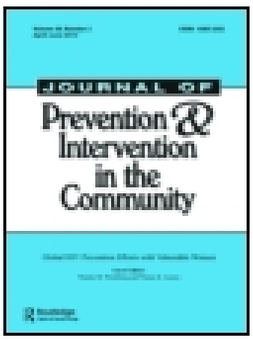

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Influence of the COVID-19 pandemic on telepractice in speech-language pathology

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ABSTRACT

Prior to the COVID-19 pandemic, speech-language pathology telepractice was used by a small percentage of consumers. The 2020 pandemic necessitated the transition of most services to an online format. This article reports on a brief, electronic survey that was completed by 145 speech-language pathologists (SLPs) during the early months (June 2020) of the pandemic. Results showed that the majority of SLPs will continue using a telepractice model into 2021 and beyond, as more than half of SLPs rated the quality as similar to services delivered in-person. The absence of earlier preparation, access to and hindrances with technology, and client factors were the main elements influencing telepractice success for SLPs. However, telepractice was rated as an efficient means of consultation, evaluation, and intervention and survey results revealed that 53.84% of SLPs plan on maintaining this modality at a higher than pre-pandemic level.

KEYWORDS

COVID-19; speech-language pathology; telepractice; therapy

Introduction

Speech-language pathologists (SLPs) are experts in speech, language, and communication processes and disorders, who work in a variety of settings such as schools, hospitals, rehabilitation centers, private practice, and others. SLPs are trained in the typical development of speech, language, and communication and on how to diagnose and treat disorders related to these areas. This can range from how speakers say and put sounds together into words, to how well they understand what they hear or read, to how words are used to speak with others, and following social communication rules (ASHA, 2020).

The majority of clinicians practicing speech-language pathology delivered services via the traditional, in-person delivery model prior to the 2020 COVID-19 pandemic, and the majority of students training to become SLPs received their training with this model. However, with the onset of

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the pandemic in 2020 in the United States, schools and other service delivery settings were closed, and SLPs and clients had to pivot almost overnight to a new format for most of them, namely telepractice. Many SLPs faced the options of either ceasing delivery of services completely or moving into a telepractice model, with little to no training or prior experience.

Telepractice ("Tele" is the ancient Greek word for "distant, far off") in speech-language pathology is the delivery of consultative, assessment, and intervention services via a physically-distanced format that utilizes various types of telecommunications technology. These services are similar to the generically termed tele-rehabilitation (American Telemedicine Association, 2010). Many work settings can utilize telepractice, and they include schools, hospitals, health clinics, universities, and corporate settings. As long as SLPs follow the regulations and policies associated with their profession and government, telepractice can be practice anywhere. The American Speech-Language-Hearing Association (ASHA) stipulates that telepractice must adhere to the profession's Code of Ethics (ASHA, 2016a) and services must be of equivalent quality to that of services provided in person (ASHA, 2016b).

Similar to online education, telepractice can be administered synchronously, asynchronously, and as a hybrid approach. In the synchronous approach, the SLP meets with the client in real time via audio and video connection and the experience often replicates the in-person, traditional encounter. The SLP can provide consultation, as well as diagnostic and intervention services with this approach. This can be complemented with asynchronous services in which the SLP views and interprets images, video, or data without the client present at the same time. Finally, the hybrid approach can include a combination of in-person, synchronous, and asynchronous services.

A survey of 27,041 ASHA-certified SLPs, administered by staff at the American Speech-Language-Hearing Association (The ASHA Leader Live, 2020), revealed that only 2–10% of respondents who worked in schools, hospitals, and in private practice said that they routinely provided clinical services via telepractice prior to COVID-19. This changed to 29–85% (The ASHA Leader Live, 2020) during COVID-19, with the biggest change occurring in schools: 5% prior to COVID-19 and 81% during the peak of COVID-19. All settings reported a moderate to major professional impact (88–94%). While this survey was informative, it did not inquire about the amount of training that SLPs had in relation to telepractice, nor did it ask whether professionals would go back to pre-pandemic levels of telepractice in 2021, when it is widely expected that a vaccine will be approved and provided to the general population. Despite the proliferation of telepractice, most graduate training programs in speech-language pathology do not

include telepractice in their teaching of clinical and academic components of this service delivery model (Grogan-Johnson et al., 2015). A survey of graduate programs showed that only 26% of universities address this model (Grogan-Johnson et al., 2015).

