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The Perception and Strategies of Building Rapport with Children with Autism Spectrum Disorder via Telepractice

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THE PERCEPTION AND STRATEGIES OF BUILDING RAPPORT WITH CHILDREN WITH AUTISM SPECTRUM DISORDER VIA TELEPRACTICE

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ABSTRACT

`**Background:** Telepractice is a growing method in providing services in the profession of Speech-Language Pathology. One potential challenge with this growing method is rapport building via telepractice, particularly in clients with challenging behaviors. While previous studies have focused on perceptions, we wanted to expand strategies used by SLPs in order to build rapport with their clients when using telepractice. In this study, we intended to find what pediatric SLPs' perceptions and strategies of building rapport via telepractice is with children with autism spectrum disorder (ASD) ages 5-12, and children's age was considered as an influential factor (5-8 years vs. 9-12 years).

Method: 17 participants completed a survey including questions about perception and strategies usage for rapport building in telepractice sessions. All 17 responders were invited for a semi-structured interview, and three of them completed the interview including more in-depth questions about their rapport building. Paired samples t-tests were implemented to compare SLPs' rating of perceptions and strategy usage for the two age groups of 5-8 and 9-12 of children with ASD. A qualitative analysis was conducted for the responses by those who participated in the semi-structured interview.

Results: We found that there is an overall good perception from SLPs of rapport building via telepractice with this population in both ages 5-8 and 9-12. We also found that strategies are similar in telepractice with this population in both ages 5-8 and 9-12. Interestingly, there was a significant difference regarding rapport building with the younger group (5-8) to be more similar in face-to-face therapy and telepractice than the older group (9-12). The findings are discussed.

DEDICATION

This thesis is dedicated to Mrs. Gina Keene and Mr. Bradley Crowe who were two of my biggest influences during my time in graduate school. Each of them helped guide me through obstacles, and helped me find my passion for the pediatric population.

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The Perception and Strategies of Building Rapport with Children with Autism Spectrum Disorder via Telepractice

I. BACKGROUND

According to ASHA, "telepractice is the practice of telecommunications technology to the delivery of speech language pathology and audiology professional services at a distance by linking clinician to client or clinician to clinician for assessment, intervention, and/or consultation" (ASHA, n.d.). ASHA uses the word "telepractice" rather than other common names such as "telemedicine" so that there is no confusion that these services can only be used in a medical setting (ASHA, n.d.). Telepractice is used in various settings that a Speech Language Pathologist (SLP) would practice. These locations include but not limited to schools, medical centers, rehabilitation hospitals, community health centers, outpatient clinics, university clinics, client's homes, residential healthcare facilities, child care, and corporate settings.

Limited Understanding of Telepractice

Telepractice is a newer delivery model for therapy, and it is important for researchers and clinicians to better understand the delivery model. Mohan et al., (2017) conducted a survey about telepractice in Speech Language Pathologists (SLPs) in India. The four things assessed were perceptions of professionals about service delivery through telepractice; characteristics of telepractice service; training and research in telepractice; and policies and guidelines for telepractice. The response rate was 7%, including 205 SLPs and audiologists. Around 48% of the responses were from Speech Language Pathologists. Only 12.9% of the people have engaged in telepractice therapy. In this study of two groups (experienced and

unexperienced SLPs with telepractice), 92% of people agreed that there is an inadequate amount of telepractice services provided. Over 83% of responders feel that there are not sufficient resources available for telepractice.

When thinking about telepractice in its entirety, it is important to understand the population that telepractice is focused towards. Grillo et al., (2017) looked into insights of SLPs' usage of the telepractice model with 66 questions for SLPs. One highlight of this study to note is that the majority of responders provided telepractice to people ages 6-17, which indicated that telepractice services are mostly for pediatric populations.

A new model of therapy delivery brings about benefits and challenges. Rao et al., (2018) conducted a research study on these challenges. India currently has professional courses and trainings for telepractice that are often modified by an expert committee. India uses what is called and Information and Communications Technology (ICT) model. There is currently a major disproportion in SLPs compared to those who need services. It was found in this study telepractice has an advantage because it allows time and money saved in travel, and allow those who are not well enough to travel to receive services. Some noted telepractice resources were power points used for flash cards, activities with instructions and scoring designed on interactive software for individual client, and applications on the mobile phones or tablets designed to provide home training which are custom made to each individualized therapy plan. Concerns noted were ethics and protecting the privacy of patients.

Akamoglu et al. (2018) also noted some advantages and disadvantages of telepractice. Noted advantages of telepractice as a whole include flexible therapy times and locations, it is non-invasive of people's personal space, allows increased family member participation, and more access to services. Noted disadvantages of telepractice as a whole include a lack of physical proximity, an e-helper may need to be present, and technology difficulties.

More than half (55.9%) of SLPs work in a school setting. (The ASHA Leader, 2014). Tucker et al. (2012) researched the perspectives of the use of telepractice in a school setting. Five telepractice SLPs were interviewed in great details. The study found that there were four major themes that were discussed in the interview process. The four major themes were barriers, benefits, reason for acceptance of telepractice, and suggestions to resolve telepractice professional status. The barrier that was most frequently mentioned was technology failure. Every responder had experienced technical difficulties at some point in their career. Inadequate training on the technology was a common response as to why there were difficulties with the technology. Another barrier mentioned was a lack of clear procedures for telepractice. Another barrier mentioned was feeling distant from the patients. Benefits mentioned were more access to services, individualized programming, increased learning, and assistance with the shortage of SLPs. Some suggestions made during interviews included proper training requirements, training of E-helpers, and a list of clear procedures.

