CLINICIAN-CLIENT PERCEPTIONS OF THE THERAPEUTIC ALLIANCE AND PERCEIVED OUTCOMES IN STUTTERING TREATMENT

by

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A Thesis for the Degree Master of Science

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ABSTRACT

The purpose of this study was to examine the therapeutic alliances (TA) of graduate student clinicians and adult clients who stutter relative to perceived treatment outcomes. Student clinicians (N = 37), adult clients who stutter (N = 21), and clinician-client dyads extracted from the greater sample (N = 10 pairs) completed a survey assessing their TA strength and perception of treatment outcomes. Clinician and client responses were analyzed to determine similarities, differences, and predictors of TA strength. Results suggest that clinicians and clients who stutter both relate the TA to treatment outcome, but in different ways. While clinicians closely associate the TA with treatment effectiveness and client progress, clients relate the TA most to outcome satisfaction. There seems to be no predictor to determine how a client or student clinician perceives the TA. Clinicians should be aware that for adult clients who stutter, outcome satisfaction is strongly related to the degree of shared understanding, agreement on daily tasks, and bond they experience with their clinician. To ensure a strong TA and client satisfaction, clinicians should actively seek their clients' perspective regarding TA status.

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INTRODUCTION

The multifaceted nature of stuttering can be represented by the diverse behavioral, affective, and cognitive characteristics that people who stutter (PWS) may exhibit. Stuttering is defined as the disruption in the rate, rhythm, smoothness and overall forward flow of speech; however, the way in which tension, strain, and effort manifest in the speech of PWS differs from one person to the next (Conture, 2001; Sheehan, 1970; Van Riper, 1973). These complex physical characteristics of stuttering are compounded by its affective and cognitive components, which are invisible to the observer but can be profound contributors to a person's quality of life. The underlying thoughts, feelings, and emotions of a PWS can manifest in avoidance behaviors (Ginsberg, 2000; Zebrowski & Kelly, 2002), psychosocial difficulties (Craig & Tran, 2014; Perez & Stoeckle, 2016; Iverach & Rapee, 2014), and/or academic and vocational challenges (Dorsey & Guenther, 2000; Klein & Hood, 2004; Zebrowski, 2016). In order to navigate the dynamic behavioral, attitudinal, and life-quality consequences that can accompany stuttering, many individuals seek treatment from speech-language pathologists (SLP).

Stuttering treatment approaches

The two primary approaches of stuttering treatment in adults are behaviorally-based and acceptance-based. Fluency-shaping, a behavioral technique, seeks to decrease or eliminate stuttering behavior by using prolonged, continuous phonation, slow articulatory movements, and an "easy voice" (Conture, 2001; Guitar, 2014; Van Riper, 1973). The ultimate goal of this technique is to produce stutter-free speech, and outcome measures are quantified by the percentage of stuttered sounds, syllables, and words. Contrarily, the acceptance approach aims to provide the PWS with enhanced control over his or her stuttering moments, enabling positive attitudinal and affective changes regarding the fear of stuttering as an unpredictable obstacle

(Van Riper, 1973; Zebrowski & Kelly, 2002). Activities during therapy may include tasks such as using stuttering modification techniques to practice the release of tension (Blomgren, 2005), pseudostuttering to promote desensitization (Bloodstein & Ratner, 2008; Gregory, 2003), and the formation of a self-disclosure statement (Byrd et al., 2017).

Although many adults who stutter report receiving treatment that integrates both fluency shaping and stuttering modification approaches (Yaruss et al., 2002), controversy surrounding the clinical application of these approaches dates back to the 1930s and has persisted to the present day. The evidence-based, outcome-measured support for the behavioral approach found in the literature grossly outweighs that for acceptance-based approaches. Therefore, proponents of this approach encourage professionals to adhere to it based on the premise that acceptance-based approaches have not demonstrated sufficient evidence to be proven effective (Nippold, 2012). Conversely, advocates of the acceptance approach have repeatedly rejected the behavioral approach based on the premises that it is too narrow in its definition of success (Yaruss, Coleman, & Quesal, 2012) and is unrealistic (Van Riper, 1982; 1973). When considering these divergent professional perspectives in the context of the three tenets of evidence-based practice, the client values and wishes become that much more significant in the clinical decision-making process for stuttering treatment (American Speech-Language-Hearing Association, 2005). Venkatagiri (2009) provided insights into the wishes of 216 adults who stutter by asking if they prefer to speak fluently or to speak freely without pressure to be fluent. The results indicated that "a majority of people who stutter appear to benefit from flexible treatment programs with cafeteria-style choices." This study revealed the paradox between freedom to speak and fluency, concluding that PWS crave fluency in some situations and freedom in others. More recently, Perez and Stoeckle (2016) examined available treatments for stuttering, including pharmacologic

treatment (e.g., antidepressants), nonpharmacologic treatments (e.g., acupuncture), and speech therapy. Across each of these treatment options, PWS indicated speech therapy as the therapy of choice.

Taken together, these findings hold serious implications for the SLP's role in stuttering treatment. It is known PWS prefer a diverse range of treatment options, and it is also known that the SLP continues to be the primary source of guidance and support in the management of stuttering. Therefore, SLPs must consider how they can be flexible in their approach to treatment, but consistent in their provision of best care. Clarity on this issue may lie beyond the therapeutic procedure and, instead, in the therapeutic alliance.

Origins of the TA

Distinct from the therapeutic relationship, which focuses on the feelings that the client and clinician have towards one another (Gelso & Carter, 1985), the therapeutic alliance is defined by three features: consensus on goals, agreement on the tasks during therapy, and the affective bond between the clinician and the client (Bordin, 1979). The concept of the alliance originates from the musings of Freud, who considered the predicament that patients face at the beginning of therapy when they feel challenged and uncomfortable, yet eager to improve (Freud, 1958; 1913). He proposed the idea that if the client and the clinician establish a trustworthy and comforting relationship, the client will remain in therapy despite increasing levels of anxiety when they are asked to do or consider something that they hadn't before. The alliance is dyadic in nature, as it signifies how well the client and clinician work together to achieve common goals (Horvath, Del Re, Fluckiger, & Symonds, 2011). In the field of psychotherapy, evidence to support the relationship between the therapeutic alliance and reported treatment outcomes is robust. In a study that examined clients' views of the therapeutic alliance and its relationship to

treatment outcomes, Clemence et al. (2005) reported that patients who viewed the alliance as strong also reported improved functioning and a feeling that therapy was helpful. Conversely, a mismatch between the clinician and client perceptions of the alliance could render interventions that are perceived as less effective (Horvath et al., 2011). One study synthesized 200 research reports that covered more than 14,000 treatments to discover the overall aggregate relation between clinician-client alliance and treatment outcomes. The overall aggregate relation was $r = .275$, and the magnitude of this correlation is one of the most robust that empirical research to date has documented (Horvath et al., 2011). The statistical probability associated with the aggregated relation between alliance and outcome was $p < .0001$, supporting the following claim:

> The impact of the alliance on therapy outcome is ubiquitous, irrespective of how the alliance is measured, from whose perspective it is evaluated, when it is assessed, the way the outcome is evaluated, and the type of therapy involved. The quality of the alliance *matters*. (p. 13)

The existence of factors that transcend the specific treatment procedure can also be explained by the common factors model. This model asserts that across diverse treatment options, there are commonalities that make treatment effective, regardless of the specific intervention approach. Some of these qualities may include empathy, positive regard, and the clinician-client relationship (Grencavage & Norcross, 1990). Norcross and Wampold (2011) reviewed a series of meta-analyses pertaining to this topic and came to a similar and powerful conclusion: the influence of the therapeutic alliance on treatment outcome is at least equal to the influence of treatment itself.

The TA in stuttering treatment

The field of communication sciences and disorders (CSD) has come to consider the common factors model in intervention outcomes, reflecting the broadening and overlapping relationship between speech-language pathology and psychotherapy (Cooper, 1966; Gregory, 2003). In the CSD literature, common factors such as empathy (Quesal, 2010) and client attitude (Andrews, Guitar, & Howie, 1980) have been explored. Among each of these factors, the unique importance of the therapeutic alliance was recognized as early as the 1960s (Cooper, 1966; Manning, 1969). Over the last 40 years, attention to the issue has only grown as clinicians and clients alike experience communication breakdowns in the therapy room. While SLPs may possess knowledge of treatment techniques, many fail to understand their clients' *experience* of stuttering, leading to client frustration. Manning (2004) suggested that SLPs should measure successful change "by whether or not [they] understand the client's story and whether or not [they] meet the client's goals rather than [their] own". In this statement, Manning suggests that the clinician-client consensus of goals – a pillar of the therapeutic alliance – is of critical importance and a therapeutic necessity that unfortunately, seems to be missing in most therapeutic contexts.

