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Speech-Language Pathologists' Perceptions Regarding Augmentative and Alternative Communication Implementation and Assessment in the Adult Population

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Speech-Language Pathologists' Perceptions Regarding Augmentative and Alternative
Communication Implementation and Assessment in the Adult Population

by

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A Thesis
Submitted to the Honors College of
The University of Southern Mississippi
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of Honors Requirements

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ABSTRACT

The goal of this research project is to bring awareness to a part of the population that is severely lacking in both representation and research in regard to the use of augmentative and alternative communication (AAC), bringing attention to the scarcity of studies centered around AAC use in adults. This study hopes to increase the number of SLPs who are comfortable in assessing and implementing AAC systems with adults. The survey included questions pertaining to how long SLPs had been practicing, what populations they are most familiar with, their comfort levels regarding both AAC implementation and assessment, and memorable experiences they may have had regarding AAC. The survey was sent via email to 589 licensed SLPs practicing in settings with primarily adult populations in the state of Mississippi. A total of 72 surveys were submitted, and 61 complete responses were obtained. Preliminary results indicated that although many SLPs have implemented a multitude of systems in their career, they do not necessarily feel confident when implementing AAC systems; data also indicated that an overwhelming majority of SLPs find AAC to be helpful when implemented correctly. This project and its outcomes contribute to SLPs' awareness of AAC implementation and assessment in adults, along with bringing attention to the insufficient number of studies centered around AAC use in adults.

Keywords: speech-language pathology, AAC, augmentative and alternative communication, adults, SL

DEDICATION

This Honors thesis is dedicated to my mother, who has supported me in everything I do and who is my best friend in this entire world. Thank you for everything you have done for me; you are truly an angel on Earth. I also dedicate this honors thesis to my father, who has always been my biggest fan and who has pushed me to be great in everything I do. Thank you both, for everything.

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First and foremost, I would like to thank my thesis advisor, Dr. Mathews, for leading me through this process, for answering my countless questions about everything, and for helping me refine my writing and research skills. You have made this a truly enjoyable experience, even in the most stressful times. To the Honors College, thank you for providing me with funds to conduct my research and for helping me to do my part to leave Southern Miss better than I found it. To the Speech-Language Pathologists who submitted a response to my survey, thank you for assisting me in my research and adding to the knowledge surrounding augmentative and alternative communication in adults. To John, thank you for reading my countless drafts and supporting me throughout this entire process.

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LIST OF ABBREVIATIONS

ASHA	American Speech-Language-Hearing Association
AAC	Augmentative and Alternative Communication
SLP	Speech-Language Pathologist

CHAPTER I: Literature Review

Communication struggles exist in individuals across all ages (ASHA, n.d.).

Augmentative and alternative communication, henceforth referred to as AAC, is used by both children and adults alike to aid in communication. In the past few years, AAC use has increased in both populations, as technology advances and more intelligent systems are being developed. AAC is defined by the American Speech-Language-Hearing Association (ASHA, n.d.), as “an area of clinical practice that supplements or compensates for impairments in speech-language production and/or comprehension, including spoken and written modes of communication” (para. 1). People who struggle with communication issues can use AAC to communicate with everyone they come into contact with, including medical providers such as speech-language pathologists (SLPs). However, not every SLP is properly prepared to communicate with patients using AAC. According to Morris, Dudgeon, and Yorkston (2013), the reasoning behind this barrier of communication between speech-language pathologists and their AAC-using patients is a lack of knowledge of how to properly communicate with patients utilizing AAC.

Rackensperger et. al (2005) found that although AAC is an effective alternative way of communicating with others, it can be challenging to adjust to the daily use of an AAC system. That challenge is amplified when medical providers are not entirely competent on the system being used and do not know how to successfully communicate with their patients. In order to be successful using an AAC system to communicate, the patients must be properly informed of all of the aspects regarding AAC and the specific system they choose to use to communicate. Without being properly assessed by a professional in order to determine which AAC system would best fit them, the most

adequate AAC system are not always chosen and can therefore create further communication issues for the patient (Rackensperger, Krezman, Mcnaughton, Williams, and D'Silva, 2005). Technology is changing rapidly, especially in the medical field. As the sophistication and variety of AAC systems continue to rise steadily, SLPs must educate themselves on the different systems in the market and know how to adequately handle patients who utilize these systems (Rackensperger, Krezman, Mcnaughton, Williams, and D'Silva, 2005).