Recent and specific feedback from SLPs regarding the benefits and challenges of telepractice is quite limited in the research literature. One qualitative study of in-depth interviews with five SLPs identified some themes surrounding the use of this modality (Tucker, 2012). These themes centered on (1) barriers, (2) benefits, (3) reasons for acceptance and use of telepractice, and (4) suggestions to resolve telepractice professional issues. Some benefits included access to SLP services, easing the shortage of SLPs, individualized programming, service delivery options, and access to specialists. On the other hand, some barriers included technology failures, lack of training, lack of physical contact, lack of research, and nature of the environment.

The purpose of the current study was extend the above study and learn, given the current pandemic, about the amount of training SLPs had in telepractice, whether they anticipated that the increase in the percentage of their telepractice versus traditional, in-person, services would return to pre-pandemic levels, and to give SLPs the opportunity to provide specific feedback regarding the benefits and challenges of this modality of service delivery.

Methods

A survey was developed with the purpose of learning about the impact of COVID-19 on telepractice from the perspective of SLPs. Ethics approval for this survey was obtained from the University's Institutional Review Board. The design of the survey instrument was based on challenges identified in the literature (The ASHA Leader Live, 2020), along with survey information completed by a previous study (Grogan-Johnson et al., 2015).

The survey consisted of nine questions that gathered information on the respondents' background (three questions) and experience with/opinion about telepractice in SLP (five questions). The last item (question #9) was an open-ended question that probed the participants' perceived challenges and benefits of telepractice. The goal of the open-ended question was to elicit themes around challenges and benefits. Table 1 provides a list of the questions.

The survey was deployed via Qualtrics Survey Software (Qualtrics, Provo, UT, USA, https://www.qualtrics.com). Qualtrics is a software program that allowed the researchers to upload the survey they developed, send an electronic link to the survey to potential participants, and collect and organize

Table 1. Survey questions.

Question #1: What is your current work setting?
Question #2: How many years of experience do you have as an SLP?
Question #3: What certifications and licenses do you currently hold?
Question #4: Approximately how many hours of training in telepractice have you completed?
Question #5: Prior to 2020, approximately what percentage of your services was conducted via telepractice?
Question #6: Following the onset of the COVID-19 pandemic in 2020, approximately what percentage of your services was conducted via telepractice?
Question #7: Approximately what percentage of your services do you anticipate to be conducted via telepractice in 2021?
Question #8: How do you rate your experience with telepractice services?
Question #9: Why is telepractice better, similar, or worse than services delivered in-person

response data. Participants could simply click on the link and complete the survey on any number of electronic devices such as a computer, smart phone, or tablet.

After the development of the survey and its upload in Qualtrics, the questions and survey link were piloted with four experienced SLPs. These participants were identified via mutual contacts within the profession. Based on suggestions obtained from the pilot sample participants, a few minor word order adjustments were made to the survey questions. The average time to complete the survey for the pilot participants was 7 minutes.

Upon completion of the pilot, the researchers used a database of SLPs to obtain information on practicing SLPs and their email addresses. A random sample of 500 SLPs' email addresses was selected, and an introductory email regarding the study and the survey link was sent to these addresses. The email stated the purpose of the survey and that anonymity would be preserved for individuals who elected to complete the survey. SLPs were also informed that participation was voluntary and participants could exit the survey at any point without penalty. A follow-up email was sent each week for four weeks. The survey link was kept active for a period of 4 weeks in June 2020.

Of a total of 166 responses received, 145 responses were included in the final analysis. Inclusionary criteria for the study were as follows: Participants had to (1) identify as an SLP who works in a traditional setting and (2) have three or more years of experience. Of the returned surveys that met the criteria, the response rate was 29%.

Results

The first eight survey questions provided information on work setting, years of experience, certifications, training in telepractice, percentage of telepractice before the pandemic, percentage of telepractice during the pandemic, predicted percentage of telepractice in the future, and opinion/rating on telepractice. Question #1 revealed that the majority (60%) worked in a

school setting and the remaining participants in a healthcare setting (27%) or private practice (13%). The average number of years of experience was 12.92 years (Question #2). All survey participants were certified or licensed by the state of New Jersey and approximately 34% held national certification from the American Speech-Language-Hearing Association (Question #3). Participants had an average of 7.42 hours of training in telepractice (Question #4).