Yaruss, Quesal, and Murphy (2002) further demonstrated this disconnect and its impact on treatment retention through a stuttering experience survey that was administered to 71 adults who stutter. Ninety-four percent of the respondents had received speech treatment at some point in their lives; however, 84.5% sought treatment more than once, with 50% of these individuals doing so because they reportedly did not feel that they experienced success in treatment. When respondents were asked the cause of treatment dissatisfaction, 22.4% reported they were asked to perform tasks they did not feel comfortable doing, 11.9% felt they were misinformed regarding

their probability of success, and 9% did not feel valued in the decision-making process. Each of these reasons directly reflects a rupture of the therapeutic alliance, specifically with regard to the "consensus on goals" and "agreement on tasks in therapy" components. Furthermore, when asked to evaluate their "best" and "worst" treatment experiences, ratings of treatment success were significantly and positively correlated with clients' ratings of perceived clinician competence. The implications of these results are both sobering and empowering. Although the therapy dissatisfaction rates are high, the mismatch between the clinician and client expectations is absolutely preventable. Collaboration is a skill, not a coincidence.

While the merit of the therapeutic alliance has been recognized repeatedly in the stuttering literature, research to support its evidence-base has emerged only recently. Plexico, Manning, and DiLollo (2010) explored the constructs of a successful therapeutic experience as defined by clients who stutter. The study used a phenomenological approach to discover what adults who stutter value in the therapeutic process, and found that 17 of 28 participants emphasized the importance of the therapeutic alliance in their responses. Specifically, PWS indicated that clinician empathy, trust, support, goal agreement, and competence were all conducive to successful therapy, more so than other clinician qualities, such as patience or adherence to treatment approach. Conversely, clinicians who were judgmental, lacked understanding of the experience of stuttering, and were too dogmatic in their approaches were viewed as less effective. Irani, Gabel, Daniels, and Hughes (2012) found similar results in a study that examined client perceptions of an intensive stuttering treatment program: one of the major factors participants reported as a contributor to their overall motivation and perceived success was their relationship with the clinician as well as their perception of the clinician's competence. Finally, a total of 237 adults with clinical speech-language pathology experience

participated in a survey that gathered their views of treatment and effective clinicians (Ebert & Kohnert, 2010). Responses indicated that rather than a quality inherent to the clinician, the clinician-client relationship led to the feeling that therapy was effective.

Given the lack of consensus regarding stuttering treatment among SLPs and dissatisfaction among clients, recent findings of the transcendent value of the therapeutic alliance are timely and render immediate action. The importance of building a strong alliance in stuttering treatment must be underscored and integrated into the didactic and clinical training of CSD students - the future of clinical practice in stuttering. According to recent studies, the current status of clinician training and clinician competence and confidence in the area of stuttering are a cause for concern. Yaruss, Lee, Kikani, Leslie, Herring, Ramachandar, Tichenor, Quesal, and McNeil (2017) surveyed the didactic coursework, the nature and amount of clinical assessment and treatment received by students, and the reductions or increases in coursework and clinical requirements of undergraduate and graduate programs in speech pathology. Out of 169 programs, only 77 (45.6%) reported that clinical experience with the treatment of fluency disorders is required. Of these, 65 programs reported an average of 15.4 clinical hours of treatment with only 37.4% of that time spent with adults. Collectively, this means that less than half of the students gain clinical experience with the stuttering population, with those who do completing a total average of only 5.75 clinical hours working with adult clients who stutter. In addition to this alarming lack of clinical experience, the formal education these students receive is also concerning, as the percentage of programs in which tenure-track instructors taught the fluency disorders course has decreased (Yaruss et al., 2017; Yaruss & Quesal, 2002). With a decreasing amount of experience and education, it is no surprise that speech-language pathologists tend to have negative views towards people who stutter (Ginsberg & Wexler, 2000;

Lass et al., 1989) and that 23.9% of PWS felt that their therapist did not have enough experience with stuttering (Yaruss, Quesal, & Murphy, 2002). Before entering the workforce, graduate students are expected to demonstrate competence in each area of speech pathology, spanning from articulation and language disorders to neurogenic communication disorders, and the SLPs scope of practice continues to expand (American Speech-Language-Hearing Association, 2016; Yaruss 2017). What may be lost in this vast transfer of knowledge is the common factor that could enhance a clinician's practice not only in stuttering, but within each area of speech pathology: the value of a strong therapeutic alliance.

PURPOSE

The purpose of the current study was to explore the self-reported TAs of graduate student clinicians and their adult clients who stutter, and the TAs relationship to perceived treatment outcomes. Examination of the student clinician-client alliance provides insight regarding the alignment of perceptions of the alliance and how the alliance may impact perceived outcomes. Such information informs not only practice, but also directions in training and can ultimately advance stuttering treatment. While there is overwhelming support for the alliance in psychotherapy and emergent recognition of the alliance in the area of stuttering, no study to date had examined the impact of the therapeutic alliance on perceived stuttering treatment outcome, the salient constructs of the therapeutic alliance, or the degree of alignment between client and clinician perceptions.

The following research questions were addressed:

1. What is the relationship between therapeutic alliance and perceived treatment effectiveness, progress, and outcome satisfaction for clinicians and adult clients who stutter?
2. To what extent do adult clients who stutter and their student clinicians align in their perceptions of the therapeutic alliance?
3. What is the relationship between a graduate student clinician's prior coursework and stuttering treatment experience and the strength of their current therapeutic alliance?
4. What is the relationship between the treatment history of adult clients who stutter and the strength of their current therapeutic alliance?

This study advances knowledge regarding the nature of the therapeutic alliance between student clinicians and their adult clients who stutter and its impact on perceived treatment outcomes. Results hold implications for the clinician-client interaction in stuttering treatment and clinical training for future SLPs.

METHOD

In order to examine graduate student clinicians' and adult clients' who stutter perception of the TA and therapy outcomes, a Qualtrics survey was developed and sent to ASHA accredited speech-language pathology programs in the United States. Prior to distribution, the study was approved by the Texas Christian University Institutional Review Board.

Recruitment

An email with the Qualtrics survey was sent to the clinical directors of 261 SLP programs. The email provided a general purpose of the project, highlighting the need for student clinician – adults who stutter dyads. Clinical directors were asked to identify eligible dyads in

their program, and to send each dyad a link to the survey, which was embedded in the email, within the last two weeks of the academic quarter or semester. Respondents were asked to complete the survey no later than one month after the completion of treatment for that term. The recruitment email can be found in Appendix A.

In addition to the email, program contacts were also recruited via telephone. Within the conversation or voice message, the language in the recruitment email was used to describe the study's purpose and procedure, and contacts were encouraged to reference their email for a direct link to the survey.

To maximize participation, this recruitment process was implemented at the conclusion of the spring term (i.e., May - July) and again at the conclusion of the fall term (i.e., November and December).

Participants

Participant eligibility was described in the recruitment email and included:

Graduate student clinicians:

A) Enrollment in an accredited speech-language pathology graduate program

B) Concluding (within one month after the last day of therapy) their treatment of an adult (≥18 years) who stutters

Clients – Adults who stutter (AWS):

A) Diagnosis of stuttering by a certified SLP

B) 18 years old or older

C) Concluding (within one month after the last day of therapy) or just received treatment from a graduate student clinician

Consent

An informed consent document, which outlined the general purpose of the study, the known associated risks and benefits, the anonymity of responses, and the freedom to stop the survey at any time, was shown as the first page of the survey. Participant benefits included the opportunity to reflect on their therapeutic alliance and outcomes, possibly leading to greater clarity and understanding about their experience. Furthermore, participants were provided with the author's contact information and could contact the author to learn of the study's results. If the clinician and client did not have a positive relationship, a risk associated with this study was the individual's feeling of negative emotions throughout the survey-taking experience. Otherwise, there were no known risks associated with participating in this study.

