2019

The Current State of Collaboration Between Speech-Language Pathologists and Behavior Therapists

Elisabeth Hickle
Fontbonne University

The undersigned, appointed by the Dean of the Fontbonne University

College of Education and Allied Health Professions,

have examined the master's thesis entitled

The Current State of Collaboration Between

Speech-Language Pathologists and Behavior Therapists

presented by

Elizabeth Hickle

a candidate for Master of Science in Communication Disorders

and hereby certify that in their opinion it is worthy of acceptance.

Laura O'Hara, PhD, CCC-SLP

Catherine Schroy, PhD, CCC-A

Barbara A. Braddock, PhD, CCC-SLP

Current State of Collaboration Between Speech-Language Pathologists and Behavior Therapists

Elisabeth Hickle, M.S.

Fontbonne University

Abstract

In both speech-language pathology and behavior therapy, best practice is interdisciplinary collaboration (ASHA, 2016; BACB, 2017). However, this is not always the case. Collaboration may be limited or non-existent between these two fields, which may negatively impact client outcomes (Koenig & Gerenser, 2006) as behavior and communication are correlated (Donaldson & Stahmer, 2014; Koenig & Gerenser, 2006). This is especially true in populations such as autism spectrum disorder (ASD) (Donaldson & Stahmer, 2014; Koenig & Gerenser, 2006). This study surveyed certified speech-language pathologists, speech-language pathologist assistants, as well as board-certified behavior analysts, board-certified assistant behavior analysts, and paraprofessionals certified in applied behavior analysis to determine the current state of collaboration between these professionals. The survey results were analyzed for trends and revealed that collaboration may currently be less than ideal between these professions. Several solutions to improve collaboration were discovered and discussed.

The Current State of Collaboration Between Speech-Language Pathologists and Behavior Therapists

Introduction

The topic of collaboration in educational and medical settings has been researched, debated, and discussed for decades. There has recently been a shift in terminology used. In the past, the terms multidisciplinary, interdisciplinary, and transdisciplinary collaboration were accepted as the proper nomenclature (ASHA n.d.; Johnson et al., 2016). The term used in more current research and how it will be referred to throughout the duration of this article is interprofessional practice (IPP), also referred to as interprofessional collaborative practice (IPCP) or interprofessional collaboration (ASHA, n.d.; CIHC, 2010; Johnson et al., 2016; WHO, 2010). According to the American Speech-Language-Hearing Association (ASHA), "IPP occurs when multiple service providers from different professional backgrounds provide comprehensive healthcare or educational services by working with individuals and their families, caregivers, and communities—to deliver the highest quality of care across settings" (n.d.). ASHA adapted this definition from the World Health Organization (WHO) definition of IPP (ASHA, n.d.). WHO states that collaborative practice occurs when "multiple health workers from different professional backgrounds work together with patients, families, carers, and communities to deliver the highest quality of care. It allows health workers to engage any individual whose skill can help achieve local health goals" (WHO, 2010). Other definitions are similar, stating that for IPP to occur, there must be two or more professions working together to achieve a common goal (CIHC, 2010; Green et al, 2015; Johnson et al., 2016).

For effective IPP, the Canadian Interprofessional Health Collaborative (CIHC) developed six domains of competency that must be adequately addressed by all professionals involved (CIHC, 2010). Those six domains are: 1) interprofessional communication;

2) patient/client/family/community–centered care; 3) role clarification; 4) team functioning; 5) collaborative leadership; and 6) interprofessional conflict resolution (CIHC, 2010; Cooper-Duffy & Eaker, 2017; Hepp et al., 2015; Salm, 2014).

The first domain is interprofessional communication, which is defined as when "learners/practitioners from different professions communicate with each other in a collaborative, responsive and responsible manner" (CIHC, 2010, p. 16). Some communication skills that may be necessary while engaged in IPP include listening, negotiating, consulting, educating, and discussing or debating. Respectful interprofessional communication includes full disclosure and transparency with all those involved, including other professionals, clients, and family/caregivers (CIHC, 2010).

Patient/client/family/community–centered care is the second domain outlined by the CIHC. This occurs when "learners/practitioners seek out, integrate and value, as a partner, the input and the engagement of the patient/client/family/community in designing and implementing care/services" (CIHC, 2010, p. 13). The client/patient and family/caregiver are viewed as equal partners in the IPP process whose input and values are respected and considered while developing treatment plans (CIHC, 2010).

The third domain is role clarification. Role clarification refers to the idea that the learner/practitioners "understand their own role and the roles of those in other professions and use this knowledge appropriately to establish and achieve patient/client/family and community goals" (CIHC, 2010, p. 12). Each individual involved in IPP must be aware of not only the roles and responsibilities that they contribute to the group, but also what their collaborative partners contribute.

The fourth domain of effective IPP is team functioning. Team functioning is when "learners/practitioners understand the principles of team work dynamics and group/team

processes to enable effective interprofessional collaboration" (CIHC, 2010, p. 14). For this domain of competency, it is necessary for all members of the IPP to understand the process of team development, regularly reflect on their team functioning, and respect team members and team ethics (CIHC, 2010).

Collaborative leadership, the fifth domain of effective IPP, refers to when "learners/practitioners understand and can apply leadership principles that support a collaborative practice model" (CIHC, 2010, p. 15). During IPP there is no sole leader, the learners/practitioners choose the leader depending on the context of the situation (CIHC, 2010). As the need for a specific area of expertise arises, the IPP team members determine who is best suited to take lead at that given point in time; this might be one or more professionals or the client/caregiver (CIHC, 2010).

The final competency domain, according to the CIHC model, is interprofessional conflict resolution. In this domain "learners/practitioners actively engage self and others, including the client/patient/family, in positively and constructively addressing disagreements as they arise" (CIHC, 2010). Disagreements naturally occur when engaged in IPP, because multiple perspectives and beliefs are being represented among the collaborative participants. It is important to establish an agreed-upon system to discuss and address these disagreements when they occur.

