$), hospitals or medical clinics ($n=3$), and intensive treatment programs ($n=1$). Most adolescents also received treatment in a school ($n=15$) and/or with private SLPs ($n=11$). Other locations of treatment locations for adolescents included intensive treatment programs ($n=4$), University clinics ($n=3$), hospitals or medical clinics ($n=1$), and psychologists ($n=1$). The proportion of specific locations children and adolescents received stuttering treatment can be seen in **Figure 2**.

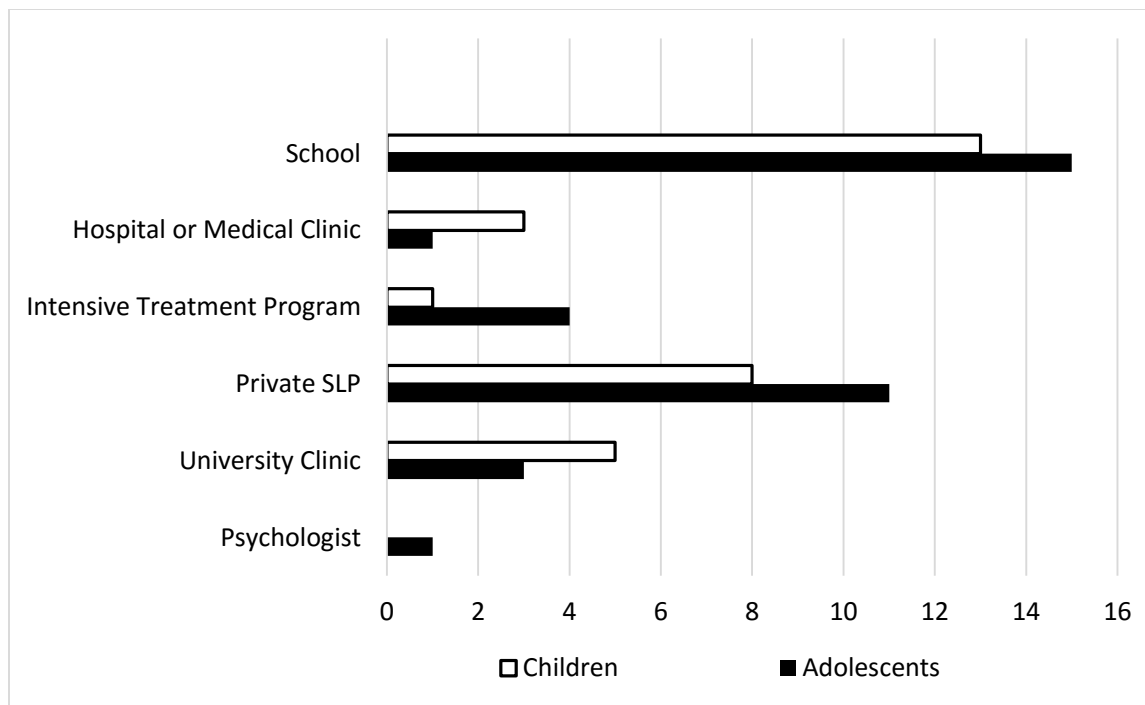


Figure 2. *Proportion of specific locations children and adolescents received stuttering treatment.*

Other Treatment Areas by Age Group. Participants were asked to select all concomitant treatment areas that may apply. **Table 7** shows the numbers of the selected concomitant treatment areas by age group. The most common other areas of treatment reported by parents of child participants included emotions and behavior ($n=7$) followed by cognition and/or attention ($n=5$). The other treatment areas reported by parents of children included language and reading ($n=4$), sensory processing ($n=4$), no other treatment areas ($n=3$), and articulation and phonology ($n=2$). The most common other areas reported by parents of adolescents included articulation and/or phonology ($n=8$) and no other treatment areas ($n=5$). Other treatment areas reported by parents of adolescents included emotions and behaviors ($n=4$), language and reading ($n=3$), cognition and attention ($n=2$) and sensory processing ($n=2$). The proportion of specific concomitant treatment areas can be seen in **Figure 3**.

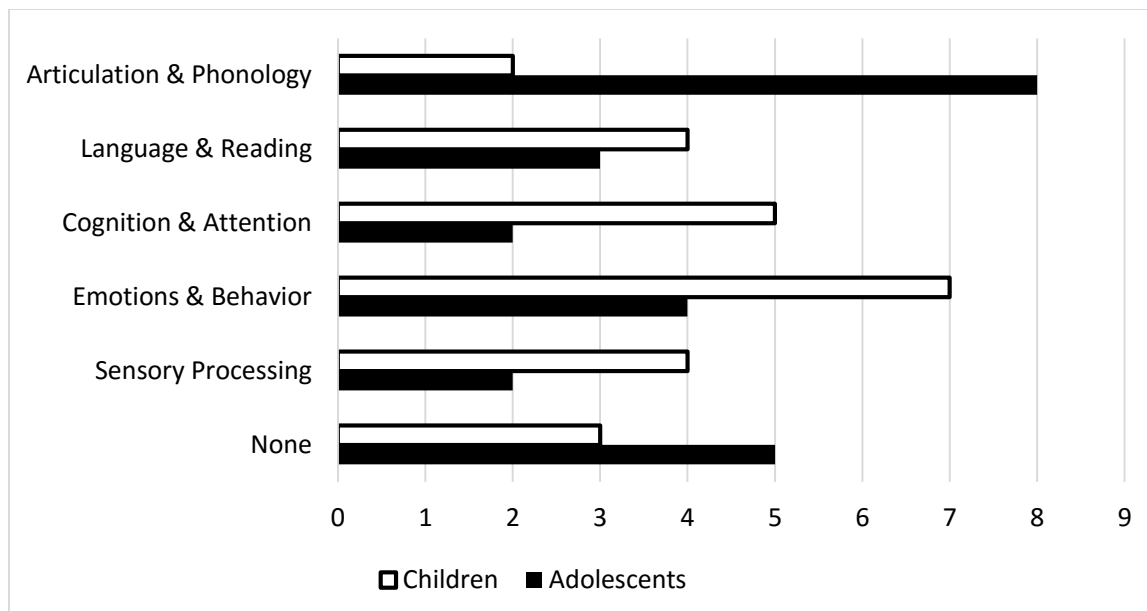


Figure 3. *Proportion of specific concomitant treatment areas.*

Summary of Participant Treatment History. Treatment history of the sample population was comprised largely of children with a preschool ($n=15$) or kindergarten age ($n=15$) of stuttering onset. More than half of the sample population began treatment by kindergarten age ($n=21$), had 5 to 8 years in treatment ($n=17$), and were currently enrolled in stuttering treatment ($n=26$). English was the primary language of treatment delivery ($n=31$), while schools ($n=28$) and private SLPs ($n=19$) were the most common treatment locations. Concomitant treatment areas most commonly reported included emotions and behaviors ($n=11$) and articulation and phonology ($n=10$).

Survey Instrument

Development. The survey instrument was developed with consideration of the wording in several surveys reported in the aforementioned literature, especially Venkatagiri (2009). He designed questions to focus on the differential preference between freedom vs. fluency as potential outcomes of treatment.

In an effort to improve the validity of the survey questions in this study, preliminary review and feedback were obtained from 6 experienced SLPs who work with children who stutter. Of the 6 SLPs who reviewed the survey, two had both clinical and research experience in the area of fluency. The remaining four SLPs came from a variety of clinical settings, including hospitals and schools. The 6 SLPs widely agreed that the survey included appropriate questions for purposes of this research, and that target participants would be able to understand the survey questions and differentiate between answer choices. A recommendation was made to add an additional question about the specific techniques targeted in the participants' stuttering therapy as a point of cross reference with the survey question concerning the general goals of therapy. This suggestion was implemented.

Another consideration in survey development was the age appropriateness of survey questions with reference to the reading comprehension abilities of the target children and adolescent participants. The youngest participants eligible for the survey were eight years of age which, if there were no language delays, would correlate with the reading level of a third grader. Children with a third grade reading level are likely to possess skills that help them phonemically decode multisyllabic words and understand complex vocabulary (Renaissance Learning, 2013). Between second and fifth grade children are expected to possess knowledge of and be exposed to complex vocabulary words in academic setting including "ability", "difficult", "decision", "skills" and "communicate" (Vocabulary A-Z, 2015). Children in third grade use their knowledge of vocabulary to comprehend the relationships among words, word context, and use synonyms to improve understanding (Renaissance Learning, 2013). Children at this level are

also likely to use prior knowledge to generate questions that they can ask adults to help aid their comprehension (Renaissance Learning, 2013).

The Flesch-Kincaid Grade Level of the parental consent portion was 7.8 while the parent survey question portion was 6.2. The child assent portion had a Flesch-Kincaid Grade Level of 4.8. The child and adolescent survey questions had a Flesch-Kincaid Grade Level of 5.0. Based on this information the survey language was considered appropriate for the target populations.

Prior to the design of the current survey, a non-experimental survey was designed and piloted with similar types of questions on the non-stuttering topic of riding a bike. The survey was informally given by parent/guardian volunteers with five different children, four who were ages 8-9 years and one who was 6 years. Among the four children ages 8 to 9 years one was reported to have a history of Attention Deficit Hyperactivity Disorder (ADHD). Parents were told to administer the surveys and that they could clarify specific questions if their child requested help. Parents were asked to refrain from providing their children with what answer they should pick.

After completing the non-experimental survey, parents/guardians were contacted by the researcher to discuss any difficulties the children experienced. None of the four 8 to 9-year-old participants were reported to have any difficulty with the wording (level of complexity) of the survey questions. The one 6-year-old participant was reported to have asked some questions about terms such as country, language, gender, and vocabulary including the term “strategies” and “socially accepted” of their guardian while completing the survey. The child, however, reportedly then answered these questions for herself after definitions and clarifications were provided by the adult. The pre-experimental survey entitled “Biking Survey”

is provided in **Appendix C**. Adjustments made to the actual survey included the inclusion of response options instead of open-ended questions. Based on the reports, response choices improved the child's ability to answer appropriately. Wording simplifications were also made based on the feedback, for example, the terms "what strategies" were replaced by "what did you work on"? Ultimately, another adjustment was that parents were asked to answer the demographic questions in the survey, rather than the children.

The current online experimental survey instrument was generated and the results were collected through the secure Qualtrics software system licensed to the University of Wisconsin-Milwaukee. The survey was composed of 30 questions including two consent and four selection criteria. Two of the selection criteria questions, parent relationship to child/adolescents and child/adolescent age, were used for demographic information as well. Parents completed an additional 10 questions regarding demographic or basic background information, including past stuttering treatment.

Both parents and their children responded separately to 7 opinion seeking questions, including what was worked on in treatment, what skills were learned in treatment, ratings of stuttering treatment experiences, ratings of change in speech skills, ratings of change in communication skills, and preference for goals of stuttering treatment. These questions were chosen in an attempt to better understand whether stuttering treatment preferences and opinions of children, adolescents, and parents vary in relation to age or any other factors, such as years in treatment. Likert scale ratings and multiple choice responses with several open-ended textbox entry opportunities to express further clarification were included to record responses. The Likert scales ranged from 1 to 5 and were reported as negative (1-2,

frowns/negative), neutral (3, neutral face), and positive (4-5, smiles). See **Appendix D** for the survey instrument.

Consent. As a survey of minors conducted entirely online, there were several necessary precautions and safeguards put in place to prevent minors from participating without valid parental consent. Professionals who passed on the recruitment information were entrusted to only forward the link to parents/guardians and not minors. Parents/guardians were asked to provide consent by checking a box next to a statement verifying they were in fact the parent or guardian authorized to give consent for their child to complete the survey. Parents/guardians were also asked to indicate their relationship to the child or adolescent participant as proof of their eligibility to provide consent. No names were required or recorded during the consent process.

This online method of consent was chosen over a signature consent form method for a number of reasons. Using online written consent with limited identifiable information made it easier to ensure confidentiality. Consent without a name attached allowed parents and participants to remain anonymous. Lastly, an online method of consent came with a level of convenience and comfort for the adults providing consent, which created a wider opportunity for participant recruitment.

Procedures

Upon receiving the survey link and completing the consent process parents were directed to their portion of the survey. The parent portion of the survey included selection criteria, demographic information pertaining to their child, and questions that assessed parent/guardian perspectives of treatment. Once the parent responses were complete

participants were taken to a page with a brief narrative including child assent language. This page described the purpose of the survey, why the child/adolescents participation would be helpful, and explained that they were not required to answer any or all of the questions if they did not feel comfortable doing so. The child assent narrative is shown in **Appendix E**.

Initially, parents were told it would be acceptable to read through the survey questions prior to permitting their child to complete their part of the survey. Parents were also informed they could assist their child with the understanding of terminology of the assent and survey questions if their child requested help. The significance of qualitative questions being answered by the child based on the child's *own* feelings was highly stressed. Once participants submitted their response the results were received by the Qualtrics survey database. From there the responses were made available to the researchers. The survey and all of the methods conducted by the researchers were approved by the University of Wisconsin-Milwaukee Institutional Review Board.

Data Analysis. Parent responses to survey questions 5 through 15 and 19 were analyzed with descriptive statistics. These consisted of responses to demographic variables (questions 5-10), and stuttering treatment history (10-15 and 19). The clients' responses to the two questions regarding perception of past treatment objectives (what was worked on in treatment and what skills were learned) were compared.

The Likert scale ratings were considered in relation to client age and number of years in treatment. The participant responses about treatment satisfaction, perceived change in speech, perceived change in communication skills, and the preferred goal of treatment, were analyzed based on the frequency of rating selections. Group comparisons were made several ways

including: children versus adolescents, parents of children versus parents of adolescents, children/adolescents with less than five years of treatment versus children/adolescents with more than five years of treatment, parents of children/adolescents with less than five years of treatment versus parents of children/adolescents with more than five years of treatment, and direct comparisons of parents to children/adolescents.

Participant numbers were too few to do Pearson Product Moment correlations between variables because a minimum of 50 responses would have been needed per set. Group differences could not be examined statistically with chi-square analyses because a minimum cell size of 30 participants was needed as a reasonable sample size with a power of 80% (VanVoorhis & Morgan, 2007).

Qualitative Analysis. Qualitative results were also considered for answers that included the option of short written responses. This information was included in the summary of results as well as subsections of data-tables to accurately represent the responses that were received. All of the submitted responses were evaluated and reported without the use of identifying information.

CHAPTER 4

Results

Perception of Past Treatment Objectives

Before addressing the perspectives of treatment satisfaction and preferred treatment outcomes, it is important to consider what the parents and children/adolescents thought their stuttering treatment has consisted of. These survey responses were the impressions of parents about what they were working on. Because the corresponding speech-language clinicians were not also surveyed, the extent to which these parent responses are valid is unknown.

The questions about past treatment by the children, adolescents and parents consisted of two questions regarding past treatment objectives, including first, what was “worked on in stuttering treatment” and second, the “skills learned in stuttering treatment”. For purposes of comparison, data were separated into four participant groups, including children, adolescents, parents of children, and parents of adolescents. The four data sets specifically consisted of the 11 children versus 13 adolescents and the 18 parents of children versus 17 parents of adolescents.