The document also informed potential respondents that their current or future status as students, clinicians, or recipients of therapy would not be affected by their participation in the study. An email and phone number were provided for potential participants to contact if they had any questions. Participants indicated their consent by clicking on the ">>" arrows at the bottom of the page, which lead to the start of the survey.

Measures

The Qualtrics survey collected demographic information, responses to questions examining the TA, and responses to questions examining perceived treatment outcomes. A complete version of the survey can be found in Appendix B.

Demographic questions.

After providing informed consent but prior to starting the survey itself, the AWS were asked to provide the initials of their clinician, and the graduate clinicians were asked to provide

the initials of their clients. Both parties were asked to provide the name of their university. The combination of these initials and the university served as a code for the authors to match dyads without being able to identify the participants' identities.

For both the client and student clinician, the following information was obtained: age, gender, number of treatment sessions that term, client stuttering severity as reported on a scale from 0-9 (Eve, Onslow, Andrews, & Adams, 1995), and therapeutic tasks (Yaruss, Quesal, & Murphy, 2002). In addition, the cumulative number of months of previous treatment settings and in which settings (i.e., school, hospital, private practice, university clinic, other) was obtained from clients. For the student clinicians, questions regarding the number of months in graduate school, completion of stuttering and counseling coursework, and previous experience treating PWS were included.

Combined Alliance Short Form – Clinician version.

After collecting demographic information, a modified version of the Combined Alliance Short Form – Clinician version (CASF-T) was included in the Qualtrics survey to assess the clinicians' perception of the TA. The modified CASF-T referred to the recipient of therapy as the "client" rather than "patient" in all items (e.g., "I appreciate my client as a person"). The CASF-T was created by Hatcher (1999) from a principal components analysis. This scale blends two alliance measures including the Working Alliance Inventory – Form T (WAI-T; Horvath & Greenberg, 1989) and the California Psychotherapy Alliance Scales – Therapist Version (CALPAS-T; Marmar, Weiss, & Gaston, 1989). The measure contains 8 subscales and ratings are reported on the same seven-point Likert-type scale as described for the CASF-P ranging from 1 (never) to 7 (always). The subscales include: (1) Shared goals, (2) Bond, (3) Goal and task disagreement, (4) Therapist confidence in treatment, (5) Patient working engagement, (6)

Therapist understanding and involvement, (7) Patient confidence and commitment, (8) Therapist confident collaboration. See Appendix C for descriptions of each sub-scale. Hatcher (1999) found alpha coefficients ranging from .75-.88 for these subscales, and Clemence et al. (2005) found co-efficient alphas ranging from 0.74 to 0.90, indicating that the measure is reliable.

Combined Alliance Short Form – Client version.

To assess the clients' perception of the TA, the Combined Alliance Short Form – Client version (CASF-P) was modified and utilized. Specifically, the service provider was referred to as the "clinician" rather than "therapist" in all items (e.g., "I believe my clinician likes me"). The CASF-P is a 20-item assessment of the therapeutic alliance from the client's perspective. Hatcher and Barends (1996) created the measure from a factor analysis of three widely-used measures of alliance: the Penn Helping Alliance Questionnaire (HAQ; Alexander & Luborsky, 1986; Luborsky et al., 1983), the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989; Horvath & Greenberg, 1986), and the California Psychotherapy Alliance Scales (CALPAS; Gaston, 1991). It consists of four subscales: Confident Collaboration (i.e., commitment to and enthusiasm about therapy), Goals and Tasks (i.e., agreement with therapist on goals), Bond (i.e., clinician trust and support), and Idealized Relationship (i.e., disagreement with therapist). See Appendix D for descriptions of each sub-scale. Items are rated on a 1-never to 7-always point scale. Cronbach's alpha coefficients ranging from .84 to .91 for the subscales and .93 for the total scale have been found (Ackerman et al., 2000), indicating measurement reliability.

Outcomes.

Perceived treatment outcomes and outcome satisfaction were measured on a Likert scale that ranged from 1-5. For treatment effectiveness, clients were asked, "In your opinion, how effective was your treatment this term?" while clinicians were asked, "In your opinion, how effective was

your client's treatment this term?" For progress, clients were asked, "In your opinion, how much progress did you make on your treatment goals this term?" while clinicians were asked, "In your opinion, how much progress did your client make on his/her treatment goals this term?" Finally, for outcome satisfaction, clients were asked, "How satisfied are you with the outcomes of your treatment this term?" and clinicians were asked, "How satisfied are you with the outcome of your client's treatment this term?"

Analysis

To answer the question regarding how TA is related to perceived treatment outcomes for student clinicians and adult clients who stutter, a series of Pearson correlations were completed examining the responses of all clinicians (N=37) and clients (N=21). Correlations were considered to be statistically significant at the $p < .05$ level.

To determine the extent to which adult clients who stutter and their student clinicians align in their perceptions of the TA, 10 clinician-client dyads (i.e., 10 clinicians and their adult clients who stutter) were extracted from the greater sample and analyzed. A t-test analysis was conducted to analyze the difference between student clinician and client TA means. To determine the degree of TA alignment within clinician-client pairs, difference scores (i.e., the absolute value of the clinician's TA minus the client's TA) were calculated for 10 clinician-client pairs. Additionally, using the reported TAs of the dyads, strong Pearson correlations between the CASF-T and the CASF-P sub-scales and the clinician and client Overall TA scores were analyzed to determine the extent to which they were related.

A multiple regression examining all clinician (n=42) and client (n=21) responses was run to determine if the following variables would predict TA: clinician and client gender, therapeutic tasks, number of sessions, and report of client's stuttering severity. Additionally, the clinicians'

previous experience (treatment and coursework) and the clients' previous treatment experience were considered

RESULTS

Respondents included 42 student clinicians and 21 adult clients who stutter whom represented a total of 25 public and private universities in 18 states. Ninety-three percent of student clinicians were female, whereas 73% of client respondents were male. Student clinicians' time in graduate school ranged from 3-20 months, and over half had completed coursework in both stuttering and counseling; however, 95% of the student clinicians did not have prior experience treating PWS. The majority of clients who stutter (77%) reported previous treatment for stuttering. Both clinician and client respondents reported number of therapy sessions completed. Stuttering severity ratings were similar for clinicians and clients. Over half of student clinicians and client participants reported working on avoidance reduction, techniques to speak fluently, and thoughts and emotions related to stuttering. Half of the student clinicians and less than half of the clients who stutter reported working on stuttering with less effort. A complete description of clinician and client participants can be found in Table 1.

Within this sample, 10 clinician-client dyads representing 9 universities were extracted and compared. Ninety percent of these student clinicians were female, while 70% of their client counterparts were male. Nearly all student clinicians had completed coursework in stuttering and counseling; however, none had prior experience treating PWS. As shown in Table 2, 90% of clinicians reported working on "avoidance reduction," while only 70% of clients reported doing the same. Similarly, 80% of clinicians reported focusing on "thoughts and emotions," while 70% of clients reported doing so. These differences are in contrast to "techniques to speak fluently"

and "stuttering with less effort," which 80% of clinicians and clients and 30% of clinicians and clients reported, respectively. A complete description of clinician-client dyads can be found in Table 2.

Prior to completing analyses related to specific research questions, the reliability of the Overall TA scores (i.e., the mean of all items for each respondent) was examined. Cronbach alpha coefficients for the CASF-T and CASF-P Overall TA were .889 and .902, respectively. These results indicate that the CASF-T and CASF-P were highly reliable measures of clinicians' and clients' TAs in the current study.

Relationship between TA and perceived outcomes

Different relationships for the clients and student clinicians in terms of perceived effectiveness, progress, and satisfaction were found. Correlation coefficients for the student clinicians (n=37) and the clients (n=21) are presented in Tables 3 and 4, respectively.

Treatment Effectiveness.

For clinicians, statistically significant, positive correlations were found between perceived treatment effectiveness and Overall TA (r=.390, p=.017), Shared Goals (r=.480, p=.003), Clinician Confidence in Treatment (r=.437, p=.007), Client Working Engagement (r=.384, p=.019) and Clinician Understanding and Involvement (r=.339, p=.04).