While research on the effectiveness of IPP is still developing, the results are positive (Bruce & Bashinski, 2017; Cooper-Duffy & Eaker, 2017; O'Toole & Kirkpatrick, 2007). Collaborative practice has been shown to improve access and coordination of health services, improve patient care and safety, increase efficiency, increase client-centered practices, increase patient/caregiver satisfaction, promote greater acceptance of treatment by patient/caregiver, and ultimately improve client outcomes (Green et al., 2015; Hepp et al., 2015; Johnson et al., 2016;

WHO, 2010). IPP has also been shown to decrease clinical errors, staff turnover, conflict among caregivers, duration of treatment, cost of treatment, mortality rates, and patient complications (Green et al., 2015; Johnson et al., 2016; WHO, 2010). Due to the positive outcomes listed above, healthcare and educational professionals such as doctors, teachers, occupational therapists, physical therapists, speech-language pathologists, and applied behavior analysts are shifting toward IPP models of collaboration (Johnson et al., 2016; WHO, 2010).

At first glance collaboration between the fields of speech-language pathology and applied behavior analysis (ABA) might not seem like a pressing area of concern when evaluating how to improve client outcomes. According to both ASHA and the Behavior Analyst Certification Board's (BACB) code of ethics, collaboration with other relevant and necessary professionals is encouraged and considered best practice to provide optimal client care (ASHA, 2016; BACB, 2017).

The fields of speech-language pathology and applied behavior analysis are intertwined; both fields have focus on the treatment of communication disorders (Frost & Bondy, 2009; Koenig & Gerenser, 2006; Ogletree & Oren, 2001). Speech-language pathologists and behavior therapists have unique qualifications to work with individuals with communication disorders. While speech-language pathologists' expertise lies in social and communication skills, behavior therapists' expertise lies in nonverbal and verbal behaviors (ASHA, 2016; BACB, 2017, Koenig & Gerenser, 2006). These areas of expertise overlap and collaboration between the two fields is necessary when a client's maladaptive or socially unaccepted behaviors stem from their communication impairment (Donaldson & Stahmer, 2014; Koeing & Gerenser, 2006). However, this collaboration may be limited or non-existent between these two fields, which can negatively impact client outcomes as behavior and communication are correlated (Donaldson & Stahmer, 2014; Koenig & Gerenser, 2006).

This study surveyed the current state of collaboration between certified speech-language pathologists and speech-language pathologist assistants (referred to broadly as SLPs for the purpose of this article), as well as board- certified behavior analysts, board-certified assistant behavior analysts, and paraprofessionals certified in ABA (referred to broadly as behavior therapists [BTs] for the purpose of this article). The survey results were analyzed for trends, and based on survey results, the author will discuss clinical implications and propose an improved model of collaboration.

Research Design & Methodology

Participants were identified by online directories through Special School District and local speech/language and applied behavior therapy clinics in St. Louis, Missouri. Surveys were distributed via e-mail to SLPs and BTs. The e-mail sent to prospective participants contained a description of the study and a SurveyMonkey hyperlink directing participants to the study (Appendix A). Participants had the option to complete any, all, or none of the survey items. Participants were not able to re-enter the survey to change answers or complete it at a later time. Participants indicated their voluntary participation in the survey by reading and acknowledging the consent form that was presented immediately upon clicking the hyperlink contained in the e-mail. Participants consented by clicking "Okay," then "Next" at the end of the consent form, and were then granted access to the study-related survey questions. The survey questions sought to obtain information regarding each participant's 1) demographics, 2) current collaborative practices, and 3) perspectives on collaboration **(**Appendix B**)**. The questions included a combination of free responses and multiple-choice responses.

The questions related to demographic information included: current certification(s), work setting, years of experience, current caseload, number of children on their caseload that receive both behavior therapy and speech/language therapy, diagnoses, and age of students/clients

receiving both therapies. Questions regarding current collaborative practices included: number of hours currently spent collaborating with BT/SLP, rating of collaboration on an ordinal scale of 1 (Poor) to 5 (Excellent), and satisfaction with current collaborative practices. The third set of questions inquired about the participants' perspectives toward collaboration. Those questions were open-ended and allowed participants to respond freely. Questions included input on: 1) What considerations must be made when collaborating with a BT/SLP; 2) What concerns the participants had about collaborating with a BT/SLP; and 3) Ways to improve collaborative efforts with the BT/SLP. The last set of survey questions were: 1) How does collaboration between the BT/SLP change as the client ages?; 2) As this population ages, what challenges do you think they will face?; and 3) At what age do your client's services typically end? The aim of these questions was to gather insight regarding the duration of services this population receives and determine need for further collaboration throughout the lifespan of individuals who receive both SLP and BT services.

All information obtained from the survey was entered into an Excel spreadsheet and analyzed. To analyze the free-response questions, the responses were categorized with terminology developed by the researcher. Categories were developed by grouping similar survey responses together. For example, if one participant stated that each professional is unable to meet regularly to ensure collaboration and another participant stated that each professional has different schedules, both responses would be categorized under the greater umbrella of 'time'. Once categorized, the researcher tallied the frequency of each term for each question.