Focus of Treatment. Possible responses to the focus of treatment or “what was worked on in treatment” included: talking without stuttering, changing stutters, talking about speech and stuttering, being a good communicator, I do not know, and optional comment. Respondents were asked to select all that applied and include optional comments if needed.

Being a good communicator was the most frequently selected response from children. Meanwhile, changing stutters was the most common response from adolescents. Response to what was worked on in treatment for the 24 children and adolescents can be seen in **Figure 4.**

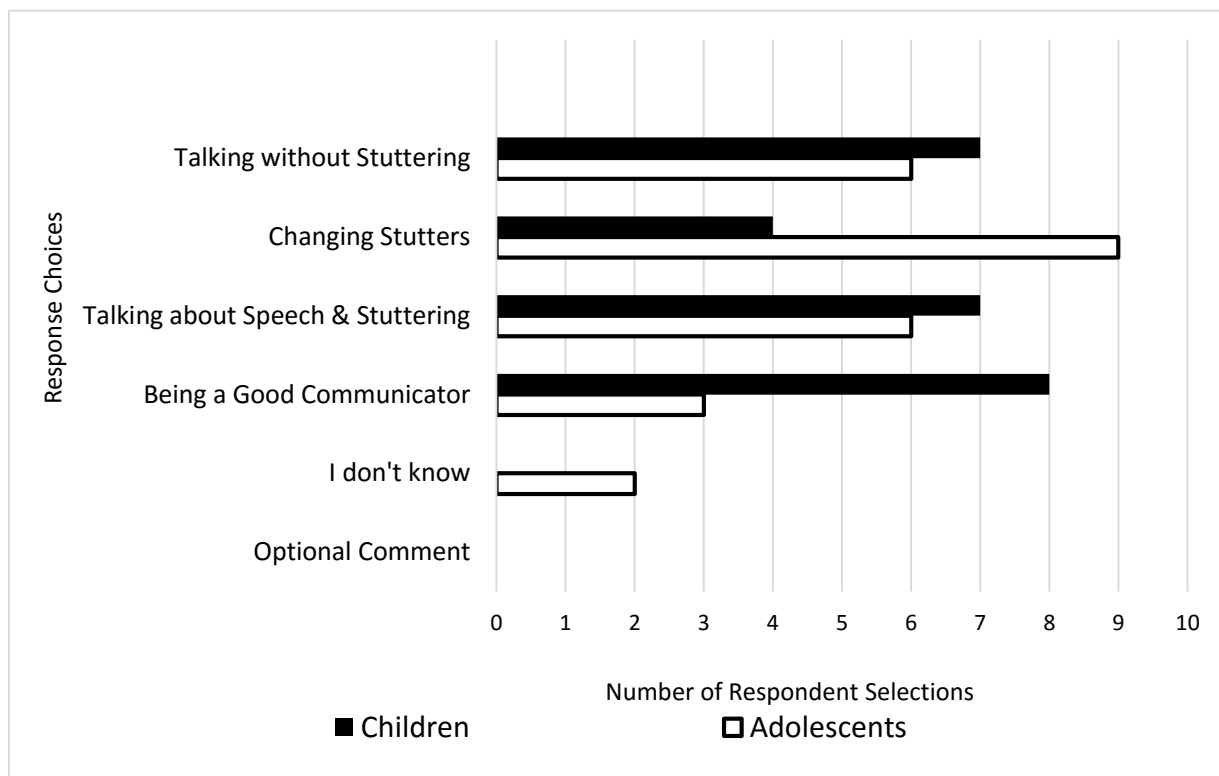


Figure 4. *Child and adolescent responses to what was worked on in treatment.*

Parents of children selected “talking about speech and stuttering” most often. The most commonly selected option for parents of adolescents was talking without stuttering. One optional comment was from a parent of a child who reported their child worked on “being ok with stuttering”. The other optional comment was from a parent of an adolescent who reported their child worked on “substitution of words.” The 35 parents’ responses by age group for what was worked on in treatment can be seen in **Figure 5**.

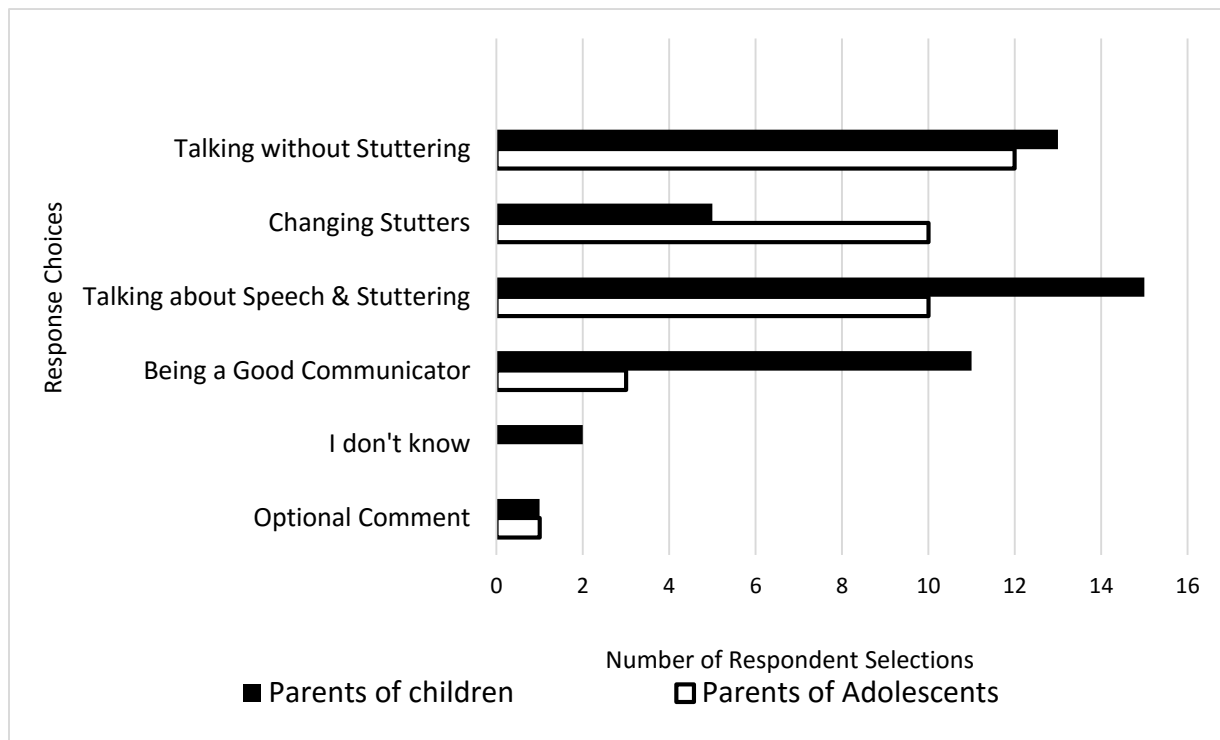


Figure 5. *Parent responses to what was worked on in treatment.*

Skills Learned in Treatment. Responses to skills learned in stuttering treatment included: making smooth speech (e.g. slower speech), making stutters easier (e.g. pull-outs), confidence (e.g. talks to new people), better communication (e.g. eye contact, taking turns to talk), I don't know, and optional comment.

The most frequently selected response for both children and adolescents regarding skills learned in treatment was “making smooth speech”. Optional comments were scarce with only one from an adolescent participant who stated “I don't want to stutter”. It is unclear if the adolescent learned this treatment or was simply stating their feelings. It was included in the data to represent the respondent's contribution. Additional details about the 24 child and adolescent participants' responses to skills learned in treatment by group can be seen in **Figure**

6.

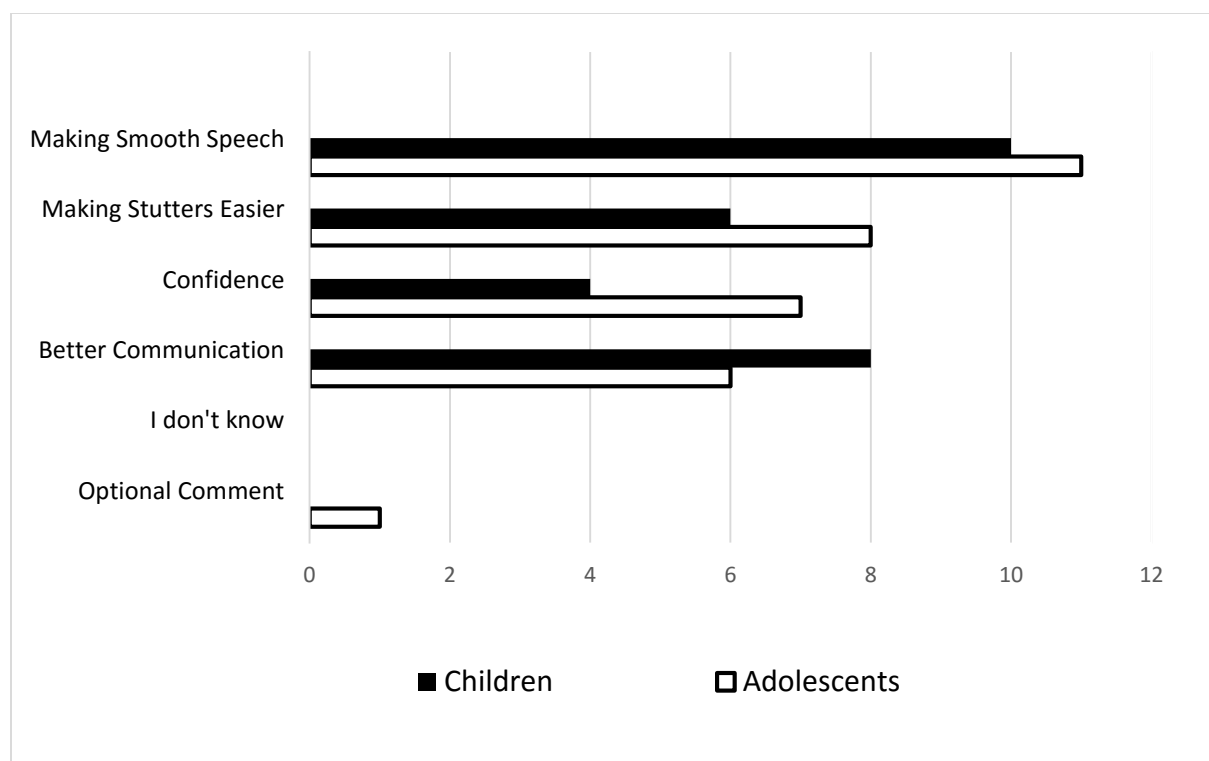


Figure 6. *Child and adolescent responses to skills learned in treatment.*

The most common response from parents of children was “making smooth speech”. The most frequently selected from parents of adolescents was “confidence”. Other information for responses from the 35 parents regarding skills learned in treatment can be seen in **Figure 7**.

As previously mentioned, questions about perceptions of past treatment objectives were asked twice as a method of test-retest with different wording to assess the reliability of questions and responses. Response options to what was worked on in treatment were paired with similar responses to what skills were learned in treatment during the survey development. These pairings of response totals and percentage selected can be seen in **Table 8**.

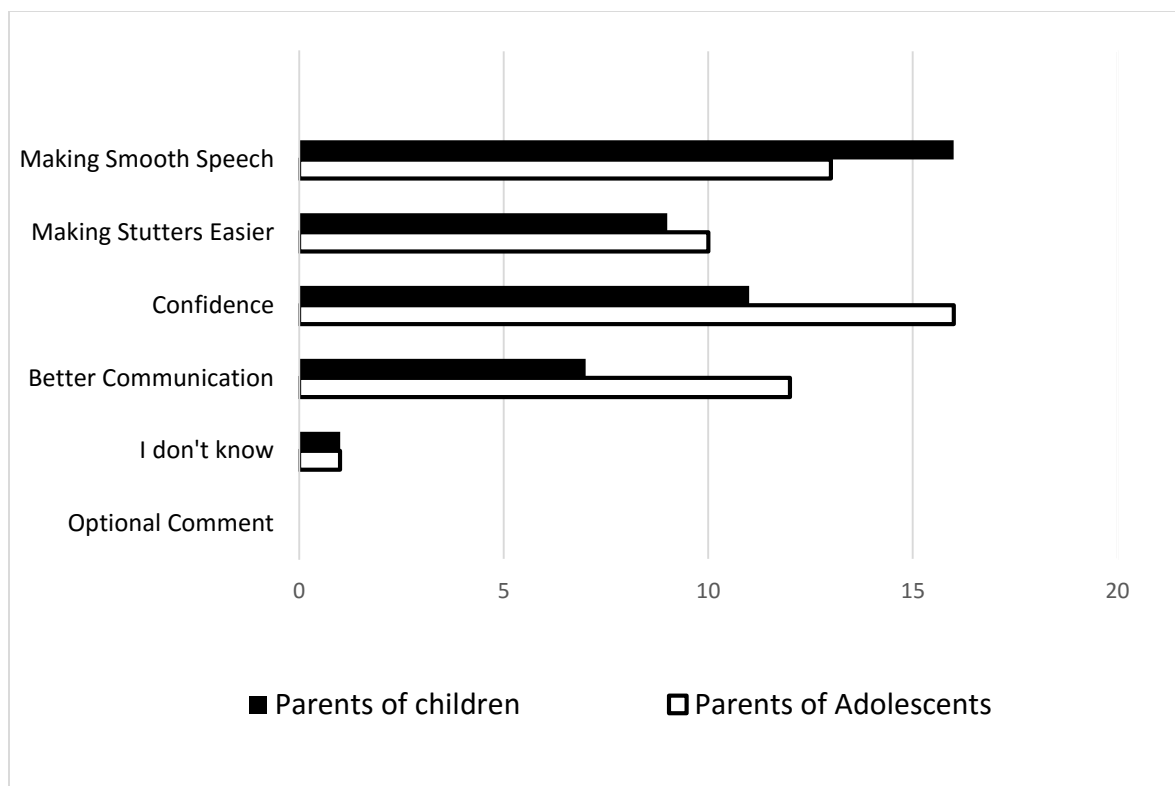


Figure 7. Parents' responses to skills learned in treatment by age group.

Table 8. Perception of what was worked on in Treatment versus Skills Learned in Treatment

What was Worked on in Treatment			What skills were Learned in Treatment		
	Number	Percent		Number	Percent
Talking without stuttering	41	30%	Making Smooth Speech	50	32.5%
Changing Stutters	25	19%	Making Stutters Easier	30	20%
Talking about Speech and Stuttering	38	28%	Confidence	34	22%
Being a Good Communicator	25	19%	Better Communication	37	24%
I don't know	4	1%	I don't know	2	1%
Optional Comment	2	3%	Optional Comment	1	.5%

As a large group, respondents' answers appeared to be consistent across these two questions based on overall numbers and percentages. When individual answers were evaluated

however, inconsistencies were present in a more than half of all responses across the two questions. Data regarding consistency by group can be seen in **Table 9**. A visual to compare the trends for consistency of responses to what was worked on in treatment and skills learned in treatment is also available as **Figure 8**.