For clients, a statistically significant, positive correlation was found only between perceived treatment effectiveness and Confident Collaboration (r=.587, p=.05).

Treatment Progress.

Clinicians' responses indicated medium, yet significant and positive correlations between perceived progress and Overall TA (r=.327, n=37, p=.048), Shared Goals (r=.331,

p=.045), Clinician Confidence (r=.334, p=.043), and Client Working Engagement (r=.333, p=.044).

Reports from clients who stutter did not result in any significant relationships between the TA overall or TA subscales and perceived progress.

Treatment Outcome Satisfaction.

Clinician responses regarding outcome satisfaction indicated significant correlations with Shared Goals (r=.403, p=.013) and Client Working Engagement (r=.349, p=.034).

Client responses indicated strong, significant relationships between outcome satisfaction and Overall TA (r=.539, p=.012), Confident Collaboration (r=.613, p=.003), Goals and Tasks (r=.444, p=.044), and Bond (r=.565, p=.008).

These findings showed that for the clinician, perceived effectiveness and/or progress was related to the overall TA and 4 of the TA sub-scales, whereas satisfaction was only related to 2 TA sub-scales. For clients, the TA related most to outcome satisfaction. TA was not as related to their perceived treatment effectiveness or progress.

Student clinician and client alignment in TA perceptions

A t-test analysis found that student clinicians did not report significantly different TAs, indicating similar ratings regarding overall TA strength. Difference score calculations indicated TA differences that ranged from .01-1.12: 3 dyads reported a small difference score, 5 dyads reported a more moderate difference score, and 2 dyads reported a larger difference score. A summary of these scores can be found in Table 5.

Significant, strong relationships (p<.05) were observed among the following clinician and client TA subscales: Clinician Confident Collaboration and Client Overall TA (r=.647, p=.043), Clinician Goals and Task Agreement and Client Confident Collaboration (r=.800, p=.005),

Clinician Confident Collaboration and Client Confident Collaboration (r=.713, p=.021), and Clinician Understanding and Involvement and Client Bond (r=.647, p=.043). No other subscales were significantly correlated. These relationships are highlighted in Table 6.

Predictors of the TA

For clinicians, none of these variables statistically significantly predicted TA strength, (F[14, 21] = 1.709, p < .130, R^2= .533). These variables also did not statistically significantly predict TA strength for the clients who stutter (F[9,11] = .182, p < .992, R^2 = .130).

DISCUSSION

The purpose of this study was to examine the relationship of the therapeutic alliances of graduate student clinicians and adult clients who stutter, and the TA's relationship to perceived treatment outcomes. Participants included 37 student clinicians, 21 adult clients who stutter, and a sub-sample of 10 clinician-client dyads, all of whom provided measures of their TA strength and perception of treatment outcome. Results revealed that clinicians and clients both associate the TA with positive treatment outcomes; however, they do so in different ways. While clinicians closely associate the TA with perceived effectiveness and progress, clients who stutter relate the TA most to outcome satisfaction. The relationship between TA and perceived outcomes, differences in clinician-client perception of TA and outcomes, relationship between clients' and clinicians' alliance constructs, predictors of the TA, and implications for clinical coursework, education, and supervision are discussed.

Relationship between TA and perceived outcomes

Effectiveness and progress.

Many studies that discuss perceived outcomes as they relate to therapeutic alliance do not distinguish between perceived effectiveness and perceived progress; rather, these terms are used interchangeably (Clemence et al., 2005; Hatcher, 1999; Hatcher & Barends, 1996). Since there are no outcome studies regarding the use of perceived effectiveness versus perceived progress in the field of stuttering, these were examined as separate constructs.

Clinicians' responses yielded significant and positive correlations between perceived effectiveness and the Overall TA, Shared Goals, Clinician Confidence and Commitment, Client Working Engagement, and Clinician Understanding and Involvement. Therefore, clinicians perceive treatment to be more effective when they experience an overall strong alliance, set mutually agreed-upon goals, feel confident in treatment, feel understanding and non-judgmental, and observe their client's efforts. With the exception of Clinician Understanding and Involvement, each of these constructs were also significantly related to clinicians' perceptions of progress.

The strong associations between perceived progress and clinician ratings of Clinician Confidence and Client Working Engagement align with previous research (Hatcher, 1999). Unlike previous studies, clinicians did not indicate a strong association between Confident Collaboration and perceived progress. This finding suggests that clinicians may perceive progress even if they do not perceive that their client is committed to and believes in the therapeutic process.

Unlike clinicians, clients' perceptions of treatment effectiveness were significantly and positively related solely to the feeling that the therapeutic process was promising and helpful

(i.e., Confident Collaboration). This finding is congruent with previous research from the field of psychotherapy. Hatcher and Barends' (1996) study, which conducted a factor analysis of 231 psychotherapy patients' ratings of the therapeutic alliance as they relate to treatment outcome, found that the Confident Collaboration construct was robustly related to perceived outcome beyond the general factor.

In the area of stuttering, these findings affirm results from a phenomenological study in which adults who had received treatment for stuttering described their perception of effective and ineffective SLPs (Plexico, Manning, & Di Lollo, 2010). These clients perceived that effective clinicians convey a sense of belief in therapy and confidence that the therapy will lead to positive change, which is a striking reflection of the "confident collaboration" construct of the therapeutic alliance. Findings from the current study expand the value of this construct as one that not only results in perceived clinician effectiveness, but treatment effectiveness as well.

A deviation from previous research findings is the absence of significant relationships between other TA constructs and perceived effectiveness for the client. For example, Bachelor (2013) found that the construct representing Goals and Tasks, or the client's partnership and agreement with the clinician for implementing therapeutic tasks, was strongly related to the clients' perception of treatment outcome. While the Goals and Tasks construct was significantly related to other outcome measures in the current study (i.e., satisfaction), the lack of a significant relationship to perceived treatment effectiveness suggests that adults who stutter view the role of this construct differently than the psychotherapy population.

Clinicians working with adults who stutter should be aware that clinicians and clients view the TA and its relationship to treatment effectiveness differently. While clinicians relate a variety of clinician-oriented (e.g., clinician confidence), client-oriented (e.g., patient working

engagement), and collaborative (e.g., shared goals) factors to treatment effectiveness, clients' perceptions of effectiveness are most related to the belief that the therapeutic process will lead to change. Without awareness of this client value, clinicians – in an effort to promote treatment effectiveness - might facilitate the therapeutic process according to their own values rather than those of their clients.

Clinically, this finding holds implications for facilitating the therapeutic process. Clinicians should realize that their clients' perception of treatment effectiveness stems from a belief that therapy works. Therefore, therapeutic activities should promote noticeable change in the client. Perhaps this means selecting activities that change client behavior outside of the therapy room, engaging in conversations that influence daily thinking, or explicitly discussing how therapy might lead to change. The process for facilitating the client who stutter's belief in the therapeutic process needs further exploration; however, it can be assumed that the pursuit of change is unique to each client and requires inter-connection among various components of the therapeutic alliance.

Reports from clients who stutter did not result in any significant relationships between the TA and perceived progress, suggesting that the TA does not necessarily relate to the client perception of progress. This finding diverges from findings in the psychotherapy literature. Hatcher and Barends (1996) found that the Confident Collaboration construct was significantly related to client perception of progress, and Clemence, Hilsenroth, Ackerman, Strassle, and Handler (2005) found significant correlations between all therapeutic alliance constructs and perceived progress.

The lack of correlation between client TA and perceived progress also indicates a marked difference from the clinician perception, which yielded several significant correlations. In the

clinical setting, clinicians should anticipate that their perception of progress may not be shared by their clients, which holds implications for short and long-term clinical decision-making. On a micro-scale, a clinician's evaluation of progress may determine if a client is ready to move forward with a technique or hierarchy. On a macro-scale, perceptions of progress influence decisions for discharge or continuation of services. Clinicians should actively seek their clients' perceptions of progress to ensure appropriate decision-making as well as client comfort with pace and advancement.

Several factors may account for the difference between client perceptions of progress in the current study and previous reports. As with all results discussed, research regarding TA and perceived treatment outcomes in the area of stuttering is scarce. Therefore, while the psychotherapy literature provides a preliminary comparison for current findings, it is important to consider the fundamental differences in the patient populations when interpreting the results. Characteristics that are unique to stuttering, such as its chronicity and sub-surface affective components, may influence clients who stutter to view progress differently than clients in psychotherapy. These characteristics as they relate to the TA should be explored in future research.