The mean percentage of services conducted via telepractice prior to the COVID-19 pandemic was 3.75% (Question #5). The mean percentage of services administered via telepractice following the shutdown of schools and businesses as a result of the onset of the COVID-19 pandemic in March 2020 was 83.96% (Question #6). When asked about the percentage of services that they anticipated to continue via telepractice in 2021, the number dropped to 53.83% (Question #7), but remained significantly elevated when compared to the reported pre-pandemic level of 3.75% (Question #5). For Question #8, the majority of SLPs (56%) selected the response that "telepractice is similar to services delivered in-person," whereas 42% chose the option that "telepractice is worse than services delivered in-person." Only 2% of the respondents answered that "telepractice is better than services delivered in-person." The last question (#9) was open-ended and allowed participants to write about their perspective on why telepractice is better, similar, or worse than services delivered in-person. Analysis of the open ended responses by our participants revealed several themes regarding telepractice. These themes related to: a. equipment and materials, b. preparation and training, c. distractions and privacy, d. complex cases, and lastly e. safety and access. In the sections that follow, the use of italics refer to the theme and the quotation marks indicate some of the supporting direct quotes from the participants that exemplify their positions regarding these themes.

Equipment and Materials were the most frequently mentioned barrier to reliable and accessible telepractice services. SLPs encountered problems with technology such as the video freezing, difficulty with the audio, internet interruptions, and little technical support or budget to purchase or update equipment. Comments that supported this theme included "I did not have an appropriate computer setup at home for telepractice" and "I did not have a budget from my place of employment to purchase equipment or materials necessary to provide services virtually." Regarding materials, SLPs voiced that there was a dearth of assessment and therapy materials. In other words, commonly used materials such as standardized tests were not available in an online version, and the same was true for materials that are used for treatment activities. This included comments such as "I had access to paper and pencil tests but there are very few online

tests available to me" and "Toys and objects used to stimulate language with in-person therapy could not be used as easily during telepractice." Challenges with equipment and materials also impacted clients who received services from SLPs. Participants conveyed that many clients did not have access to appropriate equipment such as a computer, web camera, or reliable internet, and this made it difficult to provide services to these individuals. Some public school students had to wait months before receiving an iPad or similar device. For example, "There were students on my caseload that did not have their own device and needed to share the family computer." In other households, there were many family members using the internet which led to bandwidth issues and interrupted access. This was reported for SLPs and their clients. One participant reported, "There were five family members using the internet throughout the day and the Wi-Fi was slow."

Preparation and Training were common limitations to quality of telepractice services. The majority of survey participants reported inadequate or no specialized training. Some described it as "on the job training" and "trial and error." Others reported that "it would have been nice to have some telepractice training when I was in graduate school" and "my employer did not provide any continuing education yet expected that I become an expert in telepractice." The most common preparation or training comments mentioned by participants was "I attended general workshops on live streaming but it was not specific to SLPs" and "I looked for continuing education workshops and found very little available on the subject."

Distractions and Privacy were additional challenges faced by SLPs and clients. It should be noted that the survey was administered at a time (June 2020) and in a state (NJ) that was in "lock-down" for schools and many businesses and services were required to be administered and received in the homes for many individuals. Many SLPs and clients did not have a home office or therapy room dedicated to services and, to make matters worse, some did not even have a space with privacy. This resulted in other family members such as parents, spouses, and siblings being in the immediate vicinity, as everyone was trying to conduct virtual work or education from home. For example, some said "I was providing telepractice services from my kitchen table" and "I used the dining room as my office as my husband and children used the other rooms for their work and school." SLPs also reported that "clients were distracted by other siblings running around in the background" and "younger clients were easily distracted and walked away from the screen and I had no ability to redirect them back to the screen without the aid of an adult in the child's home." Other common comments related to this theme included "I am concerned that

conversations are not confidential as I do not know who is in the room or within hearing distance of the remote location" and "I have concerns about being HIPAA and FERPA compliant."

The issue of *complex cases* was another theme that arose in the feedback from SLPs. Some complex cases were not ideal candidates receiving services via telepractice. The most frequent complaint regarded services for clients who had severe disabilities or behavioral issues. In these cases, SLPs reported that in-person services allow for physical cueing and redirecting, whereas tele-services do not allow for this option. In these instances, and adult or aide needed to be in the session with the client or student to facilitate the services, and this was not always possible for parents who needed to work. SLPs commented that "I could not sit next to client and provide physical cues as needed, and this led to a lot of wasted time" and "Clients need to juggle adjustments to technology and paying attention to therapy, and this proved too difficult for some, especially when it came to making adjustments to technology such as determining the result of a lost connection and logging in again." In addition, a child who had an aide in school could not have the aide go to the child's home to facilitate speech-language services. Any visual or hearing impairment added to the complexity of the case and provided obstacles to appropriate services. SLPs highlighted the value of aides to some clients by saying "When I provide push-in therapy to a group or classroom and there are some difficult cases, an aide is a valuable member of the team" and "an aide allows me to focus on treatment strategies and without the aide during some sessions with challenging cases, I felt that I was spending a lot of time redirecting attention."