Crema and Moran (2012) found that information regarding new AAC technology is easily attainable for all SLPs, regardless of work setting or years of experience. Recently, it has come to light that some inexperienced SLPs are unaware of the resources that can further their training in AAC systems. In order to encourage SLPs to keep themselves educated on recent AAC breakthroughs and technologies, that information should be accessible to all. By increasing access to information for everyone, the field can begin to break the stigmas and myths surrounding AAC (Crema and Moran, 2012).

Getting acquainted with an AAC system is not the only issue that patients who use AAC have with their SLPs. In a study conducted by Smith and Connolly (2008), an alarmingly high number of participants reported that if a problem arose with their AAC system, they had no professionals to readily contact. This lack of support after the initial introduction and training needs to change, as SLPs should not focus solely on the beginning of AAC use with the patient. Instead, they should regularly follow up with their patients to ensure that their systems are working properly and to educate the patients on any new information regarding AAC, which could further improve their education (Smith & Connolly, 2008).

SLPs use a variety of factors to guide their decisions regarding AAC systems. The amount of knowledge they possess regarding said factors varies significantly. All SLPs are trained to employ an evidence-based practice (EBP) framework when making clinical decisions (ASHA, 2007). Within the particular area of AAC, EBP is defined as “...the integration of the best and current research evidence with clinical/educational expertise and relevant stakeholder perspectives, in order to facilitate decision about assessment and interventions that are deemed effective and efficient for a given direct stakeholders” (Schlosser & Raghavendra, 2004 p. 3). Research evidence is a critical part of EBP, but the insights clinicians can gain through clinical experiences are just as important. SLPs tend to rely on their own clinical experience and their colleagues’ opinions over data found from previous research studies when making clinical decisions involving AAC (Sievers, Trembath, & Westerveld, 2019). It is challenging to attempt to choose the most suitable AAC system for a patient. The lack of information regarding what factors SLPs focus on when choosing an AAC system and the unreliable sources that SLPs pull their knowledge from makes the ordeal even more complicated.

Lasker and Bedrosian (2009) found that communicating with others through the use of AAC is challenging regardless of the length of time a patient has been utilizing a system or whether their speech difficulties are congenital or acquired. Adjusting to using an AAC system can be especially challenging when a person has to communicate with unfamiliar people or communicate in an unfamiliar setting (Lasker & Bedrosian, 2009). For older people who have not spent the entirety of their lives surrounded by the technology used by the children of today’s generation, making use of recent AAC systems can be seen as a daunting task. Just as the younger generation has watched older

adults struggle to adapt to the infiltration of smart phones, smart TVs, and smart homes, the older generations are more likely to face the same technological struggles with AAC systems. The societal stigmas surrounding disability can cause not only communication issues between the users and others, but also can cause self-confidence issues among users of AAC. When communicating successfully with others, it is imperative that individuals feel confident enough in themselves to adequately get their point across (Lasker & Bedrosian, 2009).

It is a requirement of the SLPs job to stay educated on all new developments in their profession, and the world of AAC is no exception (ASHA, 2016). This aspect of Speech-Language Pathology seems to be developing at a more rapid rate than others, meaning more time needs to be devoted to providing education on new systems and software. Not being fully up to date on the latest AAC technologies can have devastating effects on patients. SLPs want their patients to live successful and fulfilling lives. If SLPs are not kept up to date on current technologies in the world of AAC, then they are not giving their patients the best opportunities for success (ASHA, n.d.). SLPs need to continuously learn about the most recent findings and inventions in all aspects of the Speech-Language Pathology field, regardless of how many new inventions and software may be released. If SLPs choose to ignore the findings in a certain area, such as AAC, simply due to the fact that there is too much new information pouring in, they are putting their patients in a situation where they are unable to reach their full potential. SLPs and other professionals who have a higher chance of coming into contact with individuals who utilize an AAC system to communicate, should regularly engage in both practical and theoretical experience involving AAC systems (Moorcroft, Scarinci, & Meyer,

2019). They should focus on neither the ones they have already familiarized themselves with, nor the newest innovations in the AAC market. Instead, they need to focus wholly on providing the best experience for their patients, whether that means implementing a simpler AAC system that has existed for decades or introducing their patient to the latest in AAC system technologies (Moorcroft, Scarinci, & Meyer, 2019).