Satisfaction.

Clinician responses regarding outcome satisfaction indicated significant correlations to two of the TA constructs: Shared Goals and Client Working Engagement. Therefore, clinicians feel more satisfied with the outcomes of therapy when they achieve mutual understanding of goals with the client and observe the client taking an active role in therapy.

Client responses indicated significant relationships between outcome satisfaction and the Overall TA, as well as three TA constructs: Goals and Tasks, Bond, and Confident

Collaboration. As clients experience an overall strong TA, feel confident and committed to the therapeutic process, experience clarity of duties and tasks, and feel mutual liking and respect towards their clinician, they are also more satisfied with treatment outcomes.

Clinicians and clients differ in their perceptions of outcome satisfaction in a few critical ways. Unlike clinicians, clients who stutter closely associate Bond – the mutual feeling of liking and respect – with outcome satisfaction. This means that clinicians might feel satisfied with therapy without liking their client, or feel dissatisfied with therapy but still appreciate their client as a person. Contrarily, it is less likely that a client would dislike their clinician or feel disliked by their clinician and still be satisfied with therapy. Therefore, not only do clients who stutter relate what they actually do during therapy (i.e,. goals and tasks) to outcome satisfaction, but their feelings throughout the process are just as salient. Furthermore, Bond was unrelated to the other two outcome measures in this study (i.e., perceived effectiveness and perceived progress), suggesting that the affective component of therapy is uniquely related to outcome satisfaction. The salient relationship between Bond and client satisfaction is supported by the healthcare quality theory (Donabedian, 1980), which posits that a patient's expression of satisfaction or dissatisfaction is uniquely related to the interpersonal component of care.

Differences in clinician-client perceptions of TA and outcomes

Results from this study suggest that the therapeutic alliance is a notable contributor to both clinicians' and clients' perceptions of treatment outcome, albeit in distinct ways. As clinicians experience a strong TA, they also perceive more progress in treatment and greater treatment effectiveness (e.g., greater reduction in stuttering, more positive thoughts and emotions regarding stuttering). However, the TA was not strongly related to clinicians' satisfaction.

Clients indicated the opposite pattern; as TA strength increased, so did outcome satisfaction. Perceived progress and treatment effectiveness, however, were mostly unrelated to client TA.

One possible explanation for this clinician-client difference lies in how clinicians and clients view the *function* of the TA in stuttering treatment. While clinicians seem to view the TA as a bridge to better treatment, clients view the alliance as a bridge to a better quality of life. Clinicians might pursue a strong alliance for the sake of increasing progress, while clients might invest in the TA because they value the collaboration, shared agreement, and interpersonal connection. For clients who stutter, the TA matters not for the product it yields, but for the process it allows. On the surface, this difference in clinician-client perception of the TA's role in stuttering treatment seems benign; however, by only relating the TA to progress or effectiveness, product-focused clinicians might fail to attend to the nuances of the therapeutic process. These moment-to-moment interactions, rather than outcomes alone, matter for the client's satisfaction. Thus, outcome satisfaction seems to be a broader construct that might include goal advancement (i.e., treatment effectiveness/progress), but is not defined by it.

One might assume that perceived progress and satisfaction are inseparable, but clients who stutter indicate this is not necessarily the case. Clinically, this finding implies that measuring client satisfaction may have less to do with the outcomes themselves, and more to do with the client's day-to-day engagement with the therapeutic process. Clinicians, on the other hand, do not seem to associate TA strength with satisfaction. Considering that satisfaction partly depends on clinical expectations (Fox & Storms, 1981; Linder-Pelz, 1982; Ware, 1983), the absence of this relationship could reflect the student clinicians' lack of clinical experience.

Clinicians and clients who stutter might also harness different perceptions between TA and outcomes because of different interpretations of effectiveness/progress. Most clinician and

client participants reported working on a combination of fluency and acceptance-based tasks in therapy. However, it is possible that the clients who stutter interpreted "progress" and "treatment effectiveness" solely as a reduction in stuttered syllables, resulting in more modest reports of progress, while clinicians may have viewed these outcomes more broadly.

Clinician-client dyad characteristics and TA differences

As shown in Table 2, reports of the 10 clinician-client dyads (n = 10 clinicians, n = 10 clients who stutter) revealed similarities and differences. Despite the fact that each clinician-client dyad experienced the therapeutic process together, responses differed across several domains. These results suggest that clinicians and clients share a mutual understanding of "techniques to speak fluently" and "stuttering with less effort," but may not view "avoidance reduction" and tasks targeting "thoughts and emotions" in a similar way. Given the positive relationship between agreement on goals and tasks and the client's satisfaction with treatment outcome, clinicians should strive to achieve a shared understanding of therapeutic tasks with their clients.

Although comparisons of Overall TA in clinician-client dyads revealed no statistically significant differences, examination of the responses of each pair suggested individual differences between clinicians and clients. As seen in Table 5, the TA difference scores (i.e., the absolute value of the clinician's Overall TA minus the client's Overall TA) ranged from .01-1.12. Out of 10 clinician-client dyads, 3 dyads reported a small difference score between .008-.20, 5 dyads reported a more moderate difference score between .21 and .80, and 2 dyads reported a larger difference score that was greater than .80. For the pairs in which the greatest TA difference was found (1.12 and .89 difference scores), the clinicians reported a higher TA

than their clients. This finding suggests that it is possible for a clinician to sense a strong TA, even when their client does not align.

Importantly, statistically significant differences were not found between clinicians' and clients' overall TA ratings, indicating overall similar ratings of TA strength. However, as data from this study suggest, clinicians and clients value different constructs of the TA relative to treatment outcome. Overall TA ratings might be similar, but the relationships between the TA and outcomes are different. Understanding the nature of the relationships between the CASF-T and CASF-P constructs is critical for de-coding and calibrating clinicians' and clients' therapeutic alliances, and for gaining better understanding of the relationship between TA and perceived outcomes.

Relationship between Clients' and Clinicians' Alliance Constructs

By understanding how clinician and client sub-scales relate to one another, clinicians working with clients who stutter can learn to communicate in their clients' "therapeutic language" and thus, enhance perceived treatment outcomes.

Using the reported therapeutic alliances of clinician-client dyads, correlations between the CASF-T and the CASF-P sub-scales were analyzed to determine the degree to which clinician and client TA constructs relate. Consistent with previous research, clinician and client TA sub-scales demonstrated both alignment and difference (Bachelor, 2013). Significant relationships were observed among the following clinician and client TA subscales: Clinician Understanding and Involvement and Client Bond, Clinician Confident Collaboration and Client Confident Collaboration, and Clinician Goals and Tasks and Client Confident Collaboration.

The significant relationship between Therapist Understanding and Involvement and Client Bond is not necessarily intuitive, as one might assume that Therapist Bond would

correlate with Patient Bond. The lack of relatedness between clinician and client perceptions of bond has also been found in psychotherapy (Clemence et al, 2005; Hatcher, 1999). Because of the inherent differences between the roles of clinicians and clients, each one views the concept of therapeutic bond differently. Until the therapist is aware of this "language difference," they may try to help the client in a way that is not truly helpful for the client. Rather than explicit gestures of caring or liking, it is the therapist's understanding and non-judgmental nature that relates to and activates the client's feeling of bond. As this study indicates, client bond demonstrated a significant relationship to outcome satisfaction. Therefore, clinicians should channel behaviors associated with Therapist Understanding and Involvement, as doing so may also increase their clients' feelings of bond and associated outcome satisfaction.

CASF-T and CASF-P sub-scales were also related through clinician and client Confident Collaboration, which were positively correlated. Both sub-scales emphasize a confidence in and commitment to a treatment that feels promising and useful. Importantly, the Clinician Confident Collaboration sub-scale reflects the clinician's perception of the client, whereas the client sub-scale reflects a first-person experience. Therefore, as the clinician perceives greater client confidence and commitment to therapy, the more confidence and commitment the client feels and vice versa.

A significant relationship was also observed between Therapist Goals and Tasks and Client Confident Collaboration. The more that clinicians perceive that the purpose and tasks of therapy are clear to their clients, the more their clients experience greater commitment to and confidence in the therapeutic process.