Results

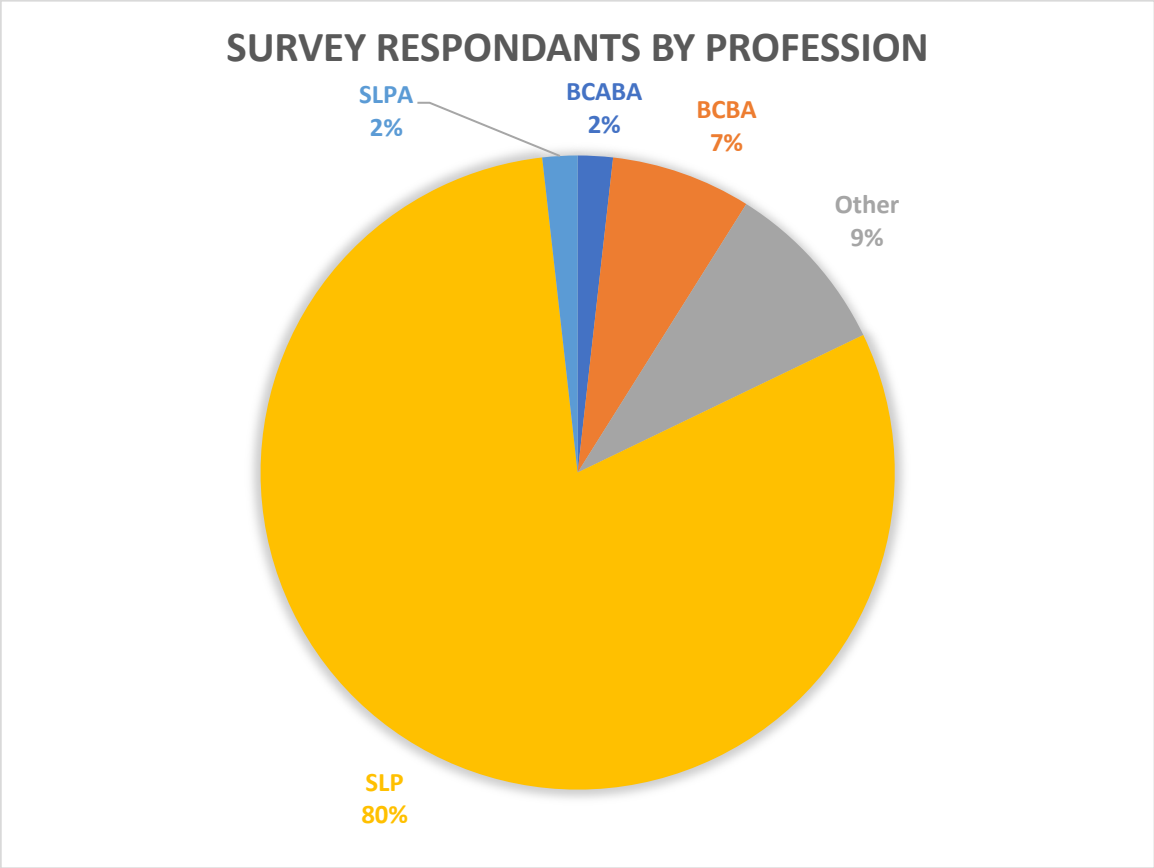
Demographics

Approximately 500 surveys were sent out. Of those, 56 surveys were completed. Of those who responded, 45 participants were SLPs, 5 were ABA-trained paraprofessionals, 4 were

BCBAs, 1 was a BCABA, and 1 was an SLPA (Figure 1). Of the survey participants, 89% indicated they worked in the school setting, while the remaining 11% indicated they worked in a clinic or center. The majority of participants had 11 years of experience or more, followed by 1 to 3 years; 7 to 10 years; and 4 to 6 years. The average reported current caseload was 29 students/clients per participant, with a range varying between 3 and 58 students/clients per participant. Of those reported caseload numbers, an average of 7 students/clients received both behavior therapy and speech/language services per participant, with a range varying between 0 and 30 students/clients per participant. Those who indicated that none of the students/clients received both behavior therapy and speech/language services indicated "N/A" for the remainder of the survey questions.

Survey participants reported the diagnoses of the students/clients that received both SLP and BT services. Of those students reported to receive both SLP and BT services, 47% were reported as being diagnosed with ASD; 14% were reported as being diagnosed with other health impairment; 12% were reported as being diagnosed with intellectual disability; and 10% were reported as being diagnosed with emotional disturbance. Other diagnoses reported included developmental delay, Down Syndrome, attention-deficit/hyperactivity disorder, sound system disorder, hearing impairment, and Fragile X Syndrome. The most common age range reported for children receiving both SLP and BT services was between 4 and 10 years old, followed by 11 to 18 years old; birth to 3 years old; and 19 to 25 years old.

Figure 1.



The breakdown of survey participants by profession. N = 56.