Based on the findings of the primary investigator of this study, minimal literature that is centered on use of AAC in adults is available. The majority of AAC research found by the primary investigator is centered around children. Children tend to be more adaptable with their communicative ways and have less trouble adapting to new methods of communication and new communication technologies (Guralnick, 2011). Adults may have more trouble adjusting to AAC and may not be as socially accepted in older populations. In a study conducted by Johnson, Inglebret, Jones, and Ray (2006), "...attitude, lack of training, lack of support... were most often related to inappropriate abandonment of AAC systems" in adults (pg. 89). Utilizing an AAC system can be difficult for every party involved. A recent study noted that families of children who used an AAC system "lacked emotional readiness and resilience to implement AAC... AAC was extraneous work for parents" (Moorcroft et. al, 2019 pg. 7).

According to Moorcroft et. al (2019), in order to successfully implement an AAC system, it is recommended that a multidisciplinary team be employed. A multidisciplinary team of professionals is the best way to ensure success and continued use of AAC systems, as it allows for all aspects of AAC system use to be covered by a professional who is familiar with each certain aspect (Moorcroft et. al, 2019). According to the primary investigator's knowledge gained in Speech Pathology and Audiology

courses, an SLP is capable of setting patients up with an AAC system and training them how to use it. However, if more professionals with different areas of knowledge are added to the patient's care team, such as physical therapists and nurses, the patients have a better chance of success with their AAC system (ASHA, n.d.).

According to Shadden and McGehee (2004), some clinicians believe AAC should only be implemented in an adult patient's life after all other speech-language treatments have been exhausted. This assumption can be harmful to members of the AAC community. Although children's brains have more neuroplasticity and are easily molded to adapt to new communication styles, adult use of AAC should not be written off as a final resource. Instead, it should be considered a viable option for both adults and children, not only for the latter. Adults may struggle more in the beginning to adapt to the initial experience of using technology that is new to them, but they are still capable of comfortably using AAC on a daily basis, as long as they are provided with the right tools to succeed. If they are given the correct tools, such as a multidisciplinary team to train them on how to properly use and feel comfortable with AAC, they can learn to communicate even when in unfamiliar settings or with unfamiliar people (Shadden & McGehee, 2004).

This study aims to bring light to a part of the population which is severely lacking in both representation and research in regard to the use of AAC systems. It works to bring attention to the scarcity of studies centered around AAC and adult use. By conducting this study, it is hoped that SLPs will actively seek out more information on AAC use in adults and ideally feel more comfortable implementing AAC with their adult patients.

CHAPTER II: Methods

The purpose of this study was to gain perspective on Speech-Language Pathologists' assessment and implementation of AAC in their adult patients. A survey of 18 questions was conducted to assess SLP's experiences pertaining to AAC use in adults. The survey was developed by the researcher in collaboration with the research advisor, Dr. L. Amanda Mathews. Before being released, the survey was tested by the research advisor to ensure there were no technical issues.

Selection of Participants

Participants were chosen via a search of their profiles on the American Speech-Language-Hearing Association's (ASHA's) website. The search had filters applied for work setting, state, and patient population. Potential participants reported the state of Mississippi as residence and one of the following as work setting: hospital, health agency, home health agency, medical school, outpatient rehabilitation, rehabilitation hospital, healthcare- hospitals, rehabilitation agency, skilled nursing facility, SLP/Audiologist's office, university hospital, or VA hospital/medical center. Settings that were chosen were selected because of the populations they primarily serviced. All participants were licensed CCC-SLPs with some level of expertise working with adults. The search yielded results based on information that members of ASHA included in their personal profiles.