To nurture the TA according to the clients' needs, clinicians must learn to suspend their own perspective and personify aspects of the TA that matter to their clients. Doing so may require deliberate attention, focus, and training.

Predictors of the TA

According to multiple regression analyses, there seems to be no predictor to determine how a client or student clinician perceives the TA. Independent variables, or possible determinants included age, gender, previous experience (treatment and coursework), therapeutic tasks, number of sessions, and reported stuttering severity. None were shown to predict TA strength for clinicians or clients. This finding suggests that the alliance is unique to each person and it cannot be assumed that the TA will develop as a result of a particular characteristic, experience, or treatment approach.

As suggested by Zebrowski (2007), the TA seems to serve a "common factor" across stuttering treatments with perceived positive outcomes, regardless of therapeutic approach. This study provides further support for this concept. As stated, clients are more satisfied with treatment outcomes when they experience a greater agreement with their clinician on goals and tasks. However, the multiple regression analyses demonstrated that the therapeutic tasks did not predict alliance strength. Rather than the nature of the therapeutic tasks themselves, it is the *agreement* on therapeutic tasks that matters.

Results also suggested that clients' positive or negative past treatment experiences do not necessarily influence a client's capacity to form a meaningful TA in the present. For SLP students, results suggest that even coursework in stuttering or counseling may not predict a successful TA. In order to better understand this finding, we must consider course content.

Implications for coursework, clinical education, and supervision

The abundance of evidence regarding client dissatisfaction with stuttering treatment (Manning, 2004; Yaruss & Quesal, 2002) and perceived lack of clinician competence (Brisk, Healey, & Hux, 1997; Tellis, Bressler, & Emerick, 2008) can be intimidating for practicing clinicians and SLP students alike. By providing student clinicians with the relevant coursework, clinical experiences, and supervision necessary to develop strong therapeutic alliances, the next generation of SLPs working with adults who stutter will be equipped to create a new status quo.

Coursework.

The current study indicated that coursework in stuttering and/or counseling did not predict TA strength; however, considering the TA's origins in psychotherapy and relatively recent application to speech-language pathology, the importance and role of the TA in the therapeutic process is not routinely integrated in the pedagogy of future SLPs. Educators should integrate instruction regarding the value of the TA into the undergraduate and graduate coursework of SLP students. Doing so would heighten students' awareness of the TA for clinical application. Classroom instruction regarding the TA is particularly important for the 31.5% undergraduate and graduate programs that report allowing SLP students to graduate without any clinical experience (assessment or treatment) with PWS (Yaruss et al. 2017). This means that students might not encounter a PWS until that person is their client. This possibility underscores the necessity of incorporating the TA into the didactic coursework of future SLPs, especially since the TA may be key for mobilizing the effectiveness of therapeutic techniques and approaches.

Coursework might also educate students about clinician-client differences in the perception of the TA. Previous research suggests that clinicians tend to appraise the alliance

according to theory, whereas clients tend to be more candid and subjective (Bachelor, 2013). While theoretical background is necessary and important knowledge for SLP students to gain, Horvath and Greenberg (1986) suggest that "the very 'naivete' of the client permits him or her to make judgments that are not based on theoretical conceptualizations". Clients' responses regarding the TA have also been found to have the strongest association with therapy outcomes, whether outcome is assessed by clients, clinicians, or observers (Bachelor, 2013; Hatcher & Barends, 1996). Therefore, SLP students would benefit from coursework that teaches the skills to balance theory with reality. Doing so could lead to more calibrated clinician-client perceptions of alliance and outcome in the clinical setting.

Clinical education.

The challenge of bridging the gap between an SLP student's theoretical knowledge and management of the interpersonal dynamics of clinical work is not a new one (Geller, 2001; Prutting, 1985). According to adult learning theory, the first stage of cognitive learning is "dualistic thinking," or the belief that issues must have one answer or solution (Perry, 1970; Wieder, Drachman, & De Leo, 1992). The subsequent stage, "relativism," is characterized by the ability to tolerate ambiguity and navigate diverse pathways in pursuit of a solution. Arguably, developing a strong TA requires a degree of relativism, as it is based on a continuous flow of clinician-client actions and reactions for which there is not a singular route. It has been reported that SLP students tend to begin in the dualistic thinking stage before advancing to relativism (Geller, 2002). Developing the thinking patterns and clinical deftness necessary to form a strong clinician-client alliance is a complex process, and it should not be assumed that student clinicians will develop these skills without intentional practice and effort (Dudding et al., 2017). As indicated, clinicians and clients who stutter do not have identical views regarding the TA and its

relationship to perceived outcomes; however, divergent perspectives are only a cause for therapeutic breakdowns if they are left unaddressed. An SLP student's clinical experience in undergraduate and/or graduate school should focus on advancing necessary skills for building strong TAs, such as adjusting and calibrating different clinician-client perceptions.

Furthermore, a meta-analysis by Safran, Muran, and Eubanks-Carter (2011) indicated that episodes of tension or breakdown in the collaborative relationship are common. These clinician-client breakdowns, or "alliance ruptures," are reported by 37% of psychotherapy patients and 56% of therapists within the first six treatment sessions. While unresolved ruptures are predictive of client-drop-out, ruptures that are subsequently repaired are associated with more positive outcomes. Therefore, the key difference between destructive and productive ruptures is resilience. By using the tension or breakdown as an opportunity for growth, clinicians and clients can achieve an alliance that is even stronger than the one before. Clinical educators must not only teach SLP students the skills for cultivating a strong alliance, but also instill practices of vigilance and resilience. Fostering this type of growth in the student clinician must start from their clinical role model: the supervisor.

Supervision.

As the ASHA Practice Portal for clinical supervision describes, "success in facilitating clinical and professional development ultimately rests on the relationship between clinical educator and student clinician" (ASHA, 2018). Therefore, an SLP student's ability to develop skills necessary for building strong TAs partly depends on his/her supervisor's ability to promote critical thinking, provide feedback, and evaluate performance. Clinical supervisors often employ a variety of teaching methods, including Deliberate Practice (Ericsson, Krampe, & Tesch-Romer, 1993), Reflective Practice (Schon, 1983), Supervision, Questioning, and Feedback (SQF) Model

of Clinical Teaching (Barnum, Guyer, Levy, & Graham, 2009), and the Cognitive Apprenticeship Instructional Model (Collins, Brown, and Newman, 1989). Each of these methods employs valuable teaching strategies that enhance the student's ability to problem solve, reason, and modify clinical behaviors accordingly. Therefore, clinical supervisors do not necessarily need to replace their methods with a different model; rather, these methods should be implemented with an emphasis on the TA and its role in stuttering treatment outcomes.

LIMITATIONS

These findings and their impact on current practices should be considered in the context of possible limitations to the current study.

First, since current enrollment in therapy was a requirement for study participation, each client participant experienced a TA that was strong enough to still be in therapy. Overall, it was found that clinicians and clients view the TA fairly positively. While this finding is consistent with past research, which has also reported high means with few negative perceptions expressed (Bachelor, de Grace, & Pocreau, 1991; Gaston & Marmar, 1991; Hatcher & Barrends, 1996), the data reported does not include the perspectives of those who have discontinued treatment. It is possible that different relationships between TA and perceived outcome would be captured by surveying adults who stutter who are no longer in therapy. These perspectives are important and worth exploring.

Another limitation is the examination of the TA at only one point in time rather than throughout the therapeutic process. It is unknown if the TA between clinicians and clients who stutter is static or dynamic, and examining it at different points in time would lend more information regarding its utility in clinical practice.

Finally, results should be interpreted with the caution and understanding that this study represents only a small sample of a much greater population. Specifically, correlations between clinicians' and clients' alliances were limited to a subset of the larger sample. The reported relationships of clinician and client perceptions of TA and outcome should be considered as a guide, not a rule.

FUTURE DIRECTIONS

There is much to be discovered regarding the TA and its role in stuttering treatment. Much of the TA literature that exists is based on the psychotherapy population; therefore, studies in the area of stuttering must be replicated and performed with large sample sizes to ensure clinical relevance. Given that this study represented the reported TA of student clinicians, the influence of clinical supervisors on the development of SLP students' TAs should be explored. Additionally, in order to transfer knowledge and clinical application regarding the TA to students, more research regarding the behaviors in clinician-client interactions that correlate to clinician and client reports of the TA and its constructs is needed. This analysis would yield better understanding regarding what the TA "looks like" in stuttering treatment. Studies might also consider adding a neutral observer in order to rate clinician-client TA, as this may prevent the inevitable bias that accompanies self-report (Hentschel, 2005).