Table 9. *Number and percentage of consistency for respondents to what was worked on in treatment and skills learned in treatment*

	Consistent Responses		Inconsistent Responses	
	Number	Percent	Number	Percent
Children	3	27%	8	73%
Parents of Children	3	17%	15	83%
Adolescents	4	31%	9	69%
Parents of Adolescents	7	41%	10	59%

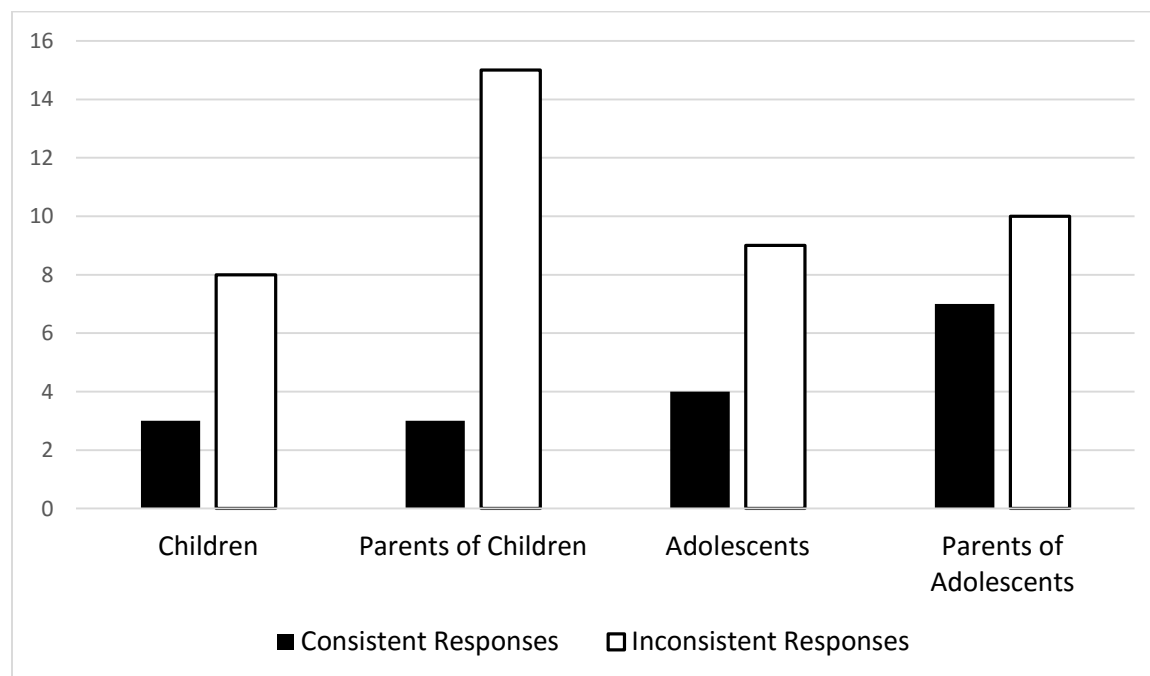


Figure 8. *Consistency of individual responses to what was worked on in treatment and skills learned in treatment.*

Analysis of Perspectives of Stuttering Treatment

Perspectives of stuttering treatment, including treatment satisfaction, perceived change in speech fluency, and perceived change in communication skills, were collected from parents/guardians, children, and adolescents who stutter for analysis. These three perspectives of treatment were assessed using a sliding scale which converted to a five point Likert type scale (1-2 frowns/negative, 3 neutral face/neutral, and 4-5 smiles/positive).

Participants' preferences of stuttering treatment outcomes were also analyzed quantitatively and qualitatively. These questions were asked twice as a method of test-retest with different wording to assess the reliability of questions and responses. Respondents selected which answers best aligned with their ideas about 1) what is most important when ordering food and 2) what is a preferred goal for treatment. Response options for the question about ordering food included: talks smoothly and ordering what he/she/you one want/s, smooth or not. Choices for preferred treatment goals included: to speak without stuttering or to say what he/she/you want/s to say, even if he/she stutters. Respondents were asked to choose one response to each question and provide an optional comment if applicable. As explained earlier, the data were divided into the four groups who gave survey responses including: children, parents of children, adolescents, and parents of adolescents. These data were also analyzed using descriptive statistics.






Views based on Age Group. Stuttering treatment satisfaction ratings of children and adolescents ranged from 1 to 5 with a mode of 4. Treatment satisfaction ratings of parents overall also ranged from 1 to 5 with a mode of 4. For children and adolescents who stutter,

trends in treatment satisfaction ratings did not show major differences across age groups.

These data from children and adolescents and their parents can be seen in **Table 10**.

For parents of children and adolescents who stutter, trends in treatment satisfaction ratings showed some slight difference in trends across groups. Nearly twice the number of parents of children rated their feelings in the positive range ($n=12$) rather than negative ($n=4$) or neutral ($n=2$). Meanwhile parents of adolescent were fairly closely divided between those whose feelings were rated as positive ($n=9$) and those that were negative ($n=6$) or neutral ($n=2$).

Table 10. *Participant Ratings of Treatment Satisfaction Based on Age Group.*






					
Children (n =11)	1	2	2	5	1
Parents of Children (n= 17)	1	3	2	12	0
Adolescents (n =13)	2	0	3	5	3
Parents of Adolescents (n= 18)	3	3	2	6	3

Children rated their perceived change in speech in the positive range ($n= 6$) more often than the neutral or negative ranges ($n= 5$). Adolescents showed a higher number of ratings in the positive range ($n= 8$) than the negative or neutral ranges ($n= 5$) as well. As shown in **Table 12**, the children and adolescents' ratings of perceived change in speech did not show major differences in trends across age groups. The two groups overall both had a little more than half of their ratings in the positive range.

More parents of children rated their child's change in speech in the positive range ($n=6$) than parents of adolescents ($n=8$). A large number parents of children ($n=7$) also selected neutral for this question. More parents of adolescents rated the change in their adolescent's

speech in the negative range. For parents of children and adolescents who stutter, trends in perceived change in speech ratings showed some slight differences across groups, which can be seen in **Table 11**.

Table 11. *Participant Ratings of Perceived Change in Speech Based on Age Group*






					
Children (<i>n</i>= 11)	1	1	3	6	0
Parents of Children (<i>n</i>= 18)	2	1	7	8	0
Adolescents (<i>n</i>= 13)	2	1	2	6	2
Parents of Adolescents (<i>n</i>= 17)	4	3	4	5	1

Parents and children were asked to rate the perceived change, if any at all, in communication skills. Ratings of perceived change in communication skills for children and adolescents ranged from 1 to 5 with a mode of 4. Meanwhile, ratings of perceived change in communication skills for parents also ranged from 1 to 5 with a mode of 4. Child and adolescent ratings of perceived change in communication skills were combined and then analyzed in relation to their 1) age and 2) number of years in treatment. Similarly, parent's responses to perceived change in communication skills were combined and analyzed in relation to their 1) child's age and 2) number of years their child received treatment.

For children and adolescents who stutter, ratings of perceived change in communication suggested minor differences in trends across age groups, as seen in **Table 12**. Nearly double the responses from children fell in the positive range (*n*=7) compared to those in the negative (*n*=1) or neutral (*n*=3) range. Adolescents had a higher number of ratings in the negative range (*n*=3)

and neutral range ($n=2$) than children. More than half of adolescent respondents rated their change in communication in the positive range ($n=8$).

Table 12. *Participant Ratings of Perceived Change in Communication Based on Age Group*

					
Children ($n= 11$)	1	0	3	5	2
Parents of Children ($n= 17^*$)	1	0	4	11	1
Adolescents ($n=13$)	2	1	2	6	2
Parents of Adolescents ($n= 16^*$)	2	3	1	8	2

** One respondent in each parent group chose not to respond*

For parents of children and adolescents who stutter, trends in perceived change in communication ratings showed some slight differences across groups. One parent of a child did choose not to rate a perceived change in communication. A majority of the parents of children rated perceived change in their child's communication within the positive range ($n=12$). A small number rated the perceived change in their child's communication as negative ($n=1$) or neutral ($n=4$). Meanwhile parents of adolescents reported greater variety of ratings for perceptions of change in their adolescents' communication, as seen in **Table 12**. A number of ratings fell within the negative ($n=5$) or neutral ($n=1$) ranges. The ratings that fell within the positive range ($n=10$) however were double those of the negative range.

Children, adolescents, and parents of both groups responded to two questions individually regarding preferred stuttering treatment outcomes, including what they thought was "more important" when ordering food and which goal is more important. Possible responses to what was most important when ordering food included: "Talks smoothly" and

“Orders what he/she/you want/s, smooth or not”. Meanwhile, choices for what goal is more important included “To speak without stuttering” and “To say what he/she/you want/s, smooth or not”. Respondents were asked to select what they felt was more important to each question and to include optional comments if necessary.

Responses were categorized into four groups: children, parents of children, adolescents, and parents of adolescents. Division of responses in this manner was done so comparisons could be made across groups. Once the data were looked at by age group it was then broken down for interpretation based on years in treatment. Direct comparisons were also made between parents and their child’s or adolescent’s response for preferences when ordering food and what goal was more important.

The child and adolescent participants had fairly similar trends in preferences when ordering food. As seen in **Figure 9**, a little more than half of all children selected the option to order what you want, smooth or not ($n=6$), compared to those who selected “Talks smoothly” ($n=5$). Adolescents had just over half of all respondents select “Order what you want, smooth or not” ($n=7$) too. This was compared to the number just under half who selected “Talks smoothly” ($n=6$).

In addition to selecting their preferences, children and adolescents provided 4 comments in the optional-response area for this question. Two adolescents who chose “Orders what he/she wants, smooth or not” wrote “My mom still orders my food” and “I think this is more important, my tools are stupid”. Two children who selected “Talks smoothly” wrote comments as well including “Always.” and “Talk without Stuttering”.

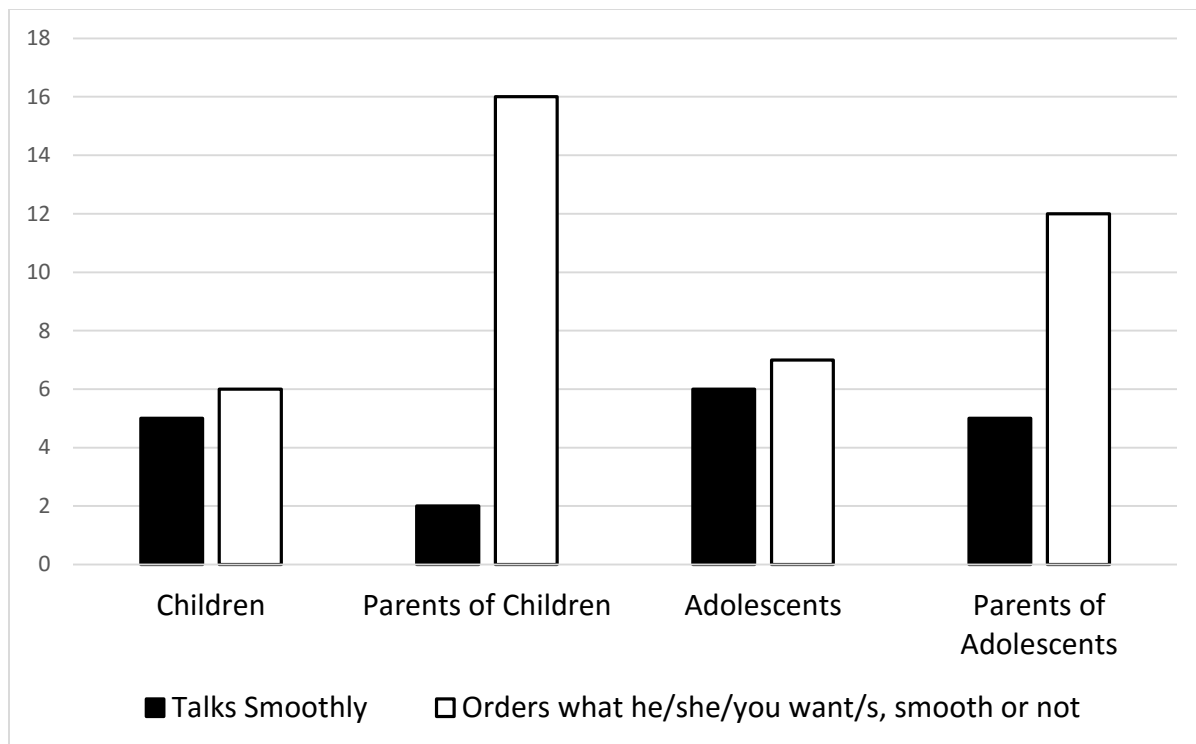


Figure 9. *Participant preferences for stuttering treatment outcome when ordering food by group.*

Preferences for parents of children and parents of adolescents suggested differences based on their child/adolescent's age group. A majority of parents of children ($n=16$) indicated a preference for their child to "order what he/she wants, smooth or not". Most parents of adolescents ($n=12$) preferred the "order what he/she wants, smooth or not", although it was not to the same extent as parents of children. A visual representation of this parent data can be seen in **Figure 9**.

Of the 35 parent respondents, two provided comments in the optional-response area for this question. A parent of an adolescent stated "S/L Therapist wants him to use techniques always", suggesting this may have influenced their selection of "Talks Smoothly". A parent of a child who selected "Orders what he/she wants, smooth or not" commented "Say what she wants even if stuttering".

Choices for which goal is more important included “To speak without stuttering” and “To say what he/she/you want/s, smooth or not”. Overall participant responses to which goal is more important can be seen in **Figure 10** without reference to any comments. Overall, “To say what he/she/you want/s even if he/she stutters” ($n=34$) was the goal most frequently selected more important. The remaining participants selected “To speak without stuttering” ($n=25$). Selections within groups were closer in numbers for this question for all four groups.

Trends in response to what goal is more important for children and adolescents were fairly similar, as seen in **Figure 10**. A little more than half of all children indicated a preference for a goal of “To say what one wants, smooth or not” ($n=6$). The remaining child participants selected “To speak without stuttering” ($n=5$).

Children and adolescents added 4 comments in the optional area for write-in responses to this question. Two adolescents who selected “To speak without stuttering” commented “but I do say what I want” and “I hate speech and stuttering. Speech makes me not want to talk.” Two children who selected “To speak without stuttering” wrote comments as well including “Of course!” and “No Stuttering”.

Responses for parents of children and adolescents suggested differences between the two groups. Parents of children were fairly closely divided in the number that selected “To speak without stuttering” ($n=8$) versus “To say what he/she wants, smooth or not” ($n=10$). As shown in **Figure 10**, parents of adolescents however, had a larger amount of total selections for “To say what he/she wants, smooth or not” ($n=12$); a smaller portion of this population selected “To speak without stuttering” ($n=5$).