Presentation of Survey

The survey was sent out via email to all selected SLPs who hold a Certificate of Clinical Competence and were identified in the ASHA website search. The survey was created through the Qualtrics software, which is a website for creating surveys. This

particular website is a neutral source, not influencing results in any way; it presented the questions in a standard format for all participants and did not have any part in pre-selecting participants. It was only accessible to those who received an email with a link to the survey; it was not made available to anyone else. An announcement stating the goal of the study and providing information was sent in the email, in addition to an anonymous survey link and a link to enter their e-mail after survey completion for the chance to win a gift card. All responses were stored on a password-protected laptop only accessible to the researcher and research advisor. Participants were asked to complete the survey within one month of receiving the link. Two reminder e-mails were sent after the initial e-mail, one two weeks after the initial e-mail and one a few days before the one-month deadline. A total of 589 potential participants were e-mailed survey links. The announcement of the survey was as follows:

Dear Participant,

I invite you to participate in a research study entitled: Speech-Language Pathologists' Perceptions Regarding Augmentative and Alternative Communication Assessment and Implementation in the Adult Population. My student, Emilee McGahee, is currently enrolled in the Speech-Language Pathology program at the University of Southern Mississippi in Hattiesburg, MS and is in the process of writing her Honor's Thesis. The purpose of the research is to bring awareness to the lack of research regarding adult use of augmentative and alternative communication (AAC) and to determine the level of confidence speech-language pathologists have regarding implementation and assessment of AAC.

The survey has been designed to collect information on your experiences as a speech-language pathologist.

Your participation in this research project is completely voluntary. You may decline altogether or leave blank any questions you don't wish to answer. There are no known risks to participation. Your responses will remain confidential and anonymous.

If you agree to participate in this project, please answer the questions as best you can at the survey link below. It should take approximately five minutes to complete. After completing this survey, follow the incentive below for a chance to win a \$250 gift card.

Survey Link: https://usmuw.co1.qualtrics.com/jfe/form/SV_0Teq3kPzNZNtAy2

Incentive Link:

https://usmuw.co1.qualtrics.com/jfe/form/SV_aX0eSeWXYG81tsy

If you have any questions about this project, feel free to contact Emilee McGahee at (228)-224-3653. Information on the rights of human subjects in research is available through USM's Institutional Review Board at the University of Southern Mississippi 118 College Drive #5125, Hattiesburg, MS, 39406; website: <https://www.usm.edu/research-integrity/>; Samuel Bruton, Samuel.Bruton@usm.edu.

Thank you for your assistance in this important endeavor.

Sincerely yours,

Dr. Amanda Mathews and Emilee McGahee

Survey Questions

Survey questions covered a broad range of information pertaining to how long the SLPs had been practicing, what populations they are most familiar with, their comfort levels regarding both AAC implementation and assessment, and memorable experiences they may have had regarding AAC. The questions were not randomized; all individuals filled out an identical survey. All of the surveys were presented in the same way; participants had access to all of the survey questions on one page. At any point during the survey, participants were able to review their answers and make any changes to their responses that they thought were necessary. All survey responses were automatically captured and sorted by the survey software. Survey questions can be found in Appendix B.