Further research is also needed to determine approximately when alliance ruptures begin to occur in stuttering treatment, and how the alliance fluctuates throughout treatment. Examining the clinician-client alliance at various points would lend empirical evidence regarding the rupture-repair process in stuttering treatment.

Future studies may also relate the TA to actual outcomes rather than perceived outcomes. There is evidence in psychotherapy to suggest that the clients' views of the TA are more predictive of actual therapeutic outcome (Horvath & Bedi, 2002). This hypothesis would be worth exploring in the area of stuttering. Additionally, replicating the study with practicing SLPs rather than students would indicate how clinical experience does or does not play a role in the clinician's and client's TA.

Finally, while the multiple regression analyses in the current study did not find predictors for TA strength, other contributors to the formation of TA should be explored. Research in psychotherapy has found that a client's reported interpersonal relationships and quality of daily life predicted the quality of the TA as well as therapeutic change (Kazdin & McWhinney, 2018). Exploring the interpersonal relationships and quality of daily life in the stuttering population could lead to another dimension of prognostic indicators in treatment.

CONCLUSION

The purpose of this study was to examine the therapeutic alliances of graduate student clinicians and adult clients who stutter relative to perceived treatment outcomes. Responses from student clinicians, adult clients who stutter, and clinician-client dyads lent empirical support that the TA plays a critical role in clinicians' and clients' perceptions of stuttering treatment outcomes, but in different ways. While clinicians closely associate the TA with treatment effectiveness and client progress, clients relate the TA most to outcome satisfaction. Diverse relationships were found between clinicians' and clients' TA constructs, indicating that these relationships are not necessarily intuitive. There also seems to be no predictor to determine how

a client or student clinician perceives the TA; therefore, it cannot be assumed that the TA will develop as a result of a particular characteristic or experience.

To achieve optimal partnership, and with it, greater client satisfaction, clinicians must seek their clients' perspective regarding the alliance. Clinical coursework, training, and supervisors should support future SLPs by advancing skills relative to the TA, such as belief suspension and the ability to balance clinical theory with the subjective clinical experience.

The TA is shaped through every clinician and client interaction and reaction, and its complexity must not be underestimated. While this study offers evidence regarding the relevance of the TA in stuttering treatment, and in particular, its relation to client satisfaction, future research should explore explicit behaviors that enable clinicians and clients to achieve a strong and aligned alliance.

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Table 1

Characteristics of student clinician and client participants

Characteristic		Student Clinicians ($N = 42$)	Clients who stutter ($N = 22$)
Age *M* (SD; range)		24.23 (2.78; 21-34)	29.09 (11.69; 18-56)
Gender	Males	3 (7.3%)	16 (72.7%)
	Females	38 (92.7%)	6 (27.3%)
No. academic programs represented		24	14
Client Stuttering Severity *M*(SD; range)		4.45 (1.68; 2-9)	5.59 (2.1; 2-9)
No. of Therapy Sessions *M*(SD; range)		14.20 (6.28; 7-28)	14.09 (6.87; 5-30)
Therapeutic tasks	Avoidance Reduction	30 (75%)	13 (59.1%)
	Techniques to speak fluently	28 (70%)	19 (86.4%)
	Stuttering with less effort	20 (50%)	10 (45.5%)
	Thoughts and emotions	33 (82.5%)	15 (68.2%)
	Other	10 (25%)	2 (9.1%)
Previous tx experience	Yes	-	17 (77.3%)
	No		5 (22.7%)
No. of Months in Graduate Program *M*(SD; range)		10.88 (5.46; 3-20)	-
Completed stuttering coursework	Yes	29 (69%)	-
	No	13 (31%)	
No. of Months learning about stuttering *M*(SD; range)		2.3 (2.15; 0-8)	-
Completed counseling coursework	Yes	27 (64.3%)	-
	No	15 (35.7%)	
No. of Months learning about counseling *M*(SD; range)		1.04 (1.78; 0-9)	-

Previous experience treating PWS	Yes	2 (4.8%)	-
	No	40 (95.2%)	-

Note. Tx = treatment

Table 2

Characteristics of Clinician-Client Dyads ($n = 10$)

Characteristic		Student Clinicians	Clients who stutter
Age *M* (SD; range)		26 (4.6; 22-34)	29 (11.2; 18-53)
Gender	Males	1 (10%)	7 (70%)
	Females	9 (90%)	3 (30%)
No. academic programs represented		9	9
Client Stuttering Severity *M*(SD; range)		4.2 (1.32; 2-6)	5.40 (2.01; 2-8)
No. of Therapy Sessions *M*(SD; range)		12.5 (4.22; 8-20)	14.30 (5.06; 9-24)
Therapeutic tasks	Avoidance Reduction	9 (90%)	7 (70%)
	Techniques to speak fluently	8 (80%)	8 (80%)
	Stuttering with less effort	3 (30%)	3 (30%)
	Thoughts and emotions	8 (80%)	7 (70%)
	Other	3 (30%)	1 (10%)
Previous tx experience	Yes	-	7 (70%)
	No		3 (30%)
No. of Months in Graduate Program *M*(SD; range)		8.7 (4.88; 3-15)	-
Completed stuttering coursework	Yes	8 (80%)	-
	No	2 (20%)	
No. of Months learning about stuttering *M*(SD; range)		2.7 (2.04; 0-6)	-
Completed counseling coursework	Yes	8 (80%)	-
	No	2 (20%)	
No. of Months learning about counseling *M*(SD; range)		2.53 (1.30; 0-3)	-

Previous experience treating PWS	Yes	0 (0%)	-
	No	10 (100%)	-

Note. Tx = treatment

Table 3

Pearson r Correlations between Student Clinician CASF-T Scores and Perceived Outcomes ($N = 37$)

	CASF-T sub-scales and outcome measurements			
	Effectiveness	Progress	Satisfaction	M (SD; range)
Overall TA	**.390***	**.327***	.271	5.84 (.47; 4.93-6.8)
Shared Goals	**.480****	**.331***	**.403***	5.95 (.55; 4.83-7)
Bond	.303	.320	.306	6.35 (.52; 5.5-7)
Goals and Tasks	.058	.105	-.10	5.75 (.88; 2.3-7)
Clinician Confidence	**.437****	**.334***	.278	5.81 (.72; 4-7)
Client Working Engagement	**.384***	**.333***	**.349***	5.44 (.69; 4-6.8)
Clinician Understanding and Involvement	**.339***	.292	.275	5.97 (.46; 4.8-6.6)
Client Confidence and Commitment	.154	.054	.057	5.71 (.75; 3.8-7)
Clinician Confident Collaboration	.221	.223	.177	5.74 (.68; 4.2-6.8)
M (SD; range)	3.9 (.63; 3-5)	3.95 (.75; 2-5)	4.23 (.58; 3-5)	

Note. CASF-T = Combined Alliance Short Form – Clinician version; TA = therapeutic alliance
**. Correlation is significant at the 0.01 level (2-tailed)
**. Correlation is significant at the 0.05 level (2-tailed)

Table 4

Pearson R correlations between CASF-P scores and perceived outcomes ($N = 21$)

	CASF-P Sub-scales and outcome measurement			
	Effectiveness	Progress	Satisfaction	M (SD; range)
Overall TA	.386	.146	**.539***	5.98 (.66; 4.6-7)
Confident Collaboration	**.587****	.359	**.613****	5.52 (.88; 3.8-7)
Goals & Tasks	.085	.095	**.444***	6.27 (.77; 4.8-7)
Bond	.294	.072	**.565****	6.03 (.82; 4.4-7)
Idealized Clinician	.261	-.068	.097	6.08 (.73; 4.2-7)
M (SD; range)	3.95 (.65; 3-5)	4 (.89; 2-5)	4.18 (.85; 2-5)	

Note. CASF-P = Combined Alliance Short Form – CliENT version; TA = therapeutic alliance
**. Correlation is significant at the 0.01 level (2-tailed)
**. Correlation is significant at the 0.05 level (2-tailed)