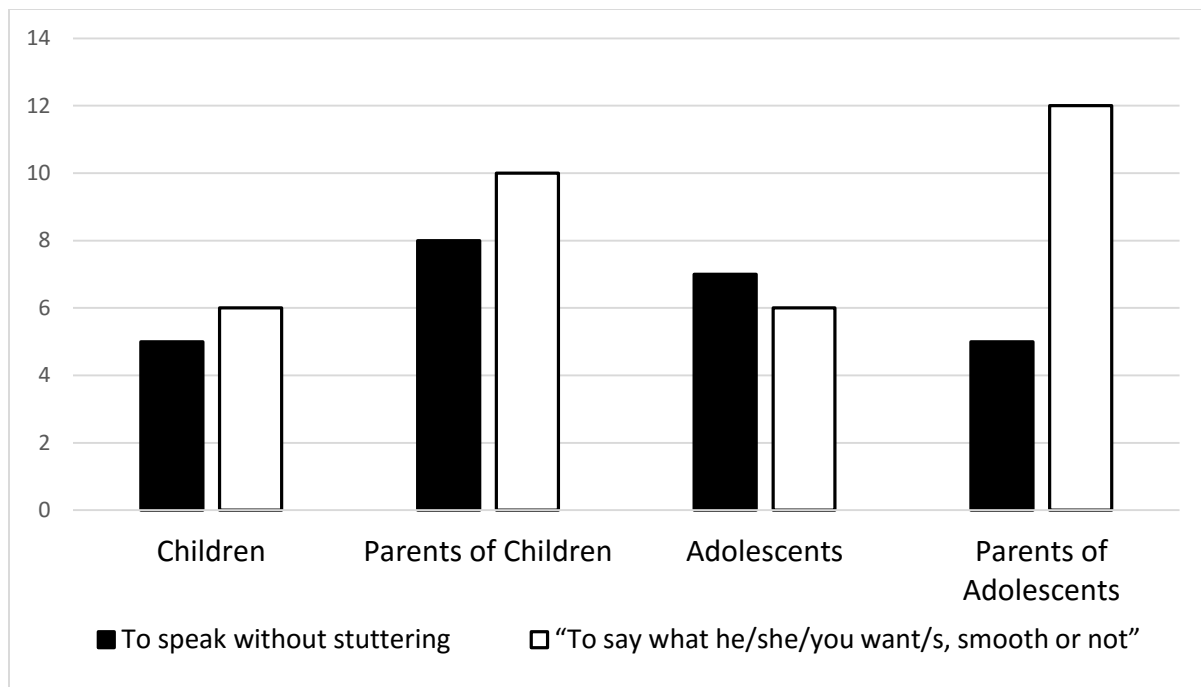


Figure 10. *Preference for the more important goal by group.*






Parent respondents gave 2 comments in the optional area for write-in responses to this question. A parent of an adolescent wrote “The therapist said he would grow out of it; if anything, his speech has gotten worse. He hates therapy and we fight about it at home all the time”, suggesting this may have influenced their selection of “To speak without stuttering”. A parent of a child wrote “He wishes he didn't stutter at all. In addition to his language disorder, it makes it very difficult for him.” in combination to her choice of “To speak without Stuttering”.

Views Based on Years in Treatment. Differences in trends were observed for children’s and adolescents’ combined satisfaction ratings in relation to their number of years in treatment. Nearly all of children and adolescents who had received treatment for less than five years rated their feelings in the positive range above neutral ($n=8$). Meanwhile, children and adolescents who had received treatment for more than 5 years showed a range of rating

responses, including positive ($n=6$), negative ($n=4$), and neutral ($n=4$). These ratings of children and adolescents can be seen in **Table 13**.

Parents of children/adolescents' combined satisfaction ratings in relation to their number of years in treatment were also assessed in relation to years in treatment. As seen in **Table 13**, these satisfaction ratings showed differences in trends based on their child/adolescent's number of years in treatment as well. Parents whose children had less than five years of treatment had almost three times the number of responses in the positive range ($n=11$). Meanwhile, parents of children/adolescents who had greater than 5 years of treatment were almost equally divided for ratings within the positive range ($n=10$) and the negative ($n=9$) and neutral range ($n=2$).






Table 13. *Participant Ratings of Treatment Satisfaction Based on Years in Treatment*

					
Children/Adolescents < 5 years of Tx ($n= 10$)	0	1	1	6	2
Parents of Children/Adolescents < 5 years of Tx ($n= 14$)	0	1	2	10	1
Children/Adolescents > 5 years of Tx ($n= 14$)	3	1	4	4	2
Parents of Children/Adolescents > 5 years of Tx ($n= 21$)	4	5	2	8	2

Differences were observed for children's and adolescents' combined change in speech ratings in relation to their number of years in treatment, as shown in **Table 14**. Those who had received treatment for less than five years rated their change in speech more positively ($n=8$). Meanwhile, children and adolescents who received treatment for more than five years had more than half of their ratings fall in the negative or neutral range ($n=8$).






Parents of children/adolescents' combined perceived change in speech ratings in relation to their number of years in treatment were also assessed in relation to years in treatment as well. Parents whose children/adolescents had less than five years of treatment had a variety of ratings, with more than half in the positive range ($n=8$). Meanwhile, a majority of parents whose children/adolescents received more than five years of treatment had ratings that fell in the negative ($n=7$) or neutral ($n=8$) range.

Table 14. *Participant Ratings of Perceived Change in Speech Based on Years in Treatment*

					
Children/Adolescents < 5 years of Tx ($n=10$)	0	1	1	6	2
Parents of Children/Adolescents < 5 years of Tx ($n=14$)	1	2	3	7	1
Children/Adolescents > 5 years of Tx ($n=14$)	3	1	4	6	0
Parents of Children/Adolescents > 5 years of Tx ($n=21$)	5	2	8	6	0

Differences in trends were observed between children's and adolescents' ratings or perceived change in communication and their number of years in treatment. Nearly all of children and adolescents who had received treatment for less than five years rated their feelings in the positive range above neutral ($n=8$). Meanwhile, children and adolescents who had received treatment from more than 5 years showed a range of rating responses, including positive ($n=6$), negative ($n=4$), and neutral ($n=4$). **Table 15** provides a visual representation of these ratings from children and adolescents.

Table 15. *Participant Ratings of Perceived Change in Communication Based on Years in Treatment*

					
Children/Adolescents < 5 years of Tx (n= 10)	0	1	1	6	2
Parents of Children/Adolescents < 5 years of Tx (n= 12**)	0	1	1	9	1
Children/Adolescents > 5 years of Tx (n= 14)	3	1	4	6	0
Parents of Children/Adolescents > 5 years of Tx (n= 21)	3	2	4	10	2

***Two respondents in this group chose not to respond*

Parents' satisfaction ratings showed differences in trends based on their child/adolescent's number of years in treatment as well. Parents whose children had less than five years of treatment had a more than half of all responses in the positive range ($n=10$). Meanwhile, parents of children/adolescents who had greater than 5 years of treatment were almost equally divided for ratings within the positive range ($n=12$) and the negative ($n=7$) and neutral range ($n=9$). Data from parents' ratings with reference to years in treatment can be seen in **Table 15**.

Differences in trends were observed for children's and adolescents' combined preferences based on years in treatment. **Table 16** shows twice as many children and adolescents who had received treatment for more than five years reported a preference for ordering what he/she wants, smooth or not. Meanwhile, children and adolescents who had received treatment for less than 5 years were fairly equally divided in their responses.

Parents' preferences for when their child/adolescent orders food showed little to no difference in trends based on their number of years in treatment. As seen in **Table 16**, a

majority of all parents, regardless of years in treatment, reported a preference for their child to order what he/she wants, smooth or not.

Table 16. *Participant Preference when Ordering Food by Years in Treatment*

	Talks Smoothly	Orders what he/she wants, smooth or not
Children/Adolescents < 5 years of Tx (n= 10)	6	4
Parents of Children/Adolescents < 5 years of Tx (n= 14)	4	10
Children/Adolescents > 5 years of Tx (n= 14)	5	9
Parents of Children/Adolescents > 5 years of Tx (n=21)	10	18

Once the data were looked at by age group it was then broken down for children/adolescents and parents/guardians for interpretation based on years in treatment. Trends of equal division for preferences were identical for children's and adolescents' preferences based on years in treatment. These ratings of children and adolescents can be seen in **Table 17**.

Parents' preferences for what goal was more important for their child/adolescent were also fairly similar, as seen in **Table 17**. Both groups had 4 more respondents prefer the goal of "To say what he/she wants, even if he/she stutters".

Table 17. *Participant Preference for Goal Based on Years in Treatment*

	To speak without stuttering	To say what he/she wants, even if he/she stutters
Children/Adolescents < 5 years of Tx (n= 10)	5	5
Parents of Children/Adolescents < 5 years of Tx (n= 14)	5	9
Children/Adolescents > 5 years of Tx (n= 14)	7	7
Parents of Children/Adolescents > 5 years of Tx (n=21)	8	13

Views Comparing Parents with their Children. In this study direct comparisons could be made between the 24 parents and their child's or their adolescent's ratings of treatment satisfaction (feelings), perceived change in speech, and perceived change in communication.

Regarding ratings of feelings about treatment, about half ($n=6$) of the parents of children gave ratings consistent with their children's. Two parents of children rated their feelings about treatment one point better than their children, while one parent was two points better than their child. In two cases, children rated their feelings about treatment one point better than their parents. A visual representation of these data can be seen in **Figure 11**.

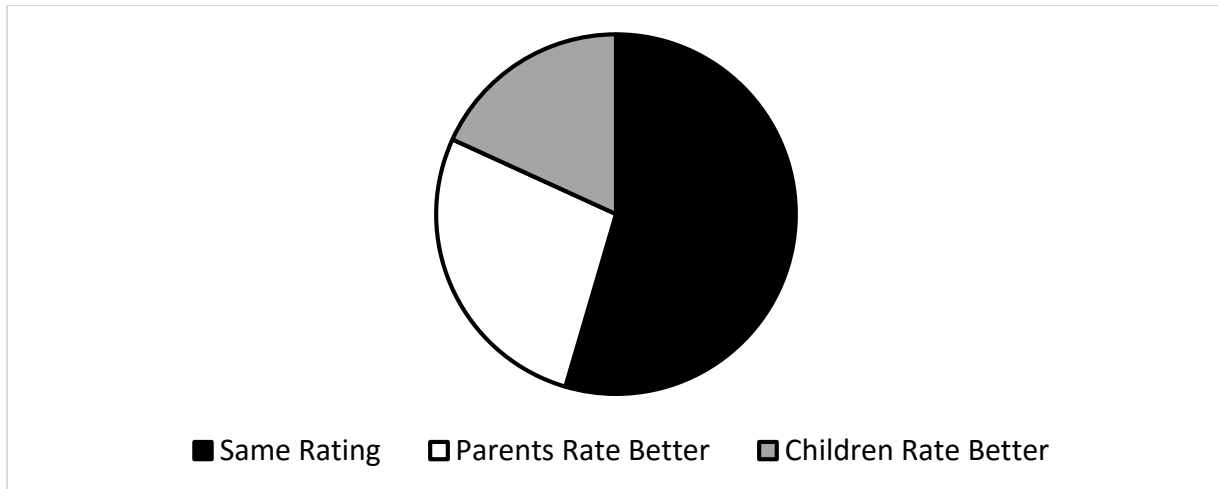


Figure 11. *Consistency in ratings of feelings toward treatment from 11 matched sets of parents and children.*

More than half of the parents of adolescents and their adolescents ($n=8$) rated their feelings about treatment as the same. Only 1 parent of an adolescent rated their feelings about treatment one point better than their adolescent; 4 adolescents rated their feelings toward treatment one point better than their parents. These data can be seen in **Figure 12**.

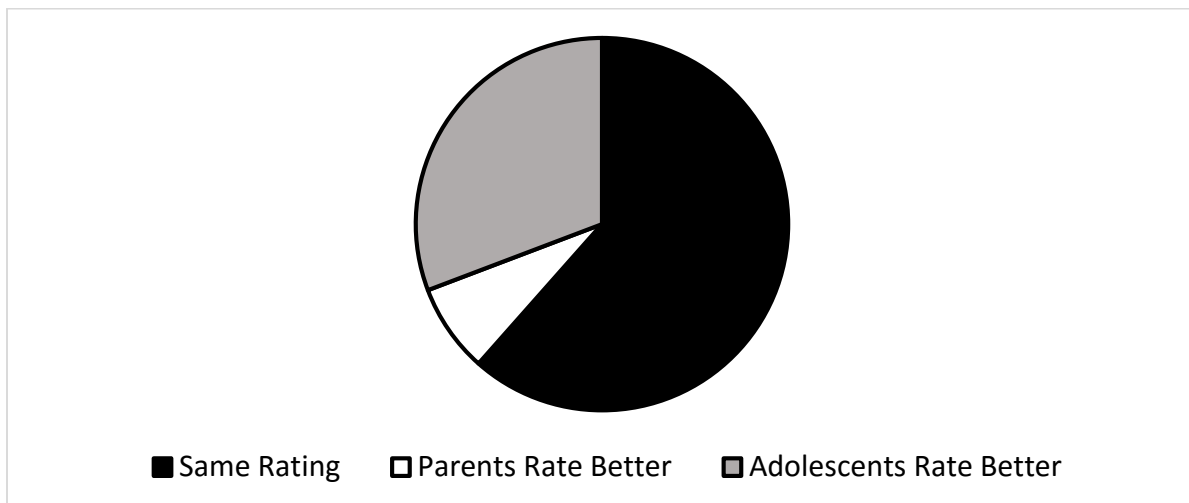


Figure 12. *Consistency in ratings of feelings toward treatment from 13 sets of matched parents and adolescents.*

As shown in **Figure 13**, a majority (8 of 11) of the parents of children gave consistent ratings of perceived change in speech with their children. Two parents rated their feelings

about the change in their child's speech one point better than their child, while two children rated their feelings about the change in their speech one point better than their parents.

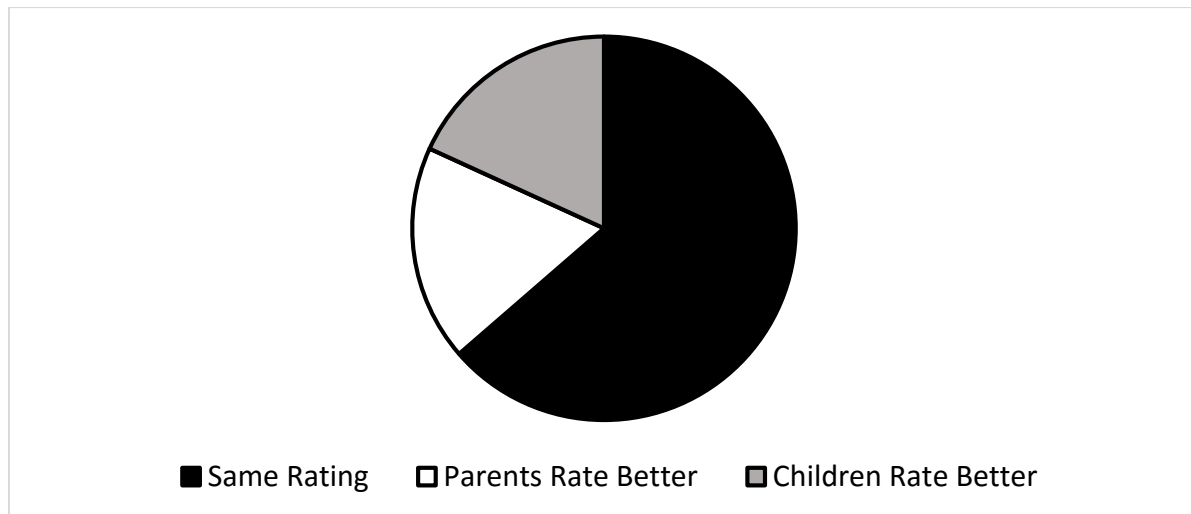


Figure 13. *Consistency in ratings of perceived change in speech from 11 matched sets of parents and children.*

The 13 parents of adolescents and adolescents' ratings of change in speech however were much different. Nearly half of all adolescents ($n=6$) rated their change in speech better than their parents. Four of the adolescents rated their change in speech one point higher than their parents and two rated their perceived change in speech two points higher than their parents. The remaining ratings between parents and adolescents ($n=7$) were the same. **Figure 14** shows none of the parents of adolescents rated their perceived change in speech higher than their adolescent.