Since the start of the outbreak of COVID-19, telepractice has taken a major increase in use for SLPs (Tohidast et al., 2020). It has allowed SLPs to continue the profession while simultaneously keeping clients safe from the virus. A study was conducted immediately after the outbreak of the pandemic with 135 SLPs in Hong Kong to assess the increased prevalence of SLPs using telepractice as a form of therapy delivery (Fong et al., 2020). Around 72% of the responders stated that they did not begin telepractice until the occurrence of the pandemic. The way that SLP services are delivered has been quickly changed from the majority being in person to now a large portion of services being conducted via telepractice. With a major increase in use of telepractice since the start of the COVID-19 pandemic, it is expected that there would be an increase in use of telepractice as a delivery method for speech therapy in the future.

Rapport Building in Telepractice

In telepractice, modifications or adaptations are needed in order to deliver quality services in front of the screen. Rapport building is one of the many modifications that can be particularly challenging in telepractice services. There is currently very limited research on rapport building in speech and language intervention sessions via telepractice. Akamoglu et al., (2018) used a mixed-method to collect quantitative and qualitative data regarding perceptions of rapport building in telepractice. The SLPs were recruited through the ASHA SIG 18 group. They were asked to fill out a questionnaire pertaining to rapport building in telepractice with pediatric clients, and select few of the participants were asked to complete a semi-structured interview in regards to the advantages and disadvantages of building rapport via telepractice. A qualitative analysis was used in this study to find common themes across different participants. The responses were that it encourages cooperation and responsiveness, it improves progress in targeted areas, and allows for stronger relationships with clients. This research noted some advantages of building rapport in speech and language intervention via telepractice, including that rapport through telepractice allowed communication through various outlets including text messaging, phone calls, and emails, more availability outside of therapy times, distance improved the relationship due to not being too close in proximity, and more flexible therapy times. Noted disadvantages of building rapport via telepractice according to this research include that an e-helper is recommended to be present during therapy sessions, the level of effort is higher when building rapport via telepractice compared to in-person services, it can be difficult for patients who struggle to maintain eye contact, and it can be difficult when the child has behavioral issues (e.g., children with autism spectrum disorders).

The investigation of rapport building in telepractice with pediatric populations are scare. According to Pitt (2018), rapport building is noted to be the same in effectiveness in telepratice as it is in face-to-face speech and language therapy. This study focused on aphasia group therapy via telepractice. In this study, 170 users and non-users of telepractice were surveyed. This study pointed out that family photographs, open conversation for the first 10 minutes of therapy, and "get to know you" activities were found to be specific ways to build rapport via telepractice that were successful.

Freckman et al, (2017) assessed if there is a difference in rapport building between clinicians and clients in face-to-face therapy verses teletherapy. There were 14 clinicians who were using teletherapy, and 18 clinicians who were using face to face therapy. The clinicians completed the Therapeutic Alliance Scales for Children (TASC-r) in order to rate the rapport that the clinicians had with up to three clients. Clinicians were also asked to report their rapport with each client and how comfortable they felt with technology. This study found that there was not a significant difference in the results of the TASC-r and feelings about rapport with clients in clinicians using face to face and telepractice. This study concluded that the comfort with technology and rapport with clients is the same in telepractice and face to face therapy.

It is important to understand the value of rapport building with clients. Murphy et al. (2012) recognizes the importance of rapport building in regards to distance education. However, they also pointed out that there is not currently a lot of information in regards to rapport and its importance in distance education. By conducting an interview with 42 different Canadian educators using distance education (telepractice), the researchers noted barriers of building rapport in distance education, including geographical distance of students, the asynchrony of distance education, the increased workload for teachers, software limitations, participants not finding rapport building to be necessary. Some rapport building

strategies important to note in this study are talking freely, being transparent, sharing personal information, displaying consistent behaviors, giving praise for hard/good work, showing care, being available, and creating a positive environment.

There are different components to think about when building rapport with clients. Tickle-Degnen and Rosenthal (1990) looked at how nonverbal actions and rapport are correlated with each other. The three related components mentioned in this study are mutual attentiveness, positivity, and coordination, which are referred to as the "three essential components". This article states nonverbal behaviors as being powerful in good communication with someone. Using a meta-analysis, this article found that smiling, nodding of the head, leaning in towards someone, and directly facing someone all assist in a positive interaction with someone. This article also states that eye contact and mirroring of posture are not so much associated with there being a positive interaction. Head nodding and smiling have been observed as indicators that the participants of the conversation approve of one another. These are strategies for rapport building in general, and it is unknown if these strategies would be effective in telepractice. It is important to determine what body language SLPs are using during telepractice to build rapport with their clients. This study mentions that there is still not enough research on nonverbal language to come to a complete conclusion about the correlation.