Safety and Access were the most frequently cited benefits of telepractice. In a time of a global pandemic with a virus that could have serious health consequences for SLPs and clients who were older or part of a vulnerable population, the physical distance provided by telepractice was invaluable. There was little fear related to virus transmission and safety protocols. For example, SLPs mentioned "working remotely removed the dangers of transmitting viruses and bacteria, which is a frequent occurrence in normal times … the pandemic just exacerbated this concern." Others stated that "the clients did not have to wear masks and this allowed me to see their oral movements, which is important during speech therapy" and "I did not have to wear a mask and this allowed me to provide speech models." *Access* was another frequently mentioned benefit of telepractice. SLPs relayed that they can be scheduled to work with clients in many locations throughout the day without ever leaving their home, and the same was true for clients. This allowed for various delivery options and scheduling alternatives, such as synchronous, asynchronous, and hybrid delivery models. Parents and clients did not need to worry about the "commute time"

involved with getting to the SLP's office. SLPs also wrote about the travel-related advantages of "providing services to students in different schools and not having to travel between schools" and "having the ability to provide services to clients in remote or underserved locations." Private practitioners and those in healthcare reported that they increased the diversity of clients on their caseloads. In addition to increased access from diverse groups, SLPs mentioned that telepractice reduced their travel costs and increased their productivity. Telepractice allowed clients and schools to reach out to SLPs beyond their immediate vicinity. This provided tremendous benefits to people in need of speech and language services. SLPs mentioned "sometimes it is difficult for clients in lower socioeconomic groups to travel to and from therapy, and telepractice eliminates this challenge," while others said "clients can access disorder-specific specialists that may not be near them … in the past, clients have been limited to generalists practicing near the clients' home or school."

Discussion

The current study aimed to learn about the challenges and benefits associated with telepractice in speech-language pathology imposed by the COVID-19 pandemic in the spring of 2020. The results gleaned from this study provide us an opportunity to discuss how these findings can be addressed by the profession to improve barriers in future care related to speech-language pathology and telepractice delivery. Telepractice will remain a large part of the speech-language pathology profession, and it is imperative that barriers and disparities be addressed by training programs, employers, and communities.

The responses to our survey regarding the percentages of services provided via telepractice pre- vs. post- pandemic and challenges vs. benefits were comparable to other studies (The ASHA Leader Live, 2020; Tucker, 2012). We extended those findings and learned that more than half of SLPs anticipated continuing to provide the majority of services (>50%) via telepractice in the year after the onset of the COVID-19 pandemic. Many survey participants conveyed that telepractice, as a service delivery model, has features that are similar to in-person services, and other features that are unique to this model. The main benefits to this service delivery model include the ability to work with clients in rural, distant, and underserved locations, and to narrow the gap of socioeconomic disparities. Telepractice allows for great flexibility with synchronous, asynchronous, and hybrid models that can be tailored around the needs of the client and the client's family. The ability to "go into the home to provide preventive, diagnostic, and therapeutic services allows for the elimination of commuting time,"

thereby increasing the efficiency and productivity of SLPs in reaching their client population, and allowing them to reach more members of the community. However, the barriers that many SLPs and families face need to be addressed in order to take full advantage of this service delivery model.

Our survey indicated that there are barriers related to *equipment and materials* for SLPs and clients. Other studies concur with our findings, as these digital divide barriers disproportionately disadvantage minority populations, elderly people, rural populations, and people with limited English proficiency (Nouri et al., 2020). Even though four in five U.S. households have access to the internet, there are significant disparities in internet access that depend on age, race, ethnicity, income, and education, according to data from the Health Information National Trends Survey (Greenberg-Worisek et al., 2019). Families with limited financial resources and/or limited health insurance may find it difficult to obtain up-to-date computers, modems, routers, internet connection, and services. One way to address this challenging barrier is for state and insurance level policymakers to examine cost-saving measures that occur as a result of telepractice. An appropriate amount of initial investment will be required to achieve these cost-saving measures. For example, there is an initial cost involved in installing reliable broadband services to communities and providing other technology such as updated equipment. However, this could result in cost-saving measures as members of the community are rehabilitated, thereby reducing the strain on a community's health care system and allowing members to (re)join the work force. The outcome would be improved and widespread health care for members of the community.

Transportation, proximity to specialists, and culturally-competent providers are other barriers to quality health care. Minority groups have a higher likelihood of encountering transportation barriers (Syed et al., 2013). Specialists or culturally-competent providers may be unavailable in the immediate area of those in need of SLP services. For example, many transgender people reported the need to travel over 50 miles to receive appropriate care (James et al., 2016). Access to SLPs via telepractice would address these barriers as it would eliminate the challenges related to transportation and access to specialists who may be quite a distance away from the client.