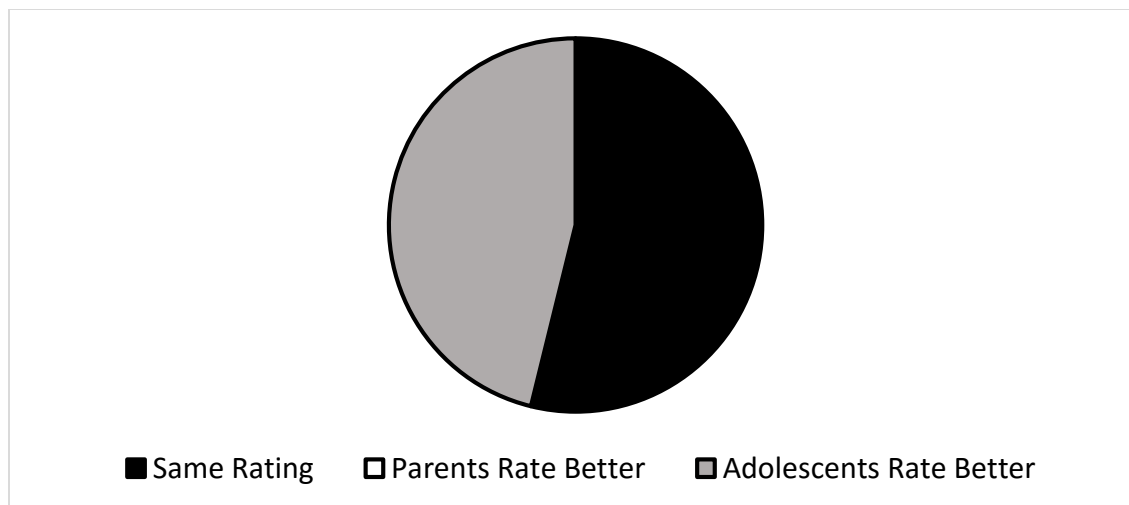


Figure 14. *Consistency in ratings of perceived change in speech from 13 matched sets of parents and adolescents.*

A majority of the parent-child pairs were consistent with their ratings of perceived change in communication ($n=7$). In two cases, children rated the change as better than their parents (one point higher), and one child-parent pair could not be compared because the parent did not make a rating. Just one parent rated perception of change in communication as better (1 point) than their child. These data are shown in **Figure 15**.

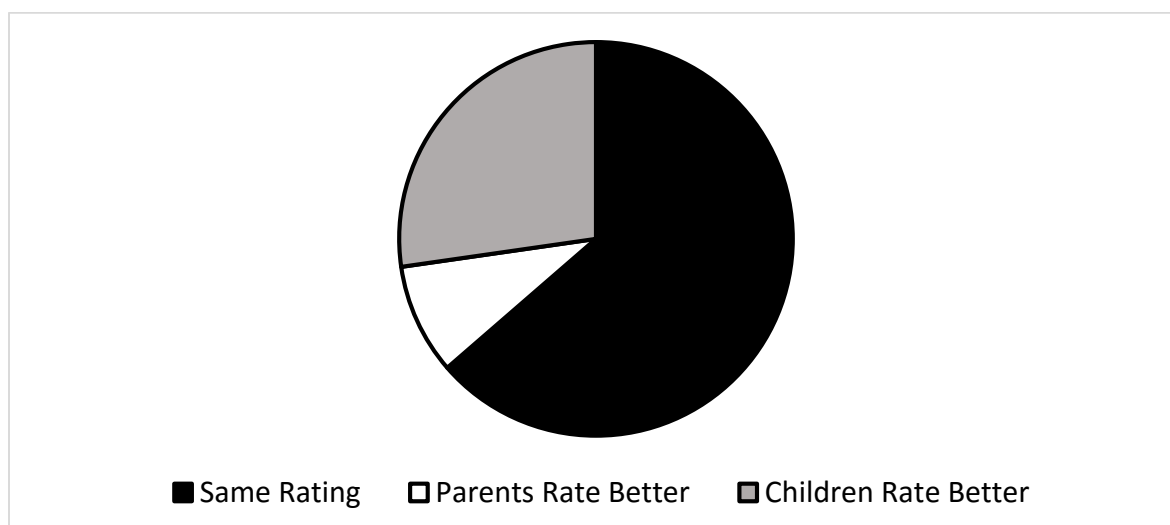


Figure 15. *Consistency in ratings of perceived change in communication from 11 matched sets of parents and children.*

A majority of the parents of adolescents and their adolescent rated their perceived change in communication the same ($n=9$). As seen in **Figure 16**, only one parent of an adolescent rated their perception of change in communication better than their adolescent by one point. Two adolescents rated their perceived change in communication better than their parents with one and two point differences. In one case, there was no comparison because a parent made no rating.

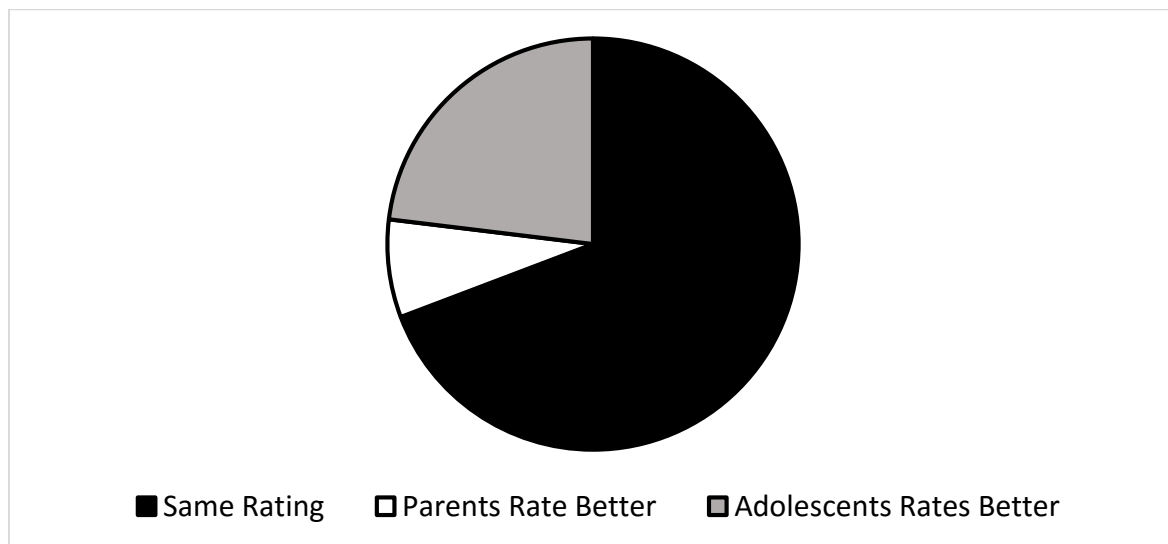


Figure 16. *Consistency in ratings of perceived change in speech from 13 matched sets of parents and adolescents.*

Comparisons were made between parents and their child's or adolescent's response for preferences when ordering food. When choosing their preference for ordering food, 5 children selected "Talking Smoothly" while their parent selected "Order what your wants, smooth or not". One parent of a child selected "Talks Smoothly" while their child chose "Orders what you want, smooth or not". The remaining 5 children and their parents selected the same preference for ordering food, as shown in **Figure 17**.

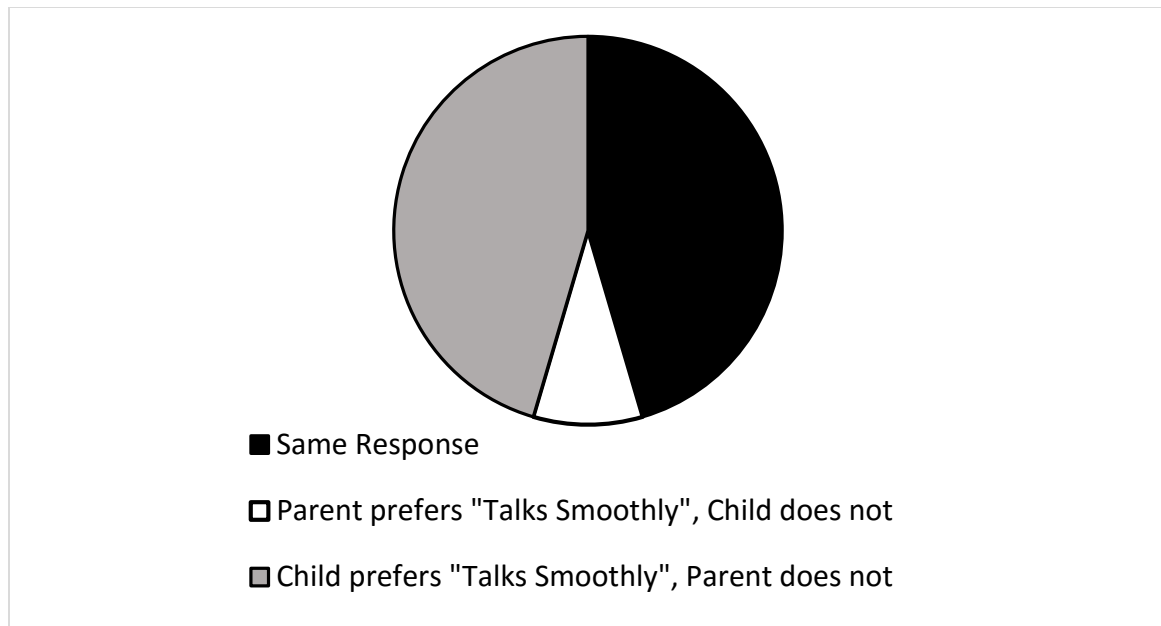


Figure 17. *Consistency in ratings of preferences for ordering food from 11 matched sets of parents and children.*

Meanwhile, adolescents and their parents had more similarities in response ($n=8$) although there were some differences in opinions. Two parents of adolescents selected “Talks Smoothly” while their adolescent chose “Orders what you want, smooth or not”. Three adolescents chose “Talks Smoothly” while their parent chose “Orders what he/she wants, smooth or not”. A visual of this data can be seen in **Figure 18**.

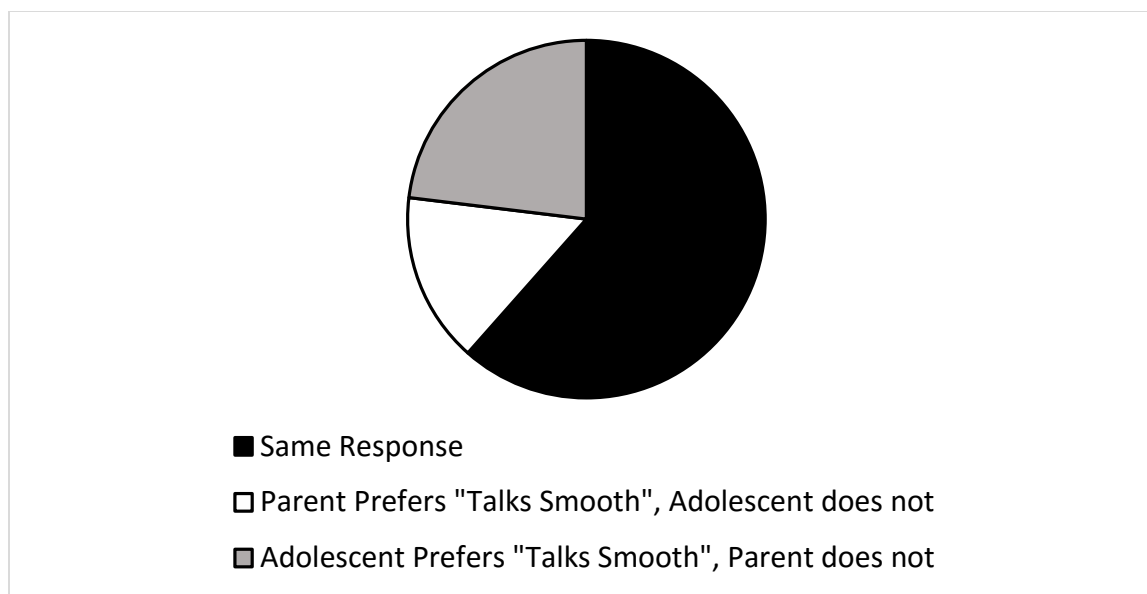


Figure 18. *Consistency in ratings of preferences for ordering food from 13 matched sets of parents and adolescents.*

Direct comparisons, shown in **Figure 19**, were also made between parents and their child's response to what goal was more important. When choosing what goal was more important 9 parents and their children has the same response. A child selected "To speak without stuttering" while their parent chose "To say what he/she wants, even if he/she stutters". Similarly, 1 parent of a child selected "To speak without stuttering" while their child chose "To say what you, even if you stutter".

A majority of adolescents and their parents ($n=10$) selected the same response to what goal was more important, which can be seen in **Figure 20**. A parent of an adolescent selected "To speak without stuttering" while their child chose "To say what you want, even if you stutter". Finally, 2 adolescents chose "To speak without stuttering" while parent chose "To say what he/she wants, even if he/she stutters".