Rapport Building via Telepractice with children with Autism Spectrum Disorders

Due to the challenging behaviors that are seen in a child with an Autism Spectrum Disorders (ASD) diagnoses, it is difficult to manage these behaviors during therapy sessions. According to Rzepecka et al. (2011), challenging behaviors are seen more often in children with an ASD diagnoses. Challenging behaviors include inability to regulate emotions, inability to act appropriately to the setting they are in, and inappropriate responses to emotions such as hitting, biting, and screaming. An additional challenge with this population

in telepractice is that the therapist is not there in person to control behaviors. According to Faras et al., (2010), the prevalence of ASD is rising worldwide. Some noted impairments of a child with an ASD diagnoses include lack of activity initiation, lack of interest in activities, lack of pretend play, deficient in non-verbal communication, and inability to share pleasure. These deficits potentially make it more difficult to engage and build rapport with a child in-person and even more so via telepractice when the clinician is not physically present. According to the CDC, children with an autism diagnoses prefer to play alone, are hyperactive, aggressive, and have unusual mood reactions (CDC, 2019). These challenging behaviors can make it difficult to conduct therapy via telepratice with this population. Akamoglu et al.'s study studied the perception of rapport building via telepractice among pediatric SLPs in general, without focusing on specific population. This study will narrow down to children with ASD considering the challenging behaviors and the challenges that may be brought about to rapport building in telepractice sessions.

Nearly 2% of school age children have an ASD diagnoses. Noted deficits in the school age population are peer interaction, social communication, and social cognition. Deficits in these areas can make it difficult for a child with ASD to fulfill social and academic demands from being in school (Bauminger-Zviley, 2014). Restricted repetitive behaviors (RRbs) are found to be less severe and frequent in older children diagnosed with ASD than younger children. Behaviors impact a child's ability to be productive (Esbensen et al., 2008). If a child has less behaviors allowing them to be more productive, the child will be able to accomplish more. Behaviors preventing productiveness diminish as the child gets older. Therefore, age could be an influential factor impacting the perception and strategy usage by SLPs in telepractice sessions.

II. RESEARCH QUESTION

We aimed to find out what the perception is on building rapport via telepractice as well as strategies SLPs are using in order to build rapport with children of the age group (5-8) and (9-12) with an ASD diagnoses. We also want to find the age-related differences in perception and strategies. This will allow better knowledge of how to build rapport via telepractice with this particularly challenging population. We wanted to find this information though a survey to SLPs using telepractice as well as an in-depth interview with a select few of the participants. We expect that SLPs would have higher perception of rapport building and more frequent usage of rapport building strategies in telepractice sessions for younger children than older children with ASD, due to the maturity and development as they age.

III. METHODS

Survey

This research was conducted through a survey as well as an in-depth interview from a portion of the responders to the survey. The survey consisted of 60 questions and was conducted using a 5-point scale in order for participants to rate the questions from the range of least important to the most important in regards to strategies and the perception of rapport building via telepractice with children of different ages with an Autism diagnosis.

The survey was split by ages 5-8 and 9-12 to compare the different rapport building perception and strategies between the two age groups. To assess perception, we asked participants questions, such as what they would rate their overall perception of rapport building via telepractice with this population, how much does rapport building allow the client to trust you in telepractice sessions, how much of a priority they make rapport building via telepractice with this population. To assess strategies in telepractice rapport building, we asked participants questions to assess strategies used to build rapport via telepractice with this population, for example, how they make themselves available to clients and families outside of the sessions, how important being available outside of sessions is, how important eye contact, smiling, and gestures were to building rapport with this population via telepractice. To control for the sequence of administration for the two age groups, half of the surveys began with ages 5-8 while the other half of the surveys distributed began with questions pertaining to ages 9-12. See the survey questionnaire in the appendix. Participants were randomly assigned to one of the two sequences.

An email was sent out to eligible participants within the United States asking for participation in this survey. Participants were initially only school based SLPs working with

the ASD population. Participants were selected by random selection of state and county. School SLPs in those state and counties were emailed to participate in the survey. Due to a low response rate of less than 1%, criteria of participants was expanded to SLPs at universities working with this population. If an eligible participant chose to participate, they were sent a Qualtrics link in order to complete the survey. According to Labrosky et al., (2011), qualitative research including surveys is a "elaborate" form of research, allowing a more in depth perspective and insight to the opinions of participants. Using a survey allowed us to compare specific questions answers to other SLPs in order to find common trends and differences in regards to building rapport via telepractice with children with an Autism diagnosis for different ages, 5-8 years old versus 9-12 years old.

Interview

The in-depth interview allowed us to hear in-depth specific strategies that SLPs are using via telepractice with this specific population. The interview consisted of 13 questions allowing participants to discuss telepractice perceptions and strategies more in depth than in the survey. This strategy was chosen so that not only could we discover the perception of telepractice, but the addition of the in-depth interview allows a discovery of what specific strategies SLPs are using in telepractice with children who have an ASD diagnoses within the age group of 5-12. The interview also allowed us to see the differences of perception and strategies with the age group of 5-8 and 9-12 in order to better specify rapport building strategies that work. For example, one question that we asked participants is if they prioritize rapport building with the child before beginning intervention. Other questions we asked participants included how much therapy time they dedicate to rapport building, how much time is dedicated in the initial session as well as all session after the first one, if they make rapport building a priority with the clients they see via telepractice, the strengths and challenges of building rapport via telepractice vs. face-to-face with this population, what

specific strategies they used to build rapport with this population during telepractice sessions, if rapport with clients in sessions via telepractice is dependent on whether the child trusts you or not, and the differences of rapport building that they see in this population via telepractice with the age group 5-8 and 9-12. See Appendix.