Current Collaborative Practices

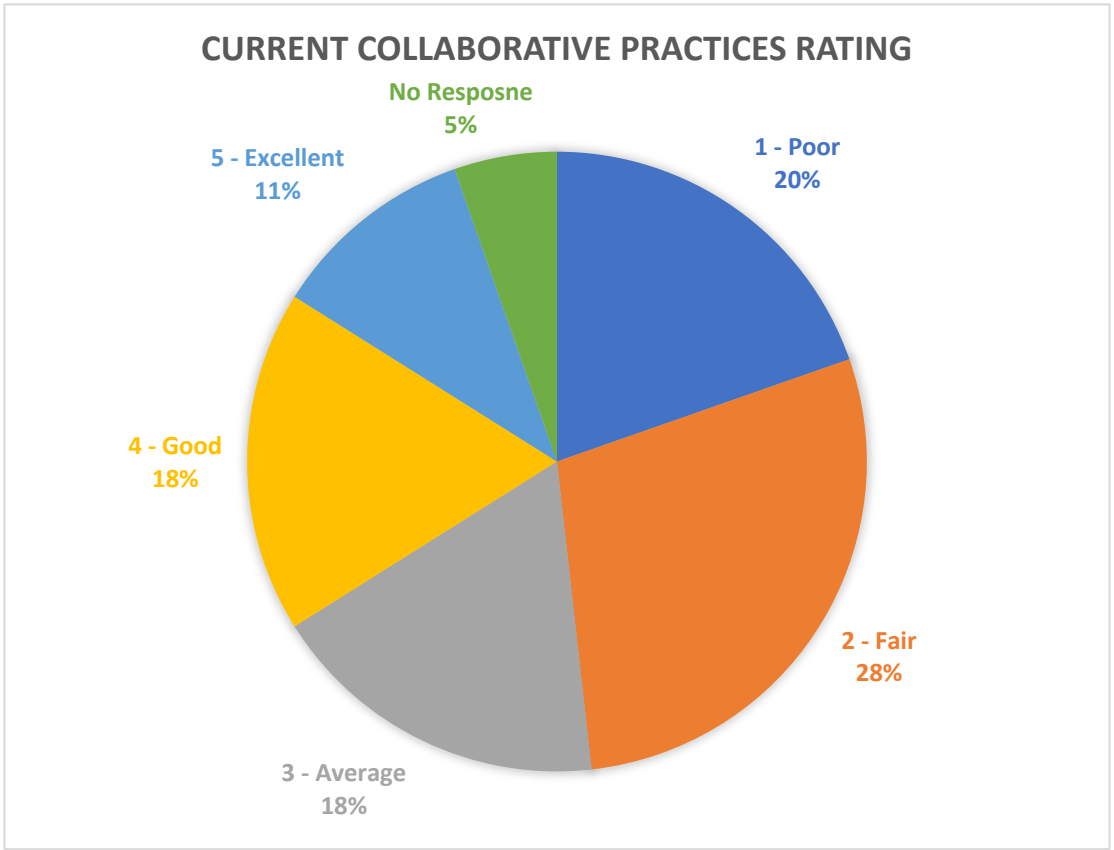
Following the survey questions designed to obtain demographic information, the second set of survey questions examined participants' current collaborative practices with SLPs/BTs. When asked how many hours per week participants collaborated with the SLP/BT, 25 participants reported 0 hours per week; 25 participants reported 1 to 3 hours per week, 2 participants reported 3 to 5 hours per week, and 3 participants reported 5 or more hours per week. One participant chose not to respond to this question.

Participants were asked to rate their current collaborative practices on the following ordinal scale: 1 - Poor, there is little to no collaboration; 2 - Fair, I reach out to the BT/SLP when I have a specific question/need; 3 - Average, we share our student/client's goals and progress

when necessary; 4 - Good, we are in contact regularly sharing our student/client's goals and progress; and 5 - Excellent, we work together to make a cohesive treatment plan. Of the participants who responded to the question, 28% rated their current collaborative practices as "Fair"; 20% as "Poor"; 18% as "Good"; and 18% "Average". Only 11% of survey participants rated their current collaborative practices with the BT/SLP as "Excellent", while 5% of participants chose not to respond to this question (Figure 2).

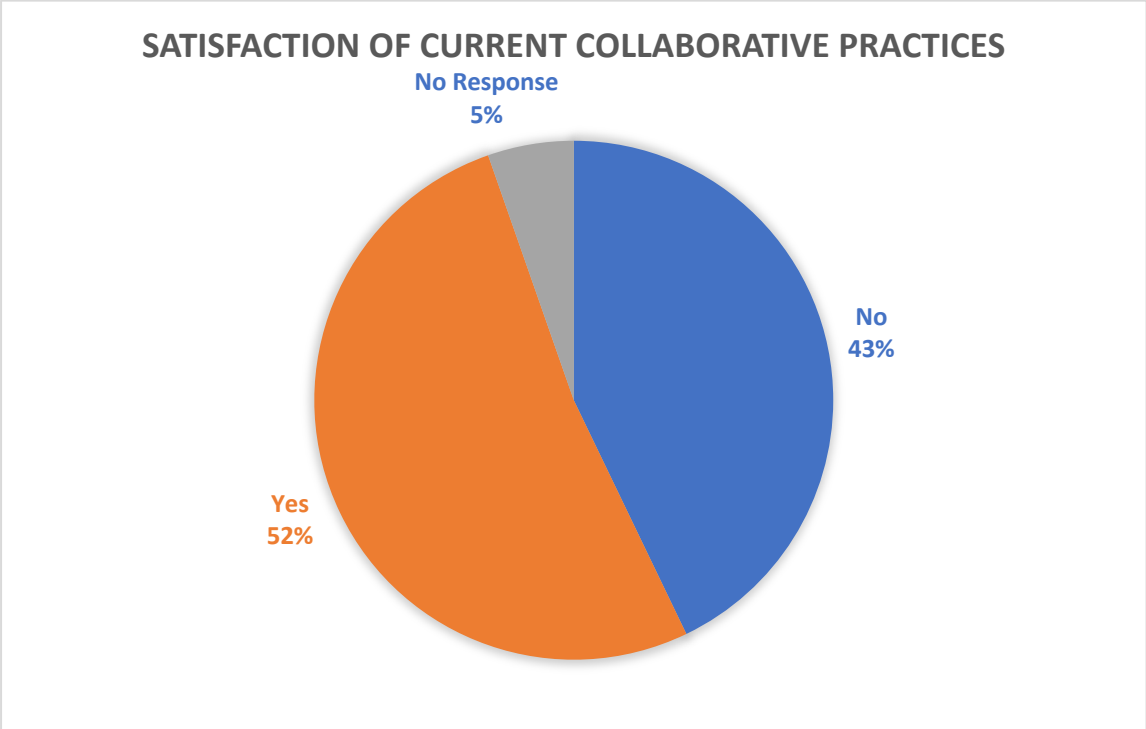
The majority of participants, 52%, reported that they were satisfied with their collaboration with the BT/SLP; 43% of survey participants indicated that they were not satisfied with their current collaborative practices; and 5% of survey participants chose to not respond with whether they were or were not satisfied with their current collaborative practices (Figure 3).