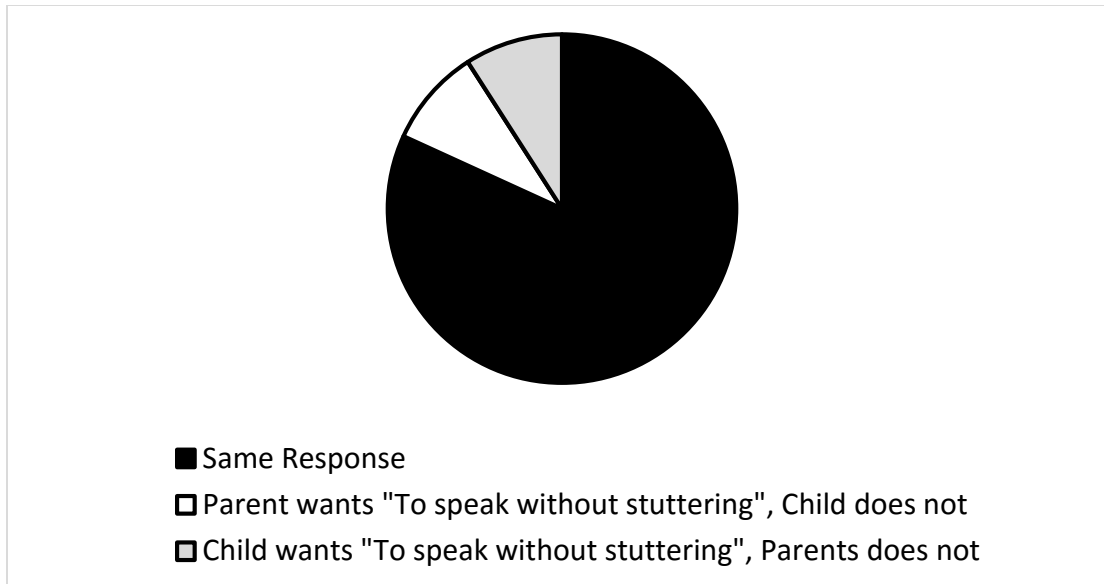


Figure 19. *Consistency in ratings of preferences for goal that is more important from 11 matched sets of parents and children.*

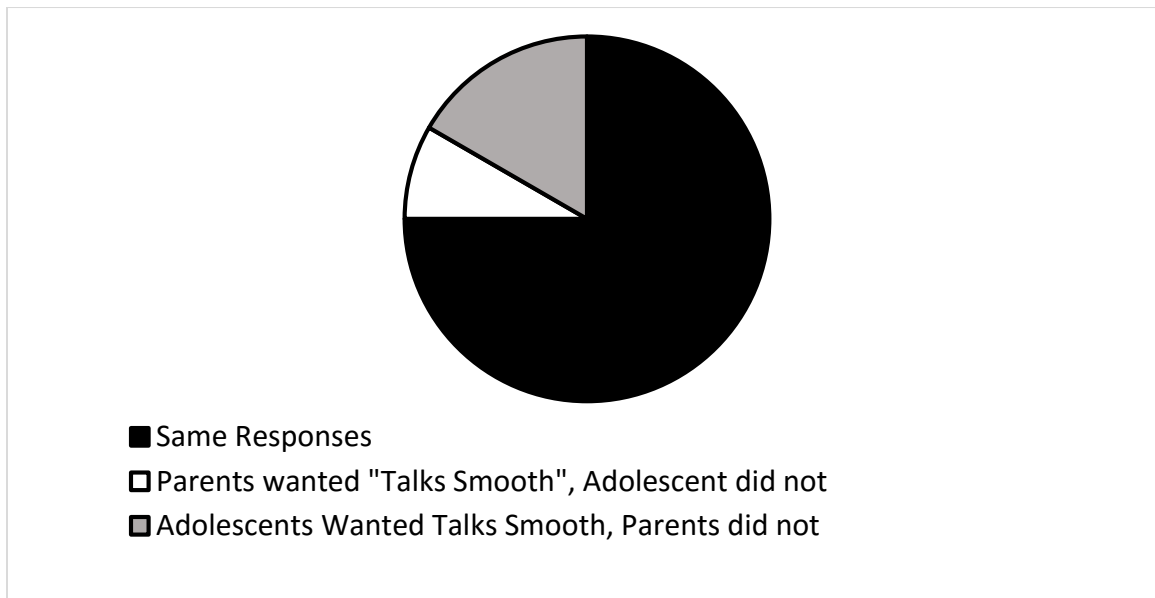


Figure 20. *Consistency in ratings of preferences for goal that is more important from 13 matched sets of parents and adolescents.*

As previously mentioned, questions about what was wanted in terms of speaking were asked twice as a method of test-retest with different wording to assess the reliability of questions and responses. Response options to what was preferred when ordering food were paired with similar responses to what goal was more important during the survey development.

These pairings of response totals and percentage selected by participants can be seen in **Table 18**. Based on the numbers and percentages there appear to be some inconsistencies in responses from individuals within the overall population.

Table 18. *Reliability of partial and complete responses to preferences when ordering food versus what goal is more important*

Preference when Ordering Food			Goal Selected as More Important		
	Number	Percent		Number	Percent
Talks smoothly	18	31%	To speak without Stuttering	25	42%
Orders what he/she/you want/s, smooth or not	41	69%	To say what he/she/you want/s, even if he/she/you stutters	34	58%

When individual answers were evaluated however, inconsistencies were present in a more than half of all responses across the two questions. Data regarding consistency by group can be seen in **Table 19**. A visual to compare the trends for consistency of responses to preference when ordering food and more important goal is also available in **Figure 21**. Based on the data, parents of children were the least consistent in their responses for preferences when ordering food versus what goal is more important. Children and adolescents had fairly similar levels of consistency in responses. Parents of adolescent were the most consistent in their responses ($n=17$, 100%).

Table 19. Number and percentage of consistency for responses to preferences when ordering food versus what goal is more important by group.

	Consistent Responses		Inconsistent Responses	
	Number	Percent	Number	Percent
Children (n= 11)	9	82%	2	18%
Parents of Children (n= 18)	10	56%	8	44%
Adolescents (n=13)	10	77%	3	23%
Parents of Adolescents (n= 17)	17	100%	0	0%

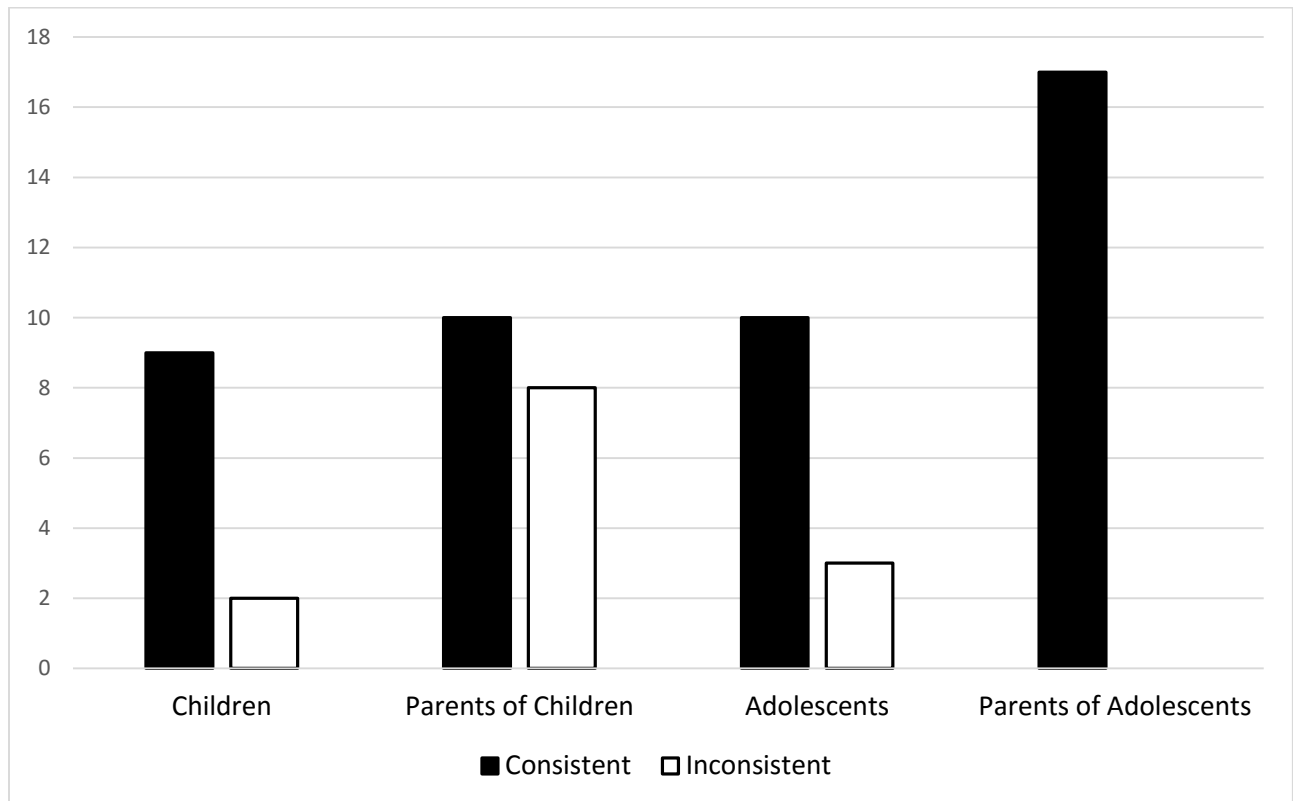


Figure 21. Consistency of responses to preference when ordering food and more important goal.

CHAPTER 5

Discussion

The purpose of this study was to determine whether age affects the perspectives of children, adolescents, and parents related to stuttering treatment. A secondary purpose of this study was to investigate whether the perspectives of children and adolescents differed from their parents.

Overall there were no differences for children and adolescents in ratings of treatment satisfaction, perceived change in speech, perceived change in communication, or preferences for treatment outcomes in relation to age. Differences were also not observed between the children/adolescents compared to the parents for ratings of treatment satisfaction, perceived change in speech, perceived change in communication, or preferences for treatment outcomes. There were slight trends for differences in ratings between parents of children and parents of adolescents related to their child/adolescent's age. There was also a tendency for differences in ratings of treatment perspectives and preferred treatment outcomes based on number of years in treatment, regardless of age.

Interpretation of Results

Prior to drawing conclusions from this research it is important to maintain caution; these results are preliminary because there were not enough responses to be conclusive. Overall, the sample population of 35 participants included 18 parents of children and 17 parents of adolescents, unequally matched to 11 children and 13 adolescents. This unequal matching was due to numerous dropouts ($n=11$) at the child/adolescent portion of the survey.

Most of the parent participants were mothers ($n=30$) who described their children/adolescents as Caucasian ($n=26$) males ($n=26$) from the Midwest ($n=12$).

With the limitations of the participants in mind, after comparing the participant data, the results of this study do not support the hypotheses that 1) age affects the perspectives of treatment for children and adolescents and 2) age affects preferences for treatment outcomes for parents, children, and adolescents. The data, however, did show trends that age may affect parents' perspectives of treatment and numbers of years in treatment may affect treatment perspectives regardless of age. Also, when parents and their child/adolescent perspectives were inconsistent for treatment satisfaction, perceived change in speech, and perceived change in communication, age group differences were noticed.

Children and Adolescents Perspectives of Treatment Based on Age. When rating aspects of treatment, responses for children and adolescents were fairly similar. Both children and adolescents had a modal rating of 4 (5-point scale) for treatment satisfaction, perceived change in speech, and perceived change in communication. Preferences for both groups in response to questions regarding treatment outcomes were split fairly equally between speaking without stuttering and freedom to say what one wants.

Parents Perspectives of Treatment Based on their Child/Adolescent's Age. The responses by children and adolescents did not reveal differences between the groups based on age. Similarly, parents' perspectives did not suggest trends in responses that differed based on the age of their child/adolescent. When rating treatment satisfaction, perceived change in speech, and perceived change in communication, parents of children and adolescents responses were closely divided between positive, neutral, and negative.

Differences between the groups of parents (of children or of adolescents) also differed on responses to preferred treatment outcomes. Nearly all parents of children selected the option in favor of speaking freely when asked about their child ordering food. When the same group responded to the general question of what goal was more important however, their perspective changed. Response selections were more equally divided between speaking without stuttering and speaking smoothly. This suggested that when there was no context provided, the preferred goal was not consistent. Unlike parents of children, the parents of adolescents were 100% consistent in their selection of treatment outcome preferences. More parents of adolescents selected the option related to speaking freely, regardless of whether it was asked in terms of the abstract goal, or set in the context of ordering food.

In summary, consistent with the hypothesis, ratings by parents of children were more optimistic than parents of adolescents. While the preferred treatment outcomes for parents of children and parents of adolescents did not match the research hypothesis, they do suggest differences may exist for parent responses depending on the age of their child.

Comparisons of Parents and Child/Adolescent Perspectives of Treatment. When the matched data set ($n=24$) of parents and their child/adolescent were compared to see if differences existed or not, as might be expected, ratings revealed similarities, but were not exactly alike. When rating treatment satisfaction, about half of all parents and child participants were consistent. Regarding the other half, rating inconsistencies appeared to show a slight shift based on age. The differences between the child participants and their parents tended to be in the direction of more positive ratings by the parent compared to the child.

Contrastively, when adolescents' and their parents' ratings differed, the adolescents tended to make more positive ratings.

Parents and their children/adolescents were very consistent in their responses for what goal was more important. When adolescents differed it was more often due to them selecting the option to speak smoothly. These results suggest most children, adolescents, and parents have similar preferences for treatment outcomes; when differences in preferences occurred, the children and adolescents tended to prefer speaking without stuttering rather than speaking regardless of stuttering.

Children and Adolescents Perspectives of Treatment Based on Years in Treatment. It was of secondary interest to consider whether years in treatment may have affected ratings on the survey. The data regarding perspective of stuttering treatment were examined in relation to years in treatment the results were suggestive of differences regardless of age. Both children and adolescents who had received treatment for less than five years rated their treatment satisfaction, perceived change in speech, and perceived change in communication within the range of positive more frequently than those who received more than five years of treatment. The latter group ratings varied across the entire Likert scale with equally many responses below positive as above positive. These findings suggest numbers of years in treatment may impact child and adolescent perspectives of treatment regardless of age.

Preferences for treatment outcomes however, did not vary consistently for children and adolescents in relation to their number of years in treatment. Children and adolescents who had received less than five years of treatment were closely divided in their preference for treatment outcomes across both questions. Children and adolescents who had received more

than five years of treatment expressed a preference for speaking freely when ordering food but the response was not the same when this group was asked what goal was more important; their preferences for important goal were closely divided. These findings suggest preferred treatment outcomes of children and adolescents are not influenced by number of years in treatment.

Parents Perspectives of Treatment Based on their Child/Adolescent's Number of Years in Treatment. The data for parents of children and adolescents in relation to number of years in treatment were consistent with the responses of children and adolescents. These results suggest differences in perspectives may also exist for parents in relation to number of years their child/adolescent has spent in treatment

When preferences for treatment outcomes were examined in relation to years in treatment, there were no changes in the trends that had been seen in the differences already noted between the two parent groups.

Comparisons to Previous Studies. The lack of differences in perspectives of treatment and preferences about treatment outcomes between children and adolescents based on age were not consistent with the research regarding development of children and adolescents. Differences in brain development and cognitive function described by Giedd (2015), paired with the concern for self in relation to peers mentioned by Hearne and colleagues (2008), suggested differences may be present. The findings however are consistent with the pilot study by Salvo (2014) in which no major differences in attitudes toward treatment were found between children or adolescents. With how similar the findings of these two studies were, perhaps the

aforementioned developmental differences do not directly connect to perceptions of treatment as much as one might expect.

Differences in perspectives for the two parent groups based on their child/adolescent's age could be explained in relation to the findings of Hayhow in 2009. Parents in Hayhow's study provided positive feedback about treatment (the Lidcombe Program), when reflecting on how it made them feel to be involved in helping their child. In the current study parents of children tended toward more positive ratings than parents of adolescents. As children grow into adolescents, they typically gain more independence. For this reason, parents of adolescents may not be or feel as involved in their child's treatment compared to parents of children. Comments from parents of adolescents in this study also suggest adolescents may want more independence in relation to their stuttering and have a tendency to fight or shut parents out. For example, one parent wrote: "The therapist said he would grow out of it; if anything, his speech has gotten worse. He hates therapy and we fight about it at home all the time." The possible differences in level of involvement may be a factor in why parents of children reported more frequent levels of satisfaction.