Table 5

Clinician and Client Overall TA and Difference Scores (n = 10 dyads)

Dyad numbers	Clinician	Client	TA difference score
1	6.14	6.3	.16
2	5.85	6.15	.3
3	5.72	4.6	1.12
4	5.44	5.35	.09
5	5.91	6.6	.69
6	5.07	5.45	.38
7	5.23	5.45	.22
8	6.59	6.6	.01
9	6.38	5.49	.89
10	6	6.25	.25

Note. TA = therapeutic alliance; TA difference score = absolute value of the clinician's Overall TA minus the client's Overall TA

Table 6

Pearson r correlations between client and clinician alliance constructs ($n = 10$ dyads)

Clinician TA Constructs	Client TA Constructs				
	Overall TA	Confident Collaboration	Goals and Tasks	Bond	Idealized Clinician
Overall TA	.536	.611	.176	.452	.612
Shared Goals	.329	.480	-.006	**.231****	.461
Bond	.150	.241	-.112	.166	.250
Goal and Task Agreement	.521	**.800****	.107	.376	.509
Clinician confidence	.191	.001	.138	.169	.372
Client Working Engagement	.372	.471	.069	.278	.486
Clinician Understanding and Involvement	.561	.533	.174	**.647***	.544
Client Confidence and Commitment	.629	.612	.508	.467	.517
Clinician Confident Collaboration	**.647***	**.713***	.366	.543	.557

TA = therapeutic alliance
*$p < .05$; **$p < .01$

Appendix A

Recruitment Email

"Dear [insert name],

My name is Robyn Croft, and as a speech-language pathology graduate student at Texas Christian University, I am conducting a study under the direction of Dr. Jennifer Watson. The following survey contains a questionnaire intended for **graduate student clinicians** and their **adult clients who stutter**. The purpose of the study is to advance knowledge regarding the clinician-client interaction during stuttering treatment. Eligible participants would exhibit the following characteristics:

Graduate student clinicians who are concluding (within one month after the last day of therapy) their treatment of an adult (≥18 years) who stutters.

Adults with a diagnosis of stuttering (≥18 years) receiving treatment from the clinician identified above.

Please forward this email to eligible participant pairs. They can access the survey using this link: http://survey.az1.qualtrics.com/jfe/form/SV_bwHDbXawO6FCvg9

Feel free to contact me with any questions you have at robyn.croft@tcu.edu or (713) 252-3161. Thank you so much for your help. It is greatly appreciated!

Sincerely,

Robyn Croft

Graduate Student Clinician

Texas Christian University"

Appendix B

Qualtrics Survey

First: Informed consent document. Participants indicated consent by clicking on the ">>" sign at the bottom of the page.

Please select your current status:
-graduate student clinician
-client
-neither

If ***"graduate student clinician"*** is selected, the participant will view and answer the following questions:

1. **What are the initials of your client (ex: RC)? If you do not know both the first and last initials, please put the one you know.** (free response)

2. **What are your initials?** (free response)

3. **What is the name of your university?** (free response)

4. **Which gender do you identify with?:** Male/female/prefer not to answer

5. **What is your age?:** (free response)

6. **Are you a person who stutters?** Yes/no

7. **When did you begin your current graduate program (e.g., August 2015)?** (free response)

8. **Have you completed any coursework related to stuttering prior to treating your current client?** Yes/No/Not sure

    a. **What is the total amount of time you spent learning about stuttering in your course/s? (e.g., two weeks, two months)** (free response)

9. **Have you completed any coursework related to counseling prior to treating your current client?** Yes/No/Not sure

    a. **What is the total amount of time you spent learning about counseling in your course/s? (e.g., two weeks, two months)** (free response)

10. **Did you have experience treating people who stutter prior to this term?** Yes/no

a. Please use the chart below to indicate the number of individuals who stutter in each age group you had treated prior to this term.

	# individuals
Preschool (2-5 years)	(free response)
School-aged (6-12 years)	
Adolescent (13-17 years)	
Adult (18+)	

11. **How many therapy sessions have you had with your client who stutters this term?** (free response)

12. **What is the date of your last therapy session for this term?** (free response)

13. **How severe was your client's stuttering when you began treatment this term?** (scale from Eve et al., 1995)

0 (no stuttering	1	2	3	4	5	6	7	8	9 (Extremely severe stuttering

14. **What did your client work on during treatment?** (checklist – From Yaruss, 2002) Check all that apply

(learning techniques to speak as fluently as possible)
(reducing the fear of stuttering or of speaking situations)
(learning to stutter with less effort)
(counseling with little emphasis on speech)
(other)

15. **In your opinion, how effective was your client's treatment this term?**

1 (not at all effective)	2	3	4	5 (Extremely effective)

16. **In your opinion, how much progress did your client make on his/her treatment goals this term?**

1 (no progress)	2	3	4	5 (A lot of progress)

17. How satisfied are you with the outcomes of your client's treatment this term?

1 (Extremely dissatisfied)	2	3	4	5 (Extremely satisfied)

If ***"client"*** is selected, the participant will view the following questions:

1. **What are the initials of your clinician (ex: RC)? If you do not know both the first and last initials, please put the one you know.** (free response)
2. **What are your initials?** (free response)
3. **What gender do you identify with?:** Male/female/prefer not to answer
4. **What is your age?:** (free response)
5. **What is the name of the university at which you are receiving therapy this term?** (free response)
6. **How many therapy sessions have you had with your clinician this term?** (free response)
7. **What is the date of your last therapy session for this term?** (free response)
8. **How severe was your stuttering when you began treatment this term?** (scale from Eve et al., 1995)

0 (no stuttering	1	2	3	4	5	6	7	8	9 (Extremely severe stuttering

9. **What did you work on in treatment this term?** (checklist)

(learning techniques to speak as fluently as possible)
(reducing the fear of stuttering or of speaking situations)
(combined approach (both fluency and stuttering were addressed))
(learning to stutter with less effort)
(counseling with little emphasis on speech)

(other)

10. **In your opinion, how effective was your treatment this term?**

1 (not at all effective)	2	3	4	5 (Extremely effective)

11. **In your opinion, how much progress did you make on your treatment goals this term?**

1 (no progress)	2	3	4	5 (A lot of progress)

12. **How satisfied are you with the outcomes of your treatment experience this term?**

1 (Extremely dissatisfied)	2	3	4	5 (Extremely satisfied)

13. **Had you received speech therapy before this term?** Yes/no
    a. Please use the chart below to indicate the total number of months you had received speech therapy in each setting (e.g., 16 months) prior to this term.

	Number of months (free response)
School	
Private practice	
Hospital	
University clinic	
Other	

If ***"neither"*** is selected, the participant will see the following message:

Thank you for participating!

Appendix C

Client TA Constructs and Descriptions

CASF-P

CONSTRUCT	DESCRIPTION
Confident Collaboration	Patient is confident in and committed to a process that feels promising and helpful
Goals and Tasks	Clarity of duties and agreement on goals and tasks
Bond	The feeling of mutual liking and respect
Idealized therapist	Patient's ability to acknowledge disagreement with and negative feelings toward their therapist

(Hatcher & Barends, 1999; Clemence, 2005; Gaston & Marmar, 1991)
Note. CASF-P = Combined Alliance Short Form – Client version

Appendix D

Clinician TA Constructs and Descriptions

CASF-T

Shared goals	The therapist and patient's mutually achieved understanding of the goals and treatment
Bond	Therapist's liking, appreciation, and respect for the patient
Goals and Task Agreement	The therapist's need to clarify the purpose and tasks of the sessions; the perception that the patient finds therapy to be confusing
Clinician confidence	Therapist's confidence that the therapist and the therapeutic work will help the patient change
Client Working Engagement	Therapist's perception that patients examine contributions to problems and make productive use of the therapist's comments
Clinician Understanding and Involvement	Therapists' abilities to be tactful, nonjudgmental, understanding and committed to help
Client confidence and commitment	Therapist perception that patient is confident in and committed to treatment
Clinician Confident Collaboration	Therapist's perception of the patient's steadfast and confident investment in a treatment that feels promising and useful to both parties

(Hatcher & Barends, 1999; Clemence, 2005; Gaston & Marmar, 1991)
Note. CASF-T = Combined Alliance Short Form – Clinician version