Figure 2.



Breakdown of survey participants self-rating of current collaborative practices with BT/STLP. N = 56.

Figure 3.



Breakdown of survey participants satisfaction with current collaborative practices with BT/SLP. N = 56

Perspectives on Collaboration

The third set of survey questions probed participants' perspective toward collaboration with BTs/SLPs in a series of open-ended questions. The first question aimed to determine what considerations participants make when collaborating with BTs/SLPs. Eight collaboration considerations were identified in the participants' responses. The two most frequently mentioned considerations were time and treatment cohesion, with each consideration being mentioned in 15 separate instances. This means that, when participants are determining whether to collaborate with a BT/SLP, they must consider whether they have enough time to do so and how each provider's treatment plans and goals can be targeted simultaneously. The next most frequently mentioned consideration was communication/shared knowledge, meaning that before collaborating with a BT/SLP, participants need to ensure that there is an established means of communication and that each provider is in agreement with how collaboration will occur. Other

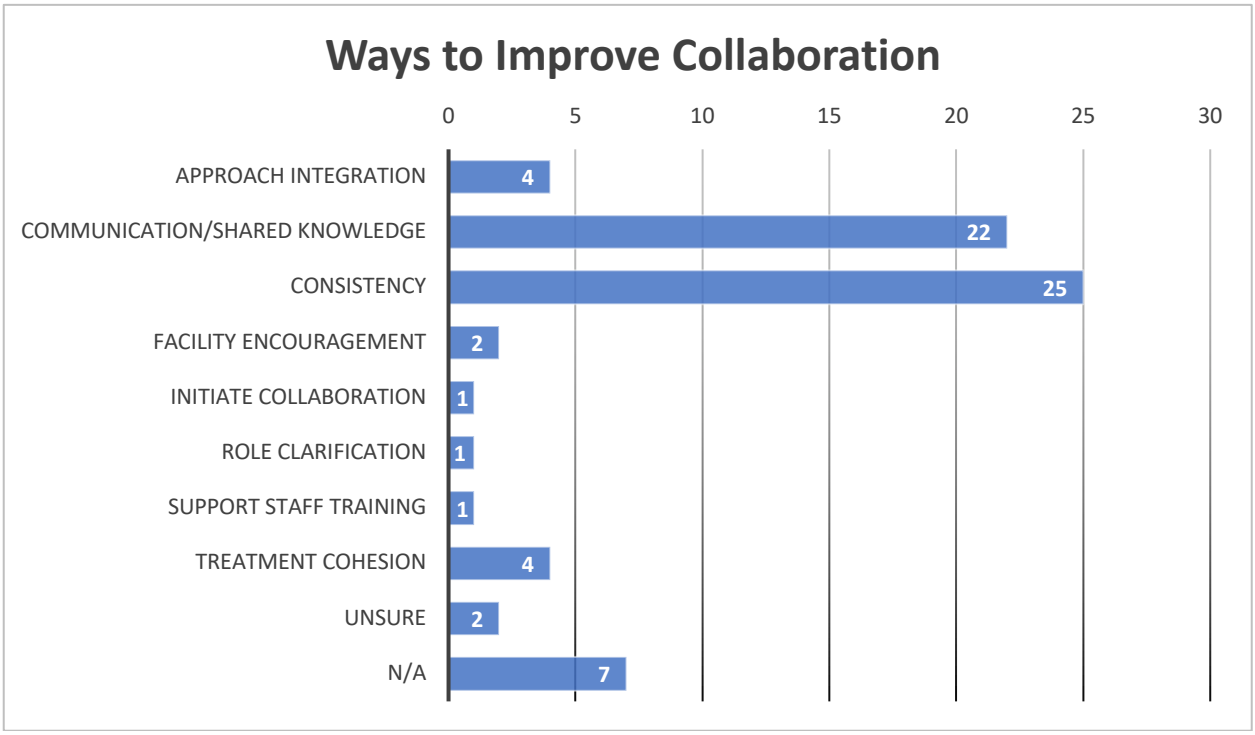
considerations mentioned included taking into account client and family needs, the other professionals' background and experience, whether there are approach conflicts between the two providers, and the training of other staff responsible for implementing treatment and collecting data when the BT/SLP is not present. Of the survey participants, 16 chose not to respond to this question.

The next question aimed to determine what concerns participants have when collaborating with BTs/SLPs. Seven collaboration concerns were identified in the participant responses. The most frequently mentioned concern was time. In 18 separate instances, participants mentioned they lack the appropriate amount of time to effectively collaborate with the BT/SLP. The next most frequently mentioned collaboration concern was approach conflicts. In 10 separate instances, participants expressed their concerns regarding how to navigate approach conflicts between providers when they arise. In 9 separate instances, participants indicated that the lack of communication/shared knowledge between providers was a collaboration concern. Other collaboration concerns included role confusion, treatment cohesion, and lack of collaboration consistency and efficiency. In total, 7 survey participants indicated that they did not have any collaboration concerns, and 8 survey participants chose to not respond to this question.

The final question asked of survey participants to determine their perspective on collaboration, was how they could improve their collaboration (Figure 4). Eight possible improvements to collaboration were identified. The most frequently mentioned way to improve collaboration between BTs/SLPs was collaboration consistency. In 25 separate instances, participants mentioned that they need to ensure they are consistently collaborating. Increasing collaboration consistency was followed by increasing communication/shared knowledge. In 22 separate instances, participants stated that their collaboration could be improved by increasing

their communicative efforts and readily sharing knowledge between providers. Other ways to improve collaboration included integrating provider approaches, ensuring treatment cohesion, clarifying provider roles, providing quality training to support staff, the presence of facility encouragement to collaborate, and to simply initiate collaboration. Two survey participants indicated that they were unsure of how to improve their collaboration, and 7 survey participants chose to not respond to this question.