Parents of adolescents in the current study were more likely to select treatment outcomes related to speaking freely rather than speaking smoothly. Although this was not the expected preference for adolescents or their parents, perhaps this tendency makes sense. Because adolescents are older than children, the parents of adolescents would tend to have a longer period of exposure to stuttering and its treatment than parents of younger children. They may have received more information and education about stuttering over the years. Perhaps they have had more opportunities to see their child be successful regardless of

stuttering. They may know their adolescent's chance of recovery is slim but want them to be able to communicate openly and honestly for themselves regardless. In turn, this would lead to the preference for speaking freely.

Parents of children were fairly inconsistent in their responses about their preference for treatment outcomes. When given a context of ordering food, these parents indicated they wanted their child to speak freely, which was the expected preference. This response, however, was not consistent with what these parents preferred when there was no situational context of ordering food. One parent stated their child "wishes he didn't stutter" and commented about how hard it is for them. If many of the other children have expressed similar ideas, perhaps these feelings have influenced their parents' preferences when no context is provided.

To our knowledge this is the first investigation to examine parent perspectives of stuttering treatment outcomes, or to compare those perspectives with those of their children. Parents and children/adolescents ratings for perspectives of treatment were fairly similar. When difference occurred in ratings of treatment satisfaction children's rating were often lower than their parents while adolescents were usually higher. It is possible that children rated satisfaction lower because they do not have the same level of cognitive understanding as their parents to gauge their treatment experience as well. It is important to keep in mind parents and child/adolescent expectations may vary which could impact ratings of satisfaction. When differences in satisfaction ratings occurred for adolescents it was usually because adolescents were rating their satisfaction higher than their parents. Cooper and Cooper (1969) found that clients who were at later stages of therapy, as an adolescent may be, had more positive affect toward their clinician; one may suspect they would also have more positive feelings about

therapy as well. Parents are also not on the direct receiving end of treatment meaning their perceptions very well could be different.

Parents and children/adolescents also had somewhat similar ratings for perceived change in speech and perceived change and communication. When differences occurred it was often because the child or adolescent was rating the aspect higher. One possible explanation for children and adolescents' higher ratings could be their still-developing self-awareness. Parents on the other hand have a more objective perspective and may have a different interpretation of their child/adolescents changes. Children and adolescents may also be experiencing internal changes that are influencing their higher self-ratings. Since parents cannot see these changes they may be unaware of them.

Preferences for treatment outcomes between parents and children/adolescents showed variability based on context. Parents of children had similar responses when given a scenario but differed otherwise. Meanwhile, a majority of parents of adolescents were consistently in favor of speaking freely, however, their adolescents were not. Differences for all of these participants may be due to a number of factors, including but not limited to: personal experience, input from professionals like SLP, social context, and personal expectations.

Child, adolescent, and parent differences in perspectives with relation to years in treatment were relatively consistent with past research. Those who had less than 5 years of treatment had higher ratings of treatment perspectives. These results were in line with the findings of Yaruss, et al. (2002) which suggested those who had less years of unmet success would have more positive attitudes about treatment. Those who had more than 5 years of treatment reported a variety of ratings across the range of positive, neutral, and negative

ratings. Negative ratings were expected based on Venkatagiri's study that suggested people who received treatment longer would have greater dissatisfaction due to more time spent in treatment with unmet success. Perhaps these differences in study results occurred because "success" differs from person to person. Ventakagiri's study was also of adults so it is also possible the children and adolescents who responded to the current study would match his findings once they are older.

In this study, the child and adolescent preferences for treatment outcomes did not differ based on years in treatment. Differences were expected with consideration to the study by Venkatagiri (2009), in which adults who received less than five years of treatment preferred fluency while those with more than five were ambivalent. In the current study children and adolescents who received less than five years of treatment did not show a strong preference for fluency or freedom. Also, those who had received treatment for more than five years showed a stronger tendency for the preference for speaking freely in a specific scenario but not when asked about their preferences in general. Overall, the groups showed no clear directions in their preference of treatment outcomes. It is possible this group of children and adolescents are still figuring out what is most important to them.

In summary, the parents' treatment outcome preferences related to years in treatment did not match the research hypotheses either. Regardless of number of years in treatment, most parents in the current study reported a preference for their child/adolescent to speak freely in response to the question about ordering food. The study by Hayhow et al. (2008) included comments in the positive feedback section from parents about their child gaining independence. Perhaps the parents of children and adolescents in this study also felt positive

about the idea of their child being independent in an activity like ordering food. Parents or children lacked consistency when responding to preferred goal. Some parent responses were paired with comments referring to what SLPs want from their child's treatment, suggesting parents' responses may have been influenced by what they thought the more important goal was supposed to be.

Limitations. Main limitations of this study included low number of participants, child/adolescent participant dropout rates, demographic representation of the sample population, and some aspects of the survey process. The most evident limitation posed by the lack of ideal participant numbers was the inability to conduct statistical analyses. Secondly, with such low numbers caution is needed when interpreting and applying any of the results. Recruitment proved to be one of the most challenging aspects of this study. Data collection was conducted over a six-month period, almost twice as long as the pilot study in 2014. A wide net was cast to countless professionals and organizations with frequent and reoccurring contact. An increase in responses was seen towards the end of the data collection period. This was also near the time when the amended recruitment email and webpage announcements were distributed. Although the initial lengthy email and webpage announcements met the criteria for IRB approval, and provided detailed information for professionals who were asked to pass on the information, perhaps they were not participant-friendly enough. The increase of responses at the end of the data collection period also suggested an even longer window of time for a study of this nature may be needed.

The number of participants who dropped out at the child/adolescent portion of the survey was not ideal. Without the child/adolescents' input a key portion of research question

went unanswered. Comparing all parents and child/adolescent responses was done with caution due to the lack of matching between groups. All parts of the recruitment process asked that parents/guardians have their child nearby to complete their portion of the survey. Perhaps introducing the child/adolescent portion with even stronger language to the parent such as: “Now please get your child and seat them at your PC. If your child is willing to participate, please be sure they complete the next 7 questions alone” with more emphatic instruction would have improved the total number surveys completed. It is also possible children/adolescents simply did not want to partake in the study. It may have been worthwhile to generate some form of motivation for children/adolescents to complete their section of the survey without overstepping research guidelines.

A strength of the study was that most of the demographic data suggested the sample participants were representative of the larger population of people who stutter. Nearly three-quarters of those who stutter were identified as males similar to the stuttering gender ratio reported in research (Yairi & Ambrose, 2013). Minorities were also represented in the sample by nearly 25% which was favorable towards cross-representation. One major concern however, was the 75% of parents reported their child to have at least one other concomitant disorder. This exceeded the 44% of 426 child participants with at least one diagnosed concomitant disorder reported in past research (Arndt & Healey, 2001). Concomitant disorders can impact treatment in a number of ways, including focus and interpretation of progress. It is possible that the perspectives of treatment sampled in this survey were not representative of the larger population due to the high levels of concomitant disorders reported.

A lot of work was put into the development of the survey instrument. Even so, ways to improve the method were thought of, both throughout the study and once the results were received. Methods of recruitment may have been improved if more professional organizations had been contacted to announce the study on their webpages sooner. A number of professionals in the stuttering community responded that they would forward the study when they received personalized emails stating who the researcher and mentoring professor were. This method may have also aided in the recruitment efforts if implemented sooner.

Future Directions. Without the ideal number of participants, the findings of this study are inconclusive. Future research is necessary to determine whether differences in perspectives of treatment and preferences for treatment outcomes exist between parents, children, and adolescents with reference to age and number of years in treatment. The current results have too few participants meaning one cannot know whether they truly represent the perspectives of parents of children/adolescents who stutter and children/adolescents who stutter.

Future studies will want to consider the obstacles that the current study faced in terms of recruitment. Researchers should be prepared to collect data over a longer timeframe than the current study. It would be interesting to see how many responses could be obtained in a year-long period compared to the current six months. Recruitment materials should also be concise and reader-friendly for people who are not researchers or SLPs. While it is important to make sure all necessary information is included in the recruitment materials, one must remember that is the material the target population is also receiving. If these materials are not concise enough they may be discarded as spam or because the reader found it overwhelming. Researchers may also consider including a question about where participants learned about the

study. This may provide valuable information for reaching the target population in future studies and about the sample population in general.

Research in the future that obtains the ideal number of participants may want to continue to investigate the possible impact of both age and number of years in treatment on perspectives of treatment. Another variable that may be worth investigating is whether parents/guardians have a history of stuttering and/or stuttering treatment. Researchers should consider asking about participation in stuttering support groups as well. If researchers choose to include participation in stuttering support groups as a variable, they may also want to try to measure the impact this has on perspectives of treatment; it could be a challenge for researchers and participants to differentiate how treatment impacts perspectives compared to support groups though. Lastly, future researchers may want to investigate the impact of the four additional aspects important to treatment effectiveness, including extratherapeutic change, therapeutic relationship, client's theory of change, and expectancy.

The investigations in this study of parents, children, and adolescents, including the impact of age and years in treatment on perspectives of treatment and preferences for treatment outcomes have been interesting. In order for this information to be of value however, future studies need to continue with a larger number of participants. If the differences suggested by this study are valid, especially those related to ratings of treatment perspectives, it would be beneficial to study how to improve ratings for those whose ratings fell within the neutral or negative range. Interviews or focus group studies may be one approach to improving insight about what leads to lower satisfaction ratings in these populations. Researchers may also want to consider the perspectives of SLPs and see how their views

correspond with the reports of individuals receiving treatment. Overall, these findings indicate improvements to stuttering treatment can and should be made.

Regardless of what future studies choose to focus on, any research that adds to the limited information in existence from parents/guardians of children/adolescents who stutter and their children/adolescents will be beneficial. This insight is needed to improve the knowledge base for SLPs providing services in the future.

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APPENDIX A

Original Recruitment Email

Subject Line: Perspectives of Treatment by Children and Adolescents who Stutter- PARENTAL CONSENT REQUIRED

Hello, my name Heather Salvo and I am a second year graduate student majoring in Communication Sciences & Disorders at the University of Wisconsin- Milwaukee. I am currently working on a Master's thesis which aims to examine the perspectives of parents as well as school-age children and adolescents regarding stuttering treatment. Target participants include minors between the ages of 8 and 17 years who have had previously received a diagnosis of a stuttering disorder, treatment for stuttering, and began stuttering before 12 years of age and their parents/guardians. As minors, participants must have the consent of a parent or guardian to participate. If your child fits the previous description, and you would be willing to permit their participation, please read further to learn about how this survey will be handled. If you know someone who has a child who would be eligible for the survey, please kindly forward this Email to them.

Survey Access. In order to gain access to the survey and to verify consent, a parent or legal guardian of the child must contact click on the survey link provided in the email. By selecting the consent option and indicating their relationship to the child participant the parent or guardian confirms their child's permission to participate and is submitting consent. The parent should complete the initial portion of the survey. The child should be nearby and ready to complete their portion of survey as well. You have the right to read the entire survey first, but the final portion of survey should be completed by your child to ensure that the responses reflect your child's opinions. The survey should be completed in one sitting.

The Survey. There are 20 questions in the initial parent/guardian portion of the survey with multiple selections or short write-in answers. Topics include basic information about your child, their stuttering treatment history, and your views about their stuttering treatment. In the first part, we are interested specifically in your views as the parent/guardian. There are 6 questions in the child portion of the survey. These match 6 of your questions, but are about your child's views of stuttering treatment. In this part, we are interested specifically in the views of your child who had stuttering treatment.

The estimated length of time that you and your child will need to complete the survey is 10 to 15 minutes.

Risks/Benefits. I anticipate no risks or costs to you or your child as a result of their participation in this study other than the time it will take to complete the survey, and the possible emotional discomfort that some children might have as they think about their experiences with stuttering treatment. Deciding to participate or not will not impact any student's grades, class standing, opportunities, or relationship to any institution. When you review the survey questionnaire

prior to your child's participation, you and/or your child can decide whether they wish to continue. You and/or your child may choose to withdraw from the survey at any time. While there may be no immediate benefits to you or your child personally as a result of your participation in this study, you will have the satisfaction of knowing that your answers may help others in the future. We believe that improved knowledge of how adolescents and children, as well as their parents, view stuttering treatment will be beneficial for those who provide future clinical services to children who stutter.

After the Survey Ends. Information you provide will remain confidential. In addition, no identifying information will be linked to the answers provided by you or your child. Only myself (Heather Salvo), my mentoring professor (Dr. Carol Seery), and possibly student assistants in the UWM Stuttering and Fluency Laboratory who assist with data entry and analysis will have access to the survey data that is handled without any identifiers or links to participant identities. In order to maintain confidentiality, this survey will not request any names. All completed Qualtrics questionnaire data will be stored in a database that is secured through logins unique to the examiners. Any email correspondences will be held in a secure online location until the survey period is over at which time they will be immediately deleted. Survey data will be kept for 5-years following the study.

Questions: If you have any questions or comments about this study you can contact Heather Salvo (hdsalvo@uwm.edu; 262-995-8187; please leave a message) or Carol H. Seery, Ph.D., CCC-SLP (cseery@uwm.edu). If you have questions about your rights as a research participant or how this study is being conducted, you may contact the Contact the UWM IRB at 414-229-3173 or irbinfo@uwm.edu.

APPENDIX B

Modified Recruitment Email & Web Page Announcement

Subject line: Stuttering Treatment Outcomes Survey Announcement- Parental Consent Required

Hello!

My name is Heather Salvo and I am a graduate student completing a Master's thesis project at the University of Wisconsin-Milwaukee. I am in need of participants and would truly appreciate your help!

This study is a survey that assesses the views of parents and their children about stuttering treatment outcomes. The purpose of this study is to investigate whether there are any differences in the perspectives of three groups: children (ages 8-12 years old), adolescents (ages 13-17 years old), and their parents/guardians, related to stuttering treatment outcomes. Better understanding of these perspectives is important because it may impact the selection of goals, treatment activities, and interpretation of progress.

To participate, the child or adolescent must:

- Be between the age of 8 and 17 years old
- Currently have a stuttering disorder
- Have started stuttering before age 12
- Have parent consent to participate
- Have internet access

If your child fits the description, and you would allow them to voluntarily participate, please read further. If you know someone who has a child eligible for the survey, please kindly forward this Email.

The Survey

- Anonymous- No identifying information will be collected
- Online access- The survey can be accessed through the link below
- Voluntary Consent- Must be given by parent and child
- Questions- 17 parent, 7 child/adolescent
- Estimated time to complete the survey: 10-15 minutes
- Data will be kept for up to 5 years after the study

Risks

- There are no major risks or costs to you or your child to participate in this study besides the time it takes to complete the survey.
- It is possible you or your child might feel emotional discomfort thinking about stuttering or stuttering treatment. If you or your child need additional resources, here are webpages you may be interested in:

- Stuttering Foundation of America, Kids Web site: www.stutteringhelp.org/kids
- *National Stuttering Association Family Programs:* <http://www.westutter.org/who-we-help/families/>

Benefits

- The satisfaction of knowing your answers may help others receiving stuttering treatment in the future.
- The opportunity for you and your child to express your thoughts and feelings about stuttering treatment.