Many SLPs in our study noted that they received very little to no formal training for telepractice. This was supported by another study that showed that most graduate programs in SLP do not offer instruction on this service modality as part of their training (Grogan-Johnson et al., 2015). The majority of participants revealed that they learned "on the job," while working with clients. A theme that kept resurfacing was that *proper training* would increase the success of telepractice hence improving outcomes for clients.

The lack of preparation and training led to wasted time and confusion among colleagues and between SLPs and clients. Training should be implemented in graduate programs, and this should be encouraged by the profession and organizing body that accredits graduate programs in SLP. The acquisition of knowledge and skills in telepractice should be required of every new person entering the SLP profession. This requirement could simply be added as a requirement for graduate programs, just as new disorders (e.g., swallowing disorders, autism, etc.) and competencies (e.g., inter-professional education) were added as requirements of training programs. The other type of training that needs to occur should be spearheaded by places of employment. This type of training should be required so that protocols are clear and easy to follow and the quality of services provided to everyone in need of the services is consistently high.

One limitation of our study is that the findings cannot be generalized to all SLPs who provide telepractice, as the sample was small relative to the total number of SLPs in the United States. The sample was also confined to SLPs in New Jersey at the height of the first wave of the COVID-19 pandemic (June 2020), a time in which many were unprepared as they were forced into telepractice delivery. This could have easily impacted the responses received, since many SLPs and clients were under considerable stress. It is possible that the feedback might have been different if the participants had been surveyed under different circumstances. Another limitation is that the survey was limited to nine questions. The reason for that was to increase response rate at a time of significant stress, while the drawback was that the instrument did not request details regarding the populations being served by the SLPs. Namely, demographic information about the populations being served might have provided additional insight into the inequalities and challenges related to telepractice.

In closing, despite the socioeconomic disparities and barriers that preclude certain clients and their families from benefitting fully from telepractice and the uneven training of SLPs in telepractice, telepractice is here to stay and will continue to increase even in a post-pandemic society. It is in the best interest of all stakeholders, members of the community and the SLP profession, to consider addressing these barriers so everyone can fully realize the benefits of this delivery modality.

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

American Speech-Language-Hearing Association (ASHA). (2016a). *Code of ethics* [Ethics]. Available from www.asha.org/policy/.

American Speech-Language-Hearing Association (ASHA). (2016b). *Scope of practice in speech-language pathology* [Scope of Practice]. Available from www.asha.org/policy/.

American Speech-Language-Hearing Association (ASHA). (2020). Who are speech-language pathologists, and what do they do? Available from www.asha.org/public/Who-Are-Speech-Language-Pathologists/.

American Telemedicine Association. (2010). *A blueprint for telerehabilitation guidelines*. Washington, DC: Author.

The ASHA Leader Live. (2020, June). COVID-19 impact on ASHA members: The personal and the professional. https://leader.pubs.asha.org/do/10.1044/leader.AAG.25062020.28/full/.

Greenberg-Worisek, A. J., Kurani, S., & Finney Rutten, L. J. (2019). Tracking Healthy People 2020 internet, broadband, and mobile device access goals: An update using data from the Health Information National Trends Survey. *Journal of Medical Internet Research*, *21*(4):e13300. https://pubmed.ncbi.nlm.nih.gov/31237238/.

Grogan-Johnson, S., Meehan, R., McCormick, K., & Miller, N. (2015). Results of a national survey of preservice telepractice training in graduate speech-language pathology and audiology programs. *Contemporary Issues in Communication Science and Disorders*, *42*(Spring), 122–137. doi:10.1044/cicsd_42_S_122

James, S. E., Herman, J. L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). *The Report of the 2015 U.S. Transgender Survey*. Washington, DC: National Center for Transgender Equality.

Nouri, S., Khoong, E., Lyles, C., & Karliner, L. (2020). Addressing equity in telemedicine for chronic disease management during the Covid-19 pandemic. *NEJM Catalyst*, 1–13. https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0123

Syed, S., Gerber, B., & Sharp, L. (2013). Traveling Towards disease: Transportation barriers to health care access. *Journal of Community Health*, *38*(5), 976–993. doi:10.1007/s10900-013-9681-1

Tucker, J. (2012). Perspectives of speech-language pathologists on the use of telepractice in schools: The qualitative view. *International Journal of Telerehabilitation*, *4*(2), 47–60. doi:10.5195/ijt.2012.6102