Figure 4.



Indicated possible ways to improve collaboration with BT/SLP by survey participants. Survey participants were able to indicate more than one area.

Future Collaborative Practices

The last set of survey questions aimed to determine the need for collaborative practices throughout the lifespan of individuals who receive both SLP and BT services. The first question asked participants how collaboration between the BT/SLP changes as their clients age. Participants identified 7 ways collaboration between the BT/SLP changes as their clients age.

The most frequent response to this question, with 18 separate instances, stated that the changes made to collaboration are dependent on the client's needs. Other identified changes made to collaboration as the client ages included the frequency of collaboration decreases, the frequency of collaboration increases, collaboration becomes more consultative, collaboration focuses on post-secondary transitioning, collaboration focuses on functional skills, and collaboration focuses on vocational skills. One participant stated collaboration does not change as the client ages; 5 participants indicated that they were unsure how collaboration changes; and 11 participants chose to not respond to this question.

The next question aimed to identify what challenges this population will face as they age. Survey participants identified 11 potential challenges this population will face. Participants identified the acquisition of vocational skills as the most pressing challenge faced as this population ages. The next most identified challenge faced by this population, with 11 separate instances, was their ability to be independent. Following were this population's ability to successfully navigate post-secondary transition, ability to integrate within the community and achieve higher-level communication/language skills. Other challenges faced by this population as they age include acquisition of social skills, acquisition of functional skills, generalization of skills, maintaining safety, ensuring a high quality of life, and their behaviors interfering with daily tasks. Nine participants chose to not respond to this question.

The final question asked survey participants at what age their clients' services typically end. On 23 occasions, participants identified that their clients' services typically end between the ages of 19 and 25 years. In 16 instances, participants reported that their clients' services typically end between the ages of 11 and 18 years; 11 survey participants identified services as ending between the ages of 4 and 10 years, while 2 participants reported services ending at 26 years of

age or older. One participant reported services ending between birth and 3 years of age. Three participants chose to not respond to this question.

Discussion

The fields of speech-language pathology and applied behavior analysis have an opportunity to engage in IPP and provide comprehensive, functional, and effective treatment for individuals with communication disorders, such as, but not limited to, the ASD population. Both fields are uniquely equipped to address this population's difficulty with social communication, which often results in maladaptive or socially unacceptable behaviors that stem from communication impairment. The purpose of this study was to survey the current collaborative practices between SLPs and BTs. In particular, this study was interested in exploring the perspectives of the survey participants' collaborative practices and how to make improvements in their collaborative processes.

As discussed in the results section, the survey questions focused on three components of collaboration. The first set of collaboration specific survey questions focused on the participants' current collaborative practices. The survey revealed that approximately 55% of survey participants are currently engaged in IPP. When asked to rate the quality of their current collaborative practices, the responses were mixed. The two most indicated responses by survey participants rated their current collaborative practices as "Fair" or "Poor". This indicates that while a little over half of the survey participants are engaging in some sort of IPP, the quality of collaboration is not optimal. Interestingly, when asked to rate whether they were satisfied with their current collaborative practices, approximately 52% of survey participants indicated that they were.

There are multiple possibilities for this disconnect between the quality and satisfaction of IPP by survey participants. First, survey participants may not believe that IPP between the two

fields is necessary. So, while the quality of IPP with the BT/SLP is fair to poor, survey participants are unconcerned because they may not find IPP necessary to provide quality treatment to those students/clients who receive both BT and SLP services. Second, the survey participants who indicated that they do not engage in IPP may have skewed the satisfaction rating as there was not a "not applicable" option of the survey. And third, each survey participant may have a different definition of the term satisfaction. So, while they may be "satisfied" with their current IPP practices, that does not mean there are not areas they may wish to improve in.

The second set of collaboration-specific survey questions focused on survey participants' perspectives on their collaborative practices. The aim of these survey questions was to gain insight to participants' collaborative processes and to identify barriers to collaboration between SLPs and BTs by exploring what factors they consider when participating in IPP, what concerns they have with engaging in IPP, and what improvements they could make to their collaborative practices. The three most frequently indicated collaboration considerations and concerns by survey participants were time, treatment cohesion, and communication/shared knowledge. This suggests that when SLPs and BTs are considering whether to engage in IPP, they are concerned about whether they will have enough time to adequately collaborate, whether their separate treatment plans and goals are compatible, and how to effectively communicate and share knowledge with those they are collaborating with.

The collaboration considerations and concerns indicated by survey participants were similar to ways indicated that SLPs and BTs could improve their collaboration. The three most frequent collaboration improvements were consistency, communication/shared knowledge, and ensuring treatment cohesion. This suggests that while SLPs and BTs know that they need to adequately account for the time demands of collaboration, establish an effective means of

communication during the collaborative process, and ensure treatment cohesion, they are struggling to effectively do so.

To enhance collaboration between speech-language pathologists and behavior therapists, three barriers must be addressed. Those barriers, as indicated by the survey participants, are time, communication/shared knowledge, and treatment cohesion. To address these three barriers, it is helpful to refer back to the CIHC's six domains of effective interprofessional collaborative practices. In particular, the domains of interprofessional communication, role clarification, and internal conflict resolution. Based on the survey results, the collaborative practices that SLPs and BTs are engaged in may be failing in appropriately addressing these three domains.