***** PLEASE MAKE SURE YOUR CHILD IS NEARBY TO COMPLETE THEIR PORTION OF THE SURVEY AT THE END IF THEY AGREE TO PARTICIPATE**

CLICK HERE TO LINK TO THE

SURVEY: https://milwaukee.qualtrics.com/SE/?SID=SV_3XmSpNpIYBi8Nwh

Questions or Concerns

If you have any questions or comments about this study you can contact:

Heather Salvo. Email: hdsalvo@uwm.edu. Phone: 262-995-8187 (please leave a message).

Dr. Carol H. Seery. Email: cseery@uwm.edu. Phone: 414-229-4291

If you have questions or concerns about how you are treated in this research, you may

contact: University of Wisconsin – Milwaukee (UWM). Institutional Review Board (IRB),

Human Research Protection Program, Department of University Safety and Assurances, P.O. Box 413, Milwaukee, WI 53201, Phone: 414-229-3173. Email: irbinfo@uwm.edu.

IRB Approval #: 16.176

IRB Approval date: January 27, 2016

Title: Perspectives of Stuttering Treatment: Parents, Adolescents, and Children

Description: This survey is a unique opportunity for both parents/guardians of school-age children and adolescents who stutter and the children themselves to express their ideas about their child's treatment. Better understanding of these perspectives is important because it may impact the selection of goals, treatment activities, and interpretation of progress.

Eligibility: The child or adolescent must:

- * Be between 8 and 17 years old
- * Currently have a stuttering disorder
- * Have started stuttering before age 12
- * Have parent consent to participate
- * Have internet access

***** PLEASE MAKE SURE YOUR CHILD IS NEARBY TO COMPLETE THEIR PORTION OF THE SURVEY AFTER YOURS IF THEY AGREE TO PARTICIPATE.**

Survey link: https://milwaukee.qualtrics.com/SE/?SID=SV_3XmSpNpLYBi8Nwh

Survey closes: July 1, 2016

If you have any questions or comments about this study you can contact:

Heather Salvo. Email: hdsalvo@uwm.edu. Phone: 262-995-8187 (please leave a message).

Dr. Carol H. Seery. Email: cseery@uwm.edu. Phone: 414-229-4291

If you have questions or concerns about how you are treated in this research, you may contact:

University of Wisconsin – Milwaukee (UWM). Institutional Review Board (IRB),
Human Research Protection Program, Department of University Safety and Assurances, P.O.
Box 413, Milwaukee, WI 53201, Phone: 414-229-3173. Email: irbinfo@uwm.edu.

IRB Approval #: 16.176

IRB Approval date: January 27, 2016

APPENDIX C

Biking Survey

Eligibility: Do you know how to ride a two-wheel bike by yourself? (circle) Yes No

1. My country: _____

2. My language: _____

3. Circle: I am: a. Male b. Female

4. I am _____ years old.

5. I have been riding a two-wheel bike by myself since:

- a. Preschool age (1–3 years of age)
- b. Kindergarten age (4–5 years of age)
- c. Primary school age (6–9 years of age)
- d. Secondary school age (10 or later)

6. I started learning to ride a two-wheel bike at the age of:

- a. Before age 3 years
- b. 3–4 years
- c. 5-6years
- d. 7-8 years
- e. 9–10 years
- f. 11–12 years
- g. 13–14 years
- h. 15-17 years

7. It took me a span of this long to learn to ride a two-wheel bike (Explain your answer below if necessary):

- a. Less than 1 year
- b. 1 year
- c. 2 years
- c. 3-4 years
- d. 5-6 years
- e. 7-8 years
- f. 9-10 years
- g. more than 10 years

8. What strategies helped you learn to ride a bike? (circle all that apply)

- a. Training wheels
 - b. Practice without training wheels
 - c. Practice with help from someone
 - d. Other (please describe)
-

9. How successful was your main strategy for learning to ride a bike?

- a. Very successful
- b. Somewhat successful
- c. Neither successful nor unsuccessful
- c. Somewhat unsuccessful
- d. Very unsuccessful

10. How much have you liked learning to ride a bike?

- a. Very much liked
- b. Somewhat liked
- c. Neither liked nor disliked
- c. Somewhat disliked
- d. Very much disliked

11. Knowing how to ride a bike has made me feel (check all that apply):

- a. More socially accepted
- b. Neither more nor less socially accepted
- c. Less socially accepted

Optional (describe feelings about social acceptance):

12. What I wish most is to:

- a. Ride for relaxation.
- b. Do tricks on a bike

Optional comment:

APPENDIX D

Survey Instrument

Parent Survey Questions

Survey Introduction

Thank you for your interest in completing this survey about stuttering and its treatment.

After providing voluntary consent you will encounter the parent portion of the survey that includes 17 questions. These questions will ask about basic information as well as your views about stuttering treatment.

Next your child will learn about the study. If they consent to participate they will respond to 7 questions. These 7 questions will be similar to questions you answered but will reflect your child's views of stuttering treatment. It is okay to explain what words mean if your child asks for help understanding the questions.

The time to complete the survey is 10-15 minutes. It must be completed in one sitting. You and your child are free to withdraw from the survey after you start. To do this, simply exit your browser. Keep in mind you may not be able to re-enter the survey if you exit.

If at this point you do not wish to participate, simply exit your browser.

If you still wish for you and your child to participate, please indicate your consent here:

- ☐ Yes, as parent/guardian of the child participant, I confirm that I am of legal consenting age, and that I give my voluntary consent to the participation by me and my child in this survey.

My relationship to the child is:

- ☐ Mother
☐ Father

Other (Optional Comment):

Selection Criteria:

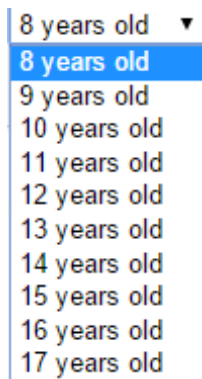
i. Does your child currently have a stuttering disorder?

- ☐ Yes
☐ No (If no ineligible)

ii. Has your child had stuttering treatment?

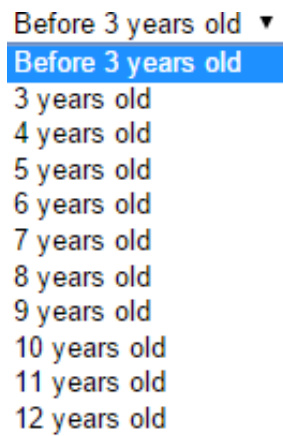
- ☐ Yes
☐ No (If no ineligible)

iii. How old is your child? (if not between 8 and 17, not eligible)



A dropdown menu with a blue header bar containing the text "8 years old" and a downward arrow. The menu is open, showing a list of options: "8 years old", "9 years old", "10 years old", "11 years old", "12 years old", "13 years old", "14 years old", "15 years old", "16 years old", and "17 years old". The "8 years old" option is highlighted in blue.

iv. At what age did your child begin to stutter? (If not before age 12, not eligible)



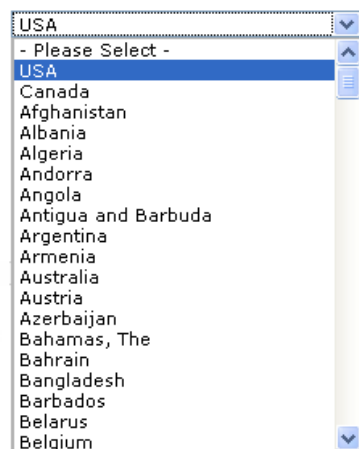
A dropdown menu with a blue header bar containing the text "Before 3 years old" and a downward arrow. The menu is open, showing a list of options: "Before 3 years old", "3 years old", "4 years old", "5 years old", "6 years old", "7 years old", "8 years old", "9 years old", "10 years old", "11 years old", and "12 years old". The "Before 3 years old" option is highlighted in blue.

Parent/Guardian Portion of the Survey Begins

Demographics & Background Information:


1. My child lives in this country:

Country:



A country selection dropdown menu. The header bar shows "USA" with a downward arrow. Below the header is a list of countries: "USA", "Canada", "Afghanistan", "Albania", "Algeria", "Andorra", "Angola", "Antigua and Barbuda", "Argentina", "Armenia", "Australia", "Austria", "Azerbaijan", "Bahamas, The", "Bahrain", "Bangladesh", "Barbados", "Belarus", and "Belgium". The "USA" option is highlighted in blue. There are upward and downward arrows on the right side of the list.

2. If USA, what state?

State Select a 

Select a State

Alabama

Alaska

Arizona

Arkansas

California

Colorado

Connecticut

D.C.

Delaware

Florida

Georgia

Hawaii

Idaho

Illinois

Indiana

Iowa

Kansas

Kentucky

Louisiana

3. In what language(s) has your child received stuttering treatment (check all that apply):

- ☐ English
- ☐ Spanish
- ☐ French
- ☐ Chinese
- ☐ Arabic
- ☐ German
- ☐ Portuguese
- ☐ Other _____

4. Your child's ethnicity origin or race is (check all that apply):

- ☐ White
- ☐ Hispanic or Latino
- ☐ Black or African American
- ☐ Native American or American Indian
- ☐ Asian / Pacific Islander
- ☐ Other _____

5. Your child's gender is:

- ☐ Male
- ☐ Female
- ☐ Other Response _____

6. Your child started treatment for stuttering at the age of:

Before 3 years old ▾
Before 3 years old
3 years old
4 years old
5 years old
6 years old
7 years old
8 years old
9 years old
10 years old
11 years old
12 years old
13 years old
14 years old
15 years old
16 years old
17 years old

7. How many years of stuttering treatment your child has had:

- ☐ Less than 1 year
- ☐ 1-2 years
- ☐ 3-4 years
- ☐ 5-6 years
- ☐ 7-8 years
- ☐ 9-10 years
- ☐ more than 10 years

8. The last time your child had stuttering treatment was:

- ☐ My child is attending stuttering treatment currently
- ☐ Less than 1 year ago
- ☐ 1-2 years ago
- ☐ 3-4 years ago
- ☐ 5-6 years ago
- ☐ 7-8 years ago
- ☐ 9-10 years ago
- ☐ More than 10 years ago

9. Where has your child received stuttering treatment? (check all that apply):

- ☐ School
- ☐ Hospital or Medical Clinic
- ☐ Intensive treatment program
- ☐ Private speech clinician
- ☐ University Clinic
- ☐ Other setting: _____



10. Has your child needed treatment for other areas besides stuttering? (check all that apply)

- ☐ Articulation
- ☐ Phonology
- ☐ Language
- ☐ Reading
- ☐ Cognition
- ☐ Attention
- ☐ Emotions and Behaviors
- ☐ Sensory Processing
- ☐ Optional comment: _____

11. What did your child work on in stuttering treatment? (check all that apply)

- ☐ Talking without stuttering
- ☐ Changing their stutters
- ☐ Talking about speech and stuttering
- ☐ Being a good communicator
- ☐ I do not know
- ☐ Optional comment: _____


12. Has your child's stuttering changed with stuttering treatment? (sliding scale below)

	
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13. Imagine your child is ordering food, is it more important that your child:

- ☐ Talks smoothly
Optional comment: _____
- ☐ Orders what your child wants, smooth or not
Optional comment: _____


14. Have your child's communication skills changed with stuttering treatment? (sliding scale below)

	
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15. What skills did your child learn in stuttering treatment? (check all that apply)

- ☐ Making smooth speech (example: slower speech)
- ☐ Making stutters easier (example: pull-outs)
- ☐ Confidence (example: talks to new people)
- ☐ Better communication (examples: eye contact, taking turns to talk)
- ☐ I do not know
- ☐ Optional comment: _____

16. How do you feel about your child's stuttering treatment? (sliding scale below)

			
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17. Which one of these goals is more important for your child?

- ☐ To speak without stuttering (Optional comment)
-
- ☐ To say what he/she wants to say, even if he/she stutters (Optional Comment)

Child Assent Language

Hi. My name is Heather and I am going to school to learn how to help people with their speech. Right now, I am trying to learn what children and teenagers think about their stuttering treatment. I hope you will help me learn more about this by answering some questions.



First, if you ever do not want to answer any of the questions, you do not have to. The choice is up to you. You can say okay now and change your mind later. All you have to do is tell your parent you want to stop or close the window on your computer. No one should be mad at you if you decide not to answer the questions, even if you start answering them and change your mind and want to stop.

I am not asking for your name. No one will know you answered these questions except your parent. If you write a comment with a question, no one will know who wrote it.

The answers you give will help me and others learn more about what children and teenagers think about stuttering treatment. We hope the answers to these questions will help children who stutter in the future.



If you are okay with answering questions, please keep reading and go on to the next page. These questions will be about stuttering treatment. If you need help with a question, you can ask your parent. But remember, we want to know what you think about your stuttering treatment.

Child Portion of the Survey Begins

1. What did you work on in stuttering treatment? (check all that apply)

- ☐ Talking without stuttering
- ☐ Changing their stutters
- ☐ Talking about speech and stuttering
- ☐ Being a good communicator
- ☐ I do not know
- ☐ Optional comment: _____

2. Has your stuttering changed with stuttering treatment? (sliding scale below)

	
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3. Imagine you are ordering food, is it more important that you:

- ☐ Talk smoothly
Optional comment: _____
- ☐ Order what you want, smooth or not
Optional comment: _____

4. Have your communication skills changed with stuttering treatment? (sliding scale below)

	
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5. What skills did you learn in stuttering treatment? (check all that apply)

- ☐ Making smooth speech (example: slower speech)
- ☐ Making stutters easier (example: pull-outs)
- ☐ Confidence (example: talks to new people)
- ☐ Better communication (examples: eye contact, taking turns to talk)
- ☐ I do not know
- ☐ Optional comment: _____

6. How do you feel about your stuttering treatment? (sliding scale below)

	
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7. Which one of these goals is more important for you?

- ☐ To speak without stuttering (Optional comment)

- ☐ To say what I want to say, even if I stutter (Optional Comment)

APPENDIX E

Child Assent Language

Hi. My name is Heather Salvo and I am going to school to learn how to help people with speech difficulties. Right now, I am trying to learn what children and teenagers think about their stuttering treatment. I hope you are willing to help me learn about this by answering some questions.



First, if you ever do not want to answer any of my questions, you do not have to. The decision is up to you. You can say okay now and change your mind later. All you have to do is tell your parent you want to stop or close the window on your computer. No one should be mad at you if you decide not to answer these questions, even if you start doing it and change your mind and want to stop.

I am not asking for your name. No one will know you answered these questions except your parent. If you write a sentence to answer a question, no one will know who wrote it.

The answers you give will help me and others learn more about what children and teenagers think about stuttering treatment. We hope the answers to these questions will help children who stutter in the future.

If you are okay with answering questions, please keep reading and continue on to the next page. These questions will be about stuttering treatment. If you need help with a question, you can ask your parent. But keep in mind we want to know what you think about your stuttering treatment.