Participants

Participants in this study included 17 SLPs providing services to children with an ASD diagnoses ranging from ages 5-12 via telepractice. The majority of participants were female with 14 participants and 3 male participants. Out of all of the participants the majority were white with 14 participants, 2 Hispanic participants, and 1 African American participant. All participants have obtained at least a master's degree. The age range of participants was from 25 to 50 years of age with the majority of participants being between the ages of 30-40. The amount of experience with telepractice ranged from less than 1 year to 3 years. The majority of participants had no experience with telepractice until the onset of COVID-19 pandemic. Prior to the COVID-19 pandemic, the vast majority of participants are spending 0 hours per week serving clients via telepractice. After the onset of the COVID-19 pandemic, participants reported spending an average of 20 hours a week serving clients via telepractice. The majority of participants work with children in urban areas, and only 6 participants serving children in rural areas. See table 1 for demographics of participants in the survey.

The three participants who also participated in the interview were all female. All responders of the survey were asked to participate in the interview, but only three agreed to participate. All three have a master's degree in Speech Language Pathology. Two of the participants were Caucasian and one was Hispanic. One participant was in her 30's, one was in her 40's, and one was in her 50's. Two of the participants of the interview used the

telepractice intervention model prior to the COVID-19 pandemic while one began this intervention model due to the onset of COVID-19.

Table 1
Demographics of Participants

Characteristics	Number of SLPs	Percentage
Gender		
Male	3	18%
Female	14	82%
Age		
20-30	5	29%
31-40	4	24%
41-50	8	47%
Race/Ethnicity		
White	14	82%
Hispanic	2	12%
African American	1	6%
Highest Degree Obtained		
Masters	14	82%
PhD	1	6%
Other	2	12%
Years of Experience		
0-10	8	47%
11-20	4	24%
21-30	5	29%
Years of Telepractice Experience		
Less than 1 year	14	82%
1-2 years	2	12%
2-3 years	1	6%
Hours per week of telepractice pre COVID-19 pandemic		
0	15	88%
5-10	2	12%
Hours per week of telepractice post COVID-19 pandemic		
0-5	5	29%
6-10	3	18%
11-15	1	6%
16-20	4	24%
21-25	1	6%
26-30	2	12%
31-35	0	0%
36-40	1	6%
Areas of work		
Urban	11	65%
Rural	6	35%

Note. For others in highest degree obtained, one participant reported obtaining an Education specialist degree and one reported with a Certificate of Advanced Study. Area of work was self reported.

Analysis of Data

The research team for this survey included a university faculty member and 2 graduate students. The team of researchers worked to collect, transcribe and analyze the data for this study. For analysis of the data from the interviews, the model from Corbin and Strauss (2015) for qualitative analysis was used. The two graduate students individually read each interview transcription to create a set of initial codes for the interviews. The two graduate students then met via Zoom to discuss similarities of codes and any disagreements among the set of codes. The two graduate students then individually coded the transcripts using the codes and created a set of themes for the codes. The two graduate students then met again, reached agreement with their coding, and came to a conclusion for the final set of themes for the interviews. All interview participant names were changed with (Subject A, B, and C) to ensure confidentiality.

For analysis of the quantitative data from the survey, a paired t-test was used to compare SLP's responses to children of the two age groups. Responses were put through the software SPSS 24 to determine the results of the responses to the survey. All names of participants were de-identified using numbers and kept confidential in data analysis.

IV. RESULTS

Survey findings

Participants completed a Perceptions and Strategies Survey in regards to SLP telepractice with the ASD population ages 5-12. Table 2 highlights the findings of the survey. All participants ranked perceptions and strategies of telepractice on a scale of 1-5. The scale for this survey was a 1 being the lowest (not at all important/necessary) and a score of a 5 being the highest (extremely important/necessary). We calculated the averaged rating of the perception-related questions and the average of the strategy-related questions for each of the participants. We also calculated averaged rating for the four rapport building outcomes questions. See SLPs' averaged rating for the two age groups and comparison results using the paired t-tests in Table 2.

There was no significant difference in regards to the perception of telepractice in younger children (5-8) and older children (9-12) with an ASD diagnoses. The average of perception for 5-8 year olds was slightly higher with a 4.3 average than for 9-12 year olds with an average of 4.09. The overall rating showed that participants' rapport building via telepractice as important for both age groups. There was no significant difference is regards to strategies used via telepractice in younger (5-8) younger and (9-12) older children with an ASD diagnoses. The rating of incorporation of strategies was slightly higher in 5-8 year olds with an average of 4.03 than in 9-12 year olds with an average of 3.75. This shows that participants rated strategy implementation for rapport building slightly more frequent in the 5-8 year old age group than the 9-12 age group.