Survey participants overwhelmingly agreed that they struggled with establishing an effective means to communicate with the BT/SLP. This failure prevents the sharing of information (CIHC, 2010; Cooper-Duffy & Eaker, 2017). In the case of collaboration between SLPs and BTs, information regarding each professional's goals and client performance data needs to be shared to develop a cohesive, functional treatment plan. One survey participant mentioned that it was difficult to establish an effective means of communication with the behavior therapist because they traveled between buildings and their paths did not cross often. One way to potentially establish effective communication would be through scheduling specific times to share knowledge. These times do not have to be lengthy, nor do they have to occur in person. This could take the form of a weekly email updating the other clinician of the client's progress, or sharing in the highs and lows of that week's treatment. By establishing a consistent and effective means of communication, the individuals involved in IPP are able to have full transparency and establish trust, resulting in more effective and efficient collaboration (CIHC, 2010; Cooper-Duffy & Eaker, 2017).

Interprofessional communication establishes the foundation for the next two domains: role clarification and internal conflict resolution. These domains are responsible for treatment cohesion, which was the second barrier to collaboration identified by survey participants. Treatment cohesion is a term developed by the researcher to define when two or more clinicians effectively combine to simultaneously target their individual treatment goals. Role clarification is essential to treatment cohesion as it establishes the functions and responsibilities of each clinician, ensuring that there are no gaps in treatment (CIHC, 2010; Cooper-Duffy & Eaker, 2017).

Internal conflict resolution is also vital to ensure treatment cohesion, as it establishes a constructive and effective way to handle conflicts when they arise. One survey participant described that it was difficult to establish treatment cohesion due to the SLP having a different approach to determining the function of a maladaptive behavior. If these two clinicians had an established system to discuss their approach conflicts in a constructive and respectful manner, it could foster more frequent and cohesive collaboration. Copper-Duffy and Eaker designed a systematic approach to address conflicts during IPP called collaborative problem-solving (2017). Collaborative problem solving has five steps: 1) define the problem; 2) brainstorm possible solutions; 3) identify the consequences of each option; 4) create a plan; and 5) evaluate the results (Cooper-Duffy & Eaker, 2017). This is just one example of how SLPs and BTs could improve treatment cohesion by mutually establishing a system to address conflicts.

Time was the most frequently indicated barrier to collaboration by survey participants. Survey participants stated that there was simply not enough time in the day to ensure effective collaboration between SLPs and BTs. By strengthening the domains of interprofessional communication, role clarification, and internal conflict resolution, SLPs and BTs are addressing the collaboration barriers of communication/shared knowledge and treatment cohesion while also

addressing the barrier of time. Establishing means of communication, defining the roles and responsibilities of each clinician, and having a systematic approach to address conflicts can result in IPP without needing to set aside large amounts of time. While the initiation of collaboration might be time-consuming, the maintenance does not have to be.

The final set of collaboration-specific survey questions focused on the need for IPP throughout the lifespan of individuals who receive both SLP and BT services. The aim of these survey questions was to determine how collaboration changes as the client ages and what challenges this population will face as they age. While the survey participants did not indicate specifically how collaboration between speech-language pathologists and behavior therapists changes as the client ages, the most frequently indicated challenges included acquisition of vocational skills, ability to be independent, and successful post-secondary navigation. The presence of these indicated challenges shows the need for the continual IPP between speech-language pathologists and behavior therapists, as both fields are vital in supplying clients with the skills necessary to be successful and independent in life after school services end (Koenig & Gerenser, 2006).

Limitations

There were many limitations to this study. First, the sample of this study was small, making it difficult for results to be generalized to the entirety of IPP between speech-language pathologists and behavior therapists. Another limitation of this study included the disproportionate response rates between speech-language pathologists and behavior therapists. Significantly more speech-language pathologists responded to the survey, which potentially biased the survey results toward the speech-language pathologist perspective.

There were several limitations with the questionnaire. First was the ambiguous use of the term “behavior therapist.” Failing to provide a detailed definition of what professionals this study

categorized as a behavior therapist left many survey respondents questioning whether they had interacted with a behavior therapist. This could have potentially prevented professionals classified as behavior therapists, such as BCBAs and BCABAs, from responding to the survey thinking they were not the targeted audience.

Another limitation with the questionnaire included the frequent use of free-response questions. By allowing the survey participants to respond freely, the responses had to be interpreted and categorized by the researcher to assess trends. This method of analysis potentially impacted the reliability of the survey response, as the researcher could have misinterpreted the data. Another difficulty encountered with the free-response questions included that not all responses were relevant, or respondents chose not to respond at all, occasionally requiring the researcher to discard responses or categorize them as not applicable. It would have been more beneficial to construct the survey with multiple choice responses for the collaboration concerns, considerations, and ways to improve collaboration. Rather than the researcher developing categories to fit the survey results, the survey participants could have chosen from established criteria.

The last limitation with the questionnaire involved the use of an ordinal scale for participants to rate the quality of their collaboration. This was a 5-point scale ranging from "Poor" to "Excellent". The use of ordinal scales is subjective and varied from person to person. For instance, one survey participant may have rated their collaborative practices as "Fair" while another participant with similar collaborative practices may have rated practices as "Average". Due to the subjective and inconsistent nature of participants' responses while using an ordinal scale to rate the quality of collaboration, it is suggested that future research develop a more quantifiable means of gathering data on the quality of IPP between speech-language pathologists and behavior therapists.

References

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

Behavior Analyst Certification Board. (2014). Professional and ethical compliance code for behavior analysts. Littleton, CO: Author. Available from https://www.bacb.com/wp-content/uploads/BACB-Compliance-Code-english_190318.pdf

Bruce, S. M., & Bashinski, S. M. (2017). The trifocus framework and interprofessional collaborative practice in severe disabilities. *American Journal of Speech-Language Pathology, 26(2),* 162–180.

Canadian Interprofessional Health Collaborative. (2010, February). A national interprofessional competency framework. Vancouver, British Columbia, Canada. Available from https://www.cihc.ca/files/CIHC_IPCompetencies_Feb1210.pdf

Cooper-Duffy, K., & Eaker, K. (2017). Effective team practices: Interprofessional contributions to communication issues with a parent's perspective. *American Journal of Speech-Language Pathology, 26(2),* 181–192.