CHAPTER III: Results

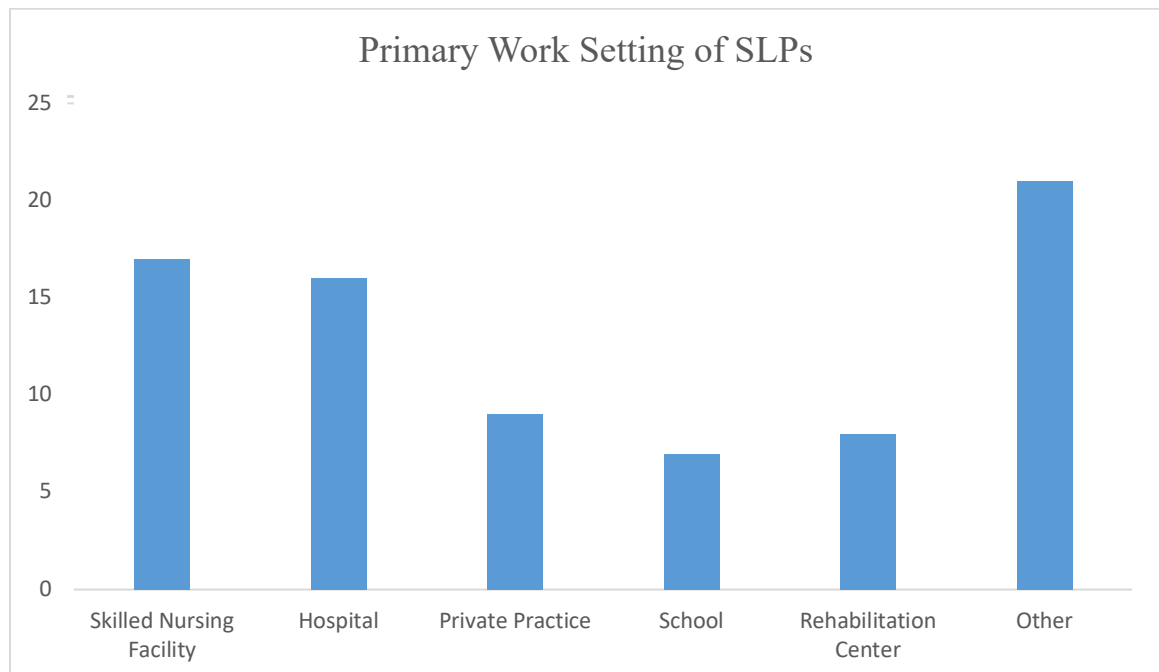
All participants gave consent to answer the survey questions. Seventy-two surveys were received, and 61 of the respondents provided complete responses. Both complete and incomplete surveys were analyzed. For the 72 SLPs who completed the survey, 63 had between 1-5 and 21-25 years of an experience, for an average of 12.6 years of experience. All 72 participants identified as female, and 85% identified as Caucasian. Seven SLPs identified themselves as African American, and 1 identified as Asian. Two chose “Other” and one SLP chose “prefer not to answer.” Of the 72 participants, 67% were between the ages of 23-44. The most commonly selected age group was “23-34,” with 25 SLPs choosing this. Twenty-three SLPs identified themselves as falling in the “35-44” range, with 14 choosing the “45-54” option. Eight SLPs fell into the “55-64” range, and 2 SLPs chose “65+.”

Average Age of SLPs

Years of Experience	<i>n</i>	%
23-34 years	25	35%
34-44 years	24	32%
45-54 years	14	19%
55-64 years	8	11%
65+ years	2	3%

Many of the participants said that they primarily worked in settings such as hospitals, skilled nursing facilities, and private practices. “Skilled Nursing Facility” was the most common option, with 17 (24%) SLPs selecting this answer; “Hospital” was the second most frequent, with 16 SLPs choosing this. “Other” was selected by 15 SLPs; home health was a frequent write-in option, with 7 respondents giving it as an answer. Other write-in answers were “outpatient rehabilitation,” “early intervention,” and “acute care.” The least commonly selected answer choices were “private practice,” “rehabilitation center,” and “school,” with nine, eight, and seven SLPs choosing those, respectively. When asked what population they primarily worked with, 54% of respondents stated “adults.” The remaining 33 SLPs (46%) stated that they worked with “children.”

Primary Work Settings of SLPs

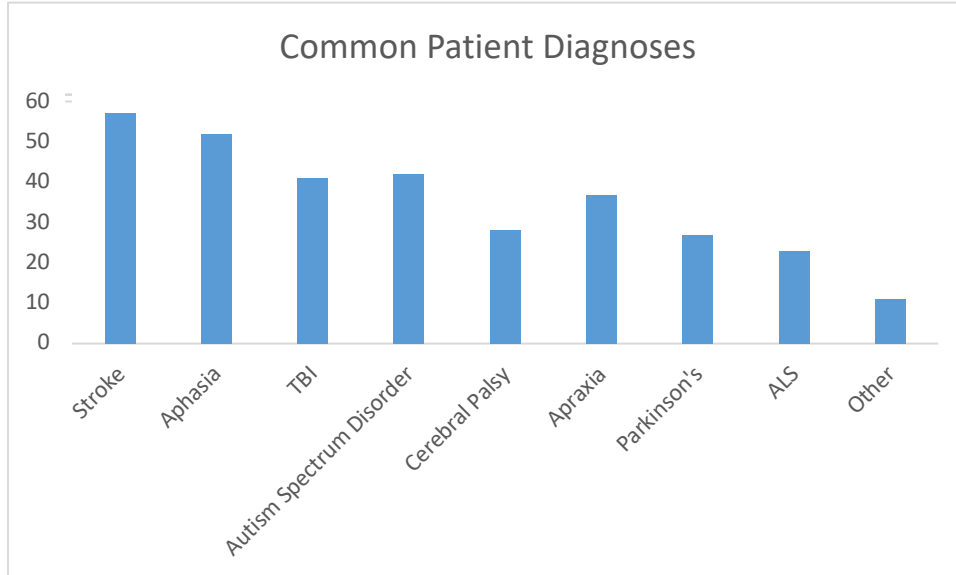


As a way to gauge their knowledge regarding AAC, SLPs were asked to choose the correct definition of AAC, as provided on ASHA's website. The answers were split between two choices. The majority of SLPs who answered the question chose the correct answer (90%), while the other 10% chose the definition which closely resembled the correct definition but was not entirely correct. The other two answer choices, which were entirely incorrect, were not chosen at all. Interestingly, nine SLPs did not choose an answer choice for this question.

In order to determine how familiar they are with implementing AAC systems, SLPs were asked to choose the option that contained the number of systems they have implemented in their career. The choice of "7 or more" was chosen by 41% of participants, with "1-3" being the second most popular choice at 31%. Seventeen SLPs had implemented between 4 and 6 systems. Only 3 of the SLPs had never implemented an AAC system in their careers.

SLPs were able to choose multiple answers when asked what their most common patient diagnoses were; stroke (57 SLPs) and aphasia (52 SLPs) were selected most frequently. TBI and Autism Spectrum Disorder were also popular choices, chosen by 41 and 42 SLPs, respectively. Other diagnoses chosen by SLPs included cerebral palsy (28), apraxia (37), Parkinsonism (27), and ALS (23). Eleven SLPs selected the "other" option, choosing to write-in patient diagnoses. Some frequent write-in options listed by SLPs were "Down Syndrome" (three SLPs), "Rhett Syndrome" (one SLP), "Laryngectomy" (one SLP), and "Pierre Robin Syndrome" (one SLP).

Common Patient Diagnoses



In an effort to better understand the types of AAC that are commonly implemented by SLPs, they were asked to choose whether the majority of AAC systems they implemented were high-tech, low-tech, or a mixture of both. Forty-two (59%) SLPs stated they implemented both low-tech and high-tech AAC devices. Low-tech devices appeared to be chosen more often in implementation, with 18 SLPs stating they had only ever implemented low-tech devices. Eleven SLPs had only implemented high-tech devices.

SLPs were asked to rate how confident they were in serving adult populations on a scale of “strongly disagree” to “strongly agree.” Results for this survey question were more varied than previous questions, with only 29 (41%) of SLPs choosing the “strongly agree” option. “Somewhat agree” was the second most-chosen option, with 25 (35%) of SLPs choosing this. “Strongly disagree” and “somewhat disagree” were chosen by 14% and 6%, respectively. “Neither agree nor disagree” was the least chosen, with only three (four percent) SLPs selecting this option.

The next question in the survey focused on how comfortable SLPs are in assessing for AAC. Thirty SLPs (42%) chose “somewhat comfortable,” and 10 SLPs (14%) chose “extremely comfortable.” Nine SLPs were “Neither comfortable nor uncomfortable” with assessing for AAC. Ten SLPs were “extremely uncomfortable,” and 13 SLPs were “somewhat uncomfortable.” When asked about knowledge of AAC options for their patients, 34 SLPs (47%) “somewhat agree” that they know about AAC options. Sixteen SLPs “strongly agree.” “Neither agree nor disagree” and “strongly disagree” were both selected by seven SLPs. “Somewhat disagree” was chosen by eight SLPs.

Twenty-five SLPs (35%) chose “somewhat agree” when asked if they stay up to date on the latest developments in AAC. Six SLPs chose “strongly agree.” The second most commonly picked choice was “somewhat disagree,” with 17 SLPs selecting this answer. Eleven SLPs chose “strongly disagree” and 13 chose “neither agree nor disagree.” Twenty SLPs “somewhat agree” that they are well-versed on how to implement a variety of AAC systems; eight SLPs “strongly agree.” Fifteen SLPs “neither agree nor disagree,” while 18 SLPs “somewhat disagree” and 11 “strongly disagree.”