Regarding outcome measures, participants were asked how accomplished they feel with their sessions via telepractice regarding establishing rapport. There was no significant

difference on how accomplished they feel in sessions with younger (5-8) and older (9-12) children. There was a slightly more accomplished feeling in the 5-8 year old group with an average of 3.71 than the 9-12 age group with an average of 3.64. Participants were asked how much improvement their clients are making via telepractice. Although there was no significant difference found between the two age groups, participants reported a more improvement in 5-8 year olds with an average rating of 3.53 and 9-12 year-old age group with a 3.35 rating. Participants were asked how much they think face-to-face and the telepractice delivery model with this population is the same. There was a significant difference found between the two age groups for this question. Participants responded that in 5-8 year olds via telepractice with an average rating of 3.65 and in the 9-12 age group with an average rating of 3.05. Responders found rapport building to be more different via telepractice with the older age group than the younger age group. Finally, participants were asked how confident they felt building rapport via telepractice with this population, and there was no significant difference between the two age groups. Rating for the 5-8 year old age group was slightly higher, with an average rating of 3.82, than the 9-12 year old age group, with an average rating of 3.71.

Table 2
Perception and Strategies of Building Rapport and outcomes via Telepractice Survey

Measures	**Age Group (5-8)**	**Age Group (9-12)**	**T-Value**	**P-Value**
Perception	4.3 (0.54)	4.09 (0.98)	1.07	0.28
Strategies	4.03 (.5)	3.75 (0.9)	1.329	0.202
How accomplished do you feel your telepractice sessions are in regards to establishing rapport?	3.71 (0.77)	3.64 (0.93)	0.236	0.817

How much improvement do you think your clients are making via telepractice?	3.53 (0.87)	3.35 (1.06)	0.717	0.484
How similar is building rapport via telepractice and face-to-face?	3.65 (1.17)	3.05 (1.56)	2.582	0.020
How confident do you feel in building rapport via telepractice?	3.82 (0.95)	3.71 (1.26)	0.382	0.707

Interview Responses

Three participants were asked open-ended questions in an in-depth interview regarding strategies for building rapport in SLP sessions via telepractice with the ASD population ages 5-12. Following the analysis of responses, six themes emerged from the responses. These themes were (a) importance and strategies of building rapport, (b) benefits of telepractice, (c) downfalls of telepractice, (d) factors influencing building rapport, (e) evolvement of rapport building strategies, (f) differences of face to face and telepractice therapy.

Theme 1: Importance and Strategies of Building Raport

One finding in this interview from each participant is that rapport building is of priority. All three responders separately stated that rapport building is important because it allows students to make progress, it allows SLPs to find out information about the child, it helps better facilitate therapy, it helps with the relationship with the family, and it helps establish a trust with the child. One responder stated that rapport building is important because it shows you that are interested in the things that the children are interested in. This responder also mentioned that rapport building is important because it is more likely the child

will pay attention. Two of the responders both discussed that client will trust you with honesty that comes with rapport building. A responder also mentions that a child will put forth better effort when they are being challenged during therapy as well as more likely to take risks when they have a good rapport with their SLP. One responder mentioned that rapport building is important because it allows a child to feel that they can be vulnerable with their SLP.

Time for rapport building with the child was stated to be important due to the importance of building rapport. All three responders stated that rapport building should be implemented during each speech therapy session. All three responders also mentioned that it is important to check in with the client with how they are doing in each session to build rapport. Two responders said that the first session in is entirety is a rapport building session rather than implementing any kind of therapy. One responder stated that establishing rapport makes the transition from face to face to telepractice easier and will help establish a routine with the client. The other responder spends the first 15 minutes of the first session building rapport and then the first five minutes of therapy every other session after.

All three responders had insight on strategies that are used in order to build rapport with their clients via telepractice. One responder stated the importance of rapport building with the parents to allow them to buy-in to therapy. This responder also stated to begin therapy with what the child is interested in, then slowly fade away into therapy, use praise, eye contact with the child, set limits with the child, match your face to tone of voice, and make an effort to connect with the teacher. All three responders stated open communication, greeting the child, knowing the child, using things that motivate the child, showing empathy for the client and family, and meeting the child where they are academically and socially all rapport building strategies implemented in telepractice with this population. Two responders stated good rapport building strategies include using visuals such as sign language and

pictures, using music, making sure the activities are preferential, as well as taking time to connect with the parents. One responder stated that better communication and connection with not only the parents, but also the case manager is important. A case manager would interact with SLPs in the school setting when overseeing the child's individualized educational plan. Two responders mentioned that they can connect with parents and case managers well by giving out their personal phone number, establishing an intentional routine with a telepractice session, following up with a recap of the session, and texting the parents and e-helpers for open and continuous communication.

Theme 2: Benefits of Telepractice

All responders reported that telepractice allows the SLP to have more interaction with the parents. This is due to them often being involved in the session by being an e-helper, in communication with the SLP through text and email, and the parents being the motivators during telepractice sessions. One responder reported that more parental involvement that comes with SLP sessions via telepractice leads to more carryover from sessions. Another responder noted that daily notes via text and email allowing exchange of thoughts was much easier than having to write one on paper after each session.

Theme 3: Downfalls of Telepractice

All three responders reported that there are downfalls to using telepractice as a delivery method for intervention. All three responders reported that downfalls include parents being resistant to the use of technology, the parents low buy-in level to therapy via telepractice, and technology issues such as poor internet in rural areas. One responder reported that when using telepractice as the form of intervention it is often easier for the child to be distracted by what may be around them when the therapist is not in front of them. This responder also reported that it can be hard for children to understand what the clinician is asking of them over a computer screen, and there are often time restraints of this delivery

model from teachers in the school setting. Two responders reported that behavioral issues can be more challenging via telepractice due to the child not being physically in front of the SLP. A responder reported that there is less time spent physically with the child. The attention span of a child via telepratice can be shorter. This responder also stated that a parent should be present for intervention during telepratcie. This responder continued by stating poor technology fluency can impact production time of intervention. This participant finally stated there is potential for a lack of motivation from a child when using telepractice rather than face-to-face therapy. Another responder reported that rapport building comes less naturally when done via telepractice, and the rapport building is more activity driven than relationship driven. This means that during a telepractice session this participant was more focused on completing tasks than building relationships with participants. Unlike the other two participants, this SLP did not have telepractice experience prior to the COVID-19 pandemic. This is likely why this SLP did not place a priority on rapport building with their clients. This responder also mentioned that there is less thought to building rapport building rapport with their clients in the telepractice format of therapy.

Theme 4: Factors Influencing Rapport Building

The COVID-19 pandemic has impacted the amount of clients seen via telepractice in order to maintain safety of the client and the SLP. With this delivery model becoming more common in the past year, it has impacted how SLPs build rapport with their clients. One responder stated that a lack of rapport with the parents of the client will impact the behavior of the child. This responder also mentioned that age can be a factor of how rapport building may be conducted during a session, as well as the severity of the ASD diagnoses, and the comfort with the telepractice delivery model for therapy. For example, younger children may positively build rapport with stuffed animals and Legos while older children are able to build good rapport by carrying on a conversation about interests and hobbies. This responder also

mentioned that parental involvement in sessions can impact how well rapport is built in a session. The parent's ability to set boundaries and let the SLP do their job will impact the rapport the SLP has with the child. This responder went on to mention that how well the e-helper is prepared will impact rapport. If the e-helper is not prepared, it will take time out of the session. Rapport building according to this responder gives the clinician a better inclination as to why a child may be behaving the way that they are during SLP sessions. In regards to the e-helper, two responders reported that the e-helper may be able to identify things that the SLP may not be able to due to being in close proximity of the child. For example, what the child may be fidgeting with or what may be distracting them in the environment that they are in. These two responders also report that the e-helpers will help reinforce what the clinician is teaching to the child. These two responders also both reported that the child must feel secure in SLP sessions in order to trust you as their clinician.

One responder reported that resistance from teachers, parent perspectives, and dependency on the clinician all impact the rapport building process with a child. This responder also reported that parental personalities of parents of children with autism are sometimes similar. For example, this responder reported that the pragmatic skills found n their children are also found in the parents. This can impact the carryover of rapport building during a session. All three responders reported the importance of being available outside of therapy time, helping a child stay on task, family buy-in, the relationship with the clinician, level of child's communication, and the value placed on the telepractice delivery model are all factors that influence rapport building. One responder mentioned that having an aid in the school can help influence rapport with the child. Finally, two responders reported that with an e-helper helping the child stay on task, it allows better rapport between the client and the SLP.

Theme 5: Evolvement of Rapport Building Strategies

Responders to the survey have reported that rapport building evolves as therapy progresses. One responder reported that initially, rapport building is more interview style and then evolves to more open conversation after the initial session. This is due to a lack of physical proximity with the child. Another responder reported that initially sessions begin with parent coaching and training before beginning intervention with the child. Due to the clinician not being physically present, this allows the parents to better assist the child in ways the clinician cannot. The clinician then will send the parents emails ahead of time of what to expect before each session of intervention. This allows the parents to feel included in the intervention process of their child.

Theme 6: Differences of Face to Face and Telepractice Therapy Regarding Rapport Building

One responder reported that in telepractice there is a lack of interaction with parents due to not being in front of them. This responder also reported that face to face therapy allows clinicians to build rapport more comfortably when in proximity with the child due to being in front of them. This responder reported that conversation via telepractice is not as comfortable as face to face. When being in the presence of the child, this clinician reported being more intentional about building rapport with clients.

V. DISCUSSION

Previous studies have mostly focused on general advantages and disadvantages of telepractice. Very few studies have delved into rapport building, which is a potential challenge in telepractice. We examined rapport building via telepractice with the specific population of children ages 5-12 with an ASD diagnosis. Not only did we focused on a specific population, but we examined the influences of age (i.e., differnces of rapport building with the younger group (5-8) and the older group (9-12)). Perceptions are high in regards to rapport building via telepractice with both age groups, and there is not significant difference between the two groups. Strategies are overall frequently used for rapport building and there is no significant difference between the two age groups. There is only one age difference regarding outcome measures. This significant difference is found with the question about how similar is rapport building via telepractice and face-to-face therapy.

Perceptions

In the survey, participants were asked to rank their perception of rapport building via telepractice, and the mean rank showed that the SLPs had a high perception for both age groups. This shows that rapport building is important in order to build a proper relationship with clients, and the pediatric SLPs working with children with ASD perceive it as very important in telepractice services. The interview expanded our understanding of the importance of rapport building when working with children with ASD via telepractice. For example, one responder reported that good rapport allows clients to trust the SLP, allowing for a better outcome for speech-language services. Another responder from the interview reported that rapport building allows better participation to therapy intervention. This is consistent with Akamoglu (2018) that pediatric SLPs have a high perception in regards to

rapport building via telepractice with pediatric populations. From the interview, responders reported that just as in-person therapy, rapport building is regarded as a prerequisite for successful therapy intervention via telepractice.

Although there is no significant group difference in regards to perception with both age groups, the mean rating of perception for the younger group is slightly higher than the older group. According to the interview, it is more difficult to pull the older children out of school or activities for a therapy session. The behavior following an older child being pulled of a class or activity they are enjoying is often difficult. Younger children are less likely to be involved in as many extra curricular activities.

Strategy Usage

Participants for this study reported a frequent implementation of rapport building strategies, as indicated by the survey results. During the interview portion, one responder reported looking up pictures of the child's interests and having the child expand on that interest. Another participant reported implemented introducing her dog for increased child engagement. It was also reported that an SLP would spend the first session to fully get to know the child in order for the child to feel comfortable with them during therapy. These strategies may be used by clincians who just start telepractice services with their clients.

There is no significant age group difference in regards to strategy usage. SLPs reported using strategies very frequently with both age groups. Although it is not statistically significant, the mean for the younger group is higher than the older group, potentially indicating there are more rapport building strategies used with younger children who are cognitively less mature than the older children. With a larger sample, future studies may find a difference.

Outcomes

Four outcomes were assessed during our survey. The first outcome was how accomplished do SLPs feel their telepractice sessions are in regards to rapport building. The mean results show SLPs feel accomplished with no significant difference between the two age groups. Another outcome measured was how much improvement do SLPs feel their clients are making via telepractice. The mean results show SLPs feel clients are making improvements via telepractice with no significant difference between both age groups. Another outcome measure assessed how confident SLPs feel with building rapport via telepractice with this population. The mean results show SLPs feel confident building rapport via telepractice with this population with no significant difference between both age groups.

One significant difference was found in the four outcome measures of this study. Clinicians reported rapport building via telepractice with older children with ASD is more different from in-person sessions than the younger children with ASD. The responses from interviewees may help explain this finding. It is reported in the interview that with older children, rapport building via telepractice is more of a conversation. Whereas, in in-person sessions, SLPs would typically play age appropriate board games such as "Sorry" and "get to know you" games with the older ones. For the younger children, one interviewed SLP reported incorporating things such as same songs from in-person therapy into telepractice sessions with her younger children. Future study may continue investigating this by directly observing SLPs' rapport building strategies with younger and older children with ASD in telepractice sessions.

Implications for telepractice rapport building

The results of this study provide insights to strategies to use in telepractice therapy with the ASD population. Age should be taken into consideration when choosing rapport building activities. For example, one responder reported using stuffed animals to engage the younger children, and the use of songs for saying hello and goodbye were reported to be

beneficial during telepractice sessions for rapport building. With the older group, it was reported to ask questions about their hobbies and interests. Once that is established, it is beneficial to engage in conversation pertaining to those interests. It was also reported to be beneficial to follow up with the child about something they may have stated during the previous session to show the clinician cares.

Other strategies are recommended and may be implicational for new telepractice clinicians. For example, being available outside of therapy via phone or email to parents allows them to build better rapport with the client and their parents. One example of this would be sending a post card to the client's house. The implementation of a school aid is also reported to be beneficial. Having someone in physical proximity of the child allows the SLP to see and understand things they may not be able to see via telepractice. Participants reported on how rapport building strategies evolve from the initial session to later sessions. Participants reported spending half or the entire first session getting to know the child. SLPs then reported dedicating the first five minutes of later sessions specifically to rapport building, in order to continue and expand on rapport building.

Due to only 17 responses, further research is required to assess the generalization of the results. Further studies should also take into account the amount of experience clients have with telepractice. For example, a child with more experience with the telepractice model may find easier to build rapport with clinicians than a child who the telepractice model is completely new to them. Clinicians' experience with telepractice may also be important to take into consideration. Most participants in this study have little experience with telepractice, which potentially impacts responses. The majority of responders to this study did not have any experience with telepactice until after the onset of COVID-19. Telepractice may be the only or predominant delivery model possible to continue services and remain safe during the pandemic. This in turn created an increase in telepractice usage. With more

clinicians' started using telepractice after the pandemic outbreak, it may be easier to study the influence of telepractice experience for rapport building via telepractice. For future studies, gender and severity of ASD diagnosis should be considered as influential factors to influence rapport building perception and strategies in telepractice. In addition to clinicians' perspectives, a beneficial future study would be to study rapport building from clients' perspective, which will give us a more comprehensive understanding of how rapport building should be established.

Despite the limitations of this study, this research contributes to currently limited research on rapport building via telepractice. This study also contributes to implementing specific rapport building strategies for the pediatric ASD population at different ages when using the telepractice delivery model. From the interview, it appears that SLPs find the face-to-face and telepractice delivery model to be similar in regards to rapport building and that SLPs perceive both delivery models in regards to rapport building similarly. The findings need to be further addressed in studies with a larger sample.

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APPENDIX

Survey Questions

Background questions:

1. What is your name? _____
2. What is your gender?

O Male **O** female

3. What is your age? _____
4. How many years have you been an SLP? _____
5. What is the highest degree that you have obtained? _____
6. What is your current occupation? _____
7. How many years have you used telepractice as a form of therapy intervention?

   _____
8. How many years have you used telepractice as a form of therapy intervention in a pediatric setting? _____
9. How many hours per week did you conduct telepractice sessions before the COVID19? (try your best to provide an estimate)_____
10. How many hours per week do you conduct telepractice sessions after the COVID19? (try your best to provide an estimate)_____
11. How many children are on your caseload? _____
12. How many autism children between the ages of 5-8 are on your caseload?

    _____

13. What is the estimated percentage of children on your caseload that have an ASD diagnoses between the ages of 5-8? _____
14. Where is the location of work?_____
15. Would you define the area you work in as rural or urban? _____

Rating about telepractice and establish rapport

1. On a scale of 1-5, how competent do you feel as far as internet fluency?

O 1. Not at all Competent

O 2. Not Very Competent

O 3. Somewhat competent

O 4. Competent

O 5. Very Competent

2. On a scale of 1-5 how competent do you feel using a computer/tablet/smart phone?

O 1. Not at all Competent

O 2. Not Very Competent

O 3. Somewhat Competent

O 4. Competent

O 5. Very Competent

When you answer the following questions, please adjust your mindset to **your 5-8 years old autism clients**.

Perception about rapport building via telepractice

3. What are traits defining the best candidates for telepractice? (You can have multiple choices)

O Child is interested in tablet/computer/smart phone

O Child has relatively few challenging behaviors

O Parents have good internet fluency

O The household has stable and fast internet connection

O Parents' education levels

O Parents' age

O Parents' perceptions/buy-in of telepractice

4. On a scale of 1-5, how necessary is rapport building via tele-practice

O 1. Not at all necessary

O 2. Not really necessary

O 3. Somewhat necessary

O 4. necessary

O 5. Extremely necessary

5. On a scale of 1-5, how necessary is rapport building training via tele-practice, suppose you have some access to a training of rapport building strategies?

O 1. Not at all necessary

O 2. Not really necessary

O 3. Somewhat necessary

O 4. Necessary

O 5. Extremely necessary

6. On a scale of 1-5, how important is building rapport for the success of a session via tele-practice?

O 1. Not at all important

O 2. Not really important

O 3. Somewhat important

O 4. Important

O 5. Extremely important

7. On a scale of 1-5, how much does good rapport with a client influence client improvement via tele-practice?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

8. On a scale of 1-5, how much does having good rapport allow the client to have more trust in you (the SLP) via tele-practice?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

9. On a scale of 1-5, how much do technology issues impact your ability to build rapport via tele-practice?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

Strategy usage in telepractice rapport building

10. On a scale of 1-5 how often have you sent reminders to your client about session time and meeting link?

O 1. Never

O 2. Not often

O 3. Sometimes

O 4. Often

O 5. Very often

11. On a scale of 1-5 how often have you emailed or mailed e-card/cards to your client to help establish rapport?

O 1. Never

O 2. Not often

O 3. Sometimes

O 4. Often

O 5. Very often

12. On a scale of 1-5, how important is an e-helper (e.g., parent, grandparent, nearby SLP assistant) for building rapport with clients via tele-practice?

O 1. Not at all important

O 2. Not really important

O 3. Somewhat important

O 4. Important

O 5. Extremely important

13. On a scale of 1-5, how much of a priority do you make rapport building with your clients via tele-practice?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

14. On a scale of 1-5, how often do you make rapport building a priority during a session?

O 1. Never

O 2. Not often

O 3. Sometimes

O 4. Often

O 5. Very often

15. On a scale of 1-5, how important is good communication for rapport building with your clients via tele-practice?

O 1. Not at all important

O 2. Not really important

O 3. Somewhat important

O 4. Important

O 5. Extremely important

16. On a scale of 1-5, how much does being empathetic to what your patient is experiencing impact your ability to build rapport via tele-practice?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

17. On a scale of 1-5, how important is eye contact when building rapport with your clients via tele-practice?

O 1. Not at all important

O 2. Not really important

O 3. Somewhat important

O 4. Important

O 5. Extremely important

18. On a scale of 1-5, how accomplished do you feel your sessions are via tele-practice regarding establishing rapport?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

19. On a scale of 1-5, how much improvement do you think you clients are making via tele-practice?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

20. On a scale of 1-5, how much do you think rapport building is the same via tele-practice as in face-to-face sessions?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

21. On a scale of 1-5, how much would you encourage other SLPs to use tele-practice when building rapport with clients?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

22. On a scale of 1-5, how does the rapport you have with face to face clients compare with clients in the tele-practice setting?

O 1. Not at all

O 2. Not a lot

O 3. Some

O 4. A lot

O 5. More than a lot

23. On a scale of 1-5, what is your overall perception of rapport building via tele-practice?

O 1. Very bad

O 2. Bad

O 3. Fair

O 4. Good

O 5. Very good

Interview Questions

1. What are the steps for rapport building establishment?

2. What does an e-helper do in order to help with building rapport?

3. Have you seen any negative impacts of poor rapport building in tele-practice? If so, please explain

4. What are some ways that you build rapport in a session?

5. What rapport building strategies do you find to be the most successful and engaging?

6. Do you prioritize building rapport first with a client before beginning intervention? Why or why not?

7. Do you find it harder to build rapport via tele-practice than face to face? If so, please explain why you think so.

8. How much therapy time do you dedicate to rapport building with the client and why?

9. Do you continue rapport building strategies even after the first session? Why or why not?

VITA

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Master of Science in Communication Sciences and Disorders- the University of Mississippi, July 2019-May 2021. Thesis title: The Perception And Strategies Of Building Rapport With Children With Autism Spectrum Disorder Via Telepractice

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