Donaldson, A. L., Stahmer, A. C., Nippold, M., & Camarata, S. (2014). Team collaboration: The use of behavior principles for serving students with ASD. *Language, Speech & Hearing Services in Schools, 45(4),* 261–276.

Frost, L., & Bondy, A. (2009). A common language: Using B.F. Skinner's verbal behavior for assessment and treatment of communication disabilities in SLP-ABA. *Journal of Speech-Language Pathology & Applied Behavior Analysis, 4(1–4)*, 2–9.

Green, B. N., & Johnson, C. D. (2015). Interprofessional collaboration in research, education, and clinical practice: Working together for a better future. *The Journal of Chiropractic Education, 29(1),* 1–10.

Hepp, S. L., Suter, E., Jackson, K., Deutschlander, S., Makwarimba, E., Jennings, J., & Birmingham, L. (2015). Using an interprofessional competency framework to examine collaborative practice. *Journal of Interprofessional Care, 29(2)*, 131–137.

Interprofessional Education/Interprofessional Practice (IPE/IPP). (n.d.). Retrieved from https://www.asha.org/Practice/Interprofessional-Education-Practice/

Johnson, A., Prelock, P., & Apel, K. (2016). Interprofessional education and interprofessional - practice in communication sciences and disorders. *Health and Medicine Division (HMD).*

Koenig, M., & Gerenser, J. (2006). SLP-ABA: Collaborating to support individuals with communication impairments. *The Journal of Speech and Language Pathology – Applied Behavior Analysis, 1(1)*, 2–10.

O'Toole, C., & Kirkpatrick, V. (2007). Building collaboration between professionals in health and education through interdisciplinary training. *Child Language Teaching & Therapy, 23(3),* 325–352.

Ogletree, B. T., & Oren, T. (2001). Application of ABA principles to general communication instruction. *Focus on Autism & Other Developmental Disabilities, 16(2),* 102.

Salm, T. (2014). Action research to improve collaboration among Student Support Services teams. *Educational Action Research, 22(1)*, 93–108.

World Health Organization. (2010.) Framework for action on interprofessional education and collaborative practice. Available from https://apps.who.int/iris/bitstream/handle/10665/70185/WHO_HRH_HPN_10.3_eng.pdf;jsessionid=89DDF047D18B96D18CC86CFEBCDA6F35?sequence=1

Appendix A

Dear -**participant's name-**,

Below is a request for your voluntary participation in a Fontbonne University IRB-approved survey on the current state of collaboration between speech-language pathologists and behavior therapists.

I am a second-year graduate student in speech-language pathology completing a master's thesis under the guidance of Laura O'Hara, PhD, CCC-SLP, at Fontbonne University. I am requesting your participation in a survey of Missouri Speech-Language Pathologists (SLPs) and Behavior Therapists (BTs) to determine the current state of collaboration between the professions. This survey is one component of the completion of a master's thesis. The purpose of this study is to identify the current state of collaboration between SLPs and BTs; analyze the results and discuss trends in collaboration; and propose an improved model of collaboration between the fields of speech-language pathology and behavior therapy. The results of this survey will add to our field's understanding of the importance and application of interprofessional collaboration between SLPs and BTs.

The online survey will take approximately 15 minutes to complete. Participation in this research study is voluntary, and all of your responses will be completely anonymous. The Fontbonne University Institutional Review Board has approved this survey (FBUIRB051519-EH). Survey results will be made available if you wish to receive them.

Should you have any questions regarding this survey, please email me at hicklee@fontbonne.edu or Dr. Laura O'Hara, faculty advisor, at lohara@fontbonne.edu.

If you choose to participate in this study, indicate that you agree to do so by clicking on the following link:

https://www.surveymonkey.com/r/WYZMP6J

Thank you very much for your participation.

Elisabeth Hickle, BS
Speech-Language Pathology Graduate
hicklee@fontbonne.edu
573-275-9183

Appendix B

1. In what setting(s) do you currently work in?
2. Which best describes you? Select all that apply.
    - SLP
    - SLPA
    - BCBA
    - BCABA
3. How many years of experience do you have?
    - Clinical Fellow
    - 1 to 3
    - 3 to 5
    - 5 to 10
    - 10 +
4. How many people do you currently have on your caseload? _____
5. At your place of work, how many of your students/clients receive both behavior therapy and speech/language therapy? _____
6. Of your clients who receive both speech-language and behavior therapy, what are their diagnoses?
7. Of your clients who receive both speech-language and behavior therapy, what are their ages? Select all that apply
    - Birth to 3
    - 3 to 10
    - 10 to 18
    - 18 to 25
    - 25+
8. How many hours per week do you currently collaborate with the BT/SLP?
    - 0
    - 1 to 3
    - 3 to 5
    - 5+
9. If you were to rate your collaboration with your client's BT/SLP what would it be?
    - 1 – Poor, there is little to no collaboration
    - 2 – Fair, I reach out to the BT/SLP when I have a specific question/need
    - 3- Average, we share our client's goals and progress when necessary
    - 4 – Good, we are in contact regularly sharing our client's goals and progress
    - 5 – Excellent, we work together to make a cohesive treatment plan

10. Are you satisfied with your collaboration with the BT/SLP?
    - Yes
    - No
11. What considerations must be made when collaborating with a BT/SLP?
12. What are some concerns you have about collaborating with BT/SLP?
13. What are some ways you could improve your collaborative efforts with the BT/SLP?
14. How does collaboration between the BT/SLP change as the client ages?
15. As this population ages, what challenges do you think they will face?
16. At what age do your client's services typically end?
    - Birth to 3
    - 3 to 10
    - 10 to 18
    - 18 to 25
    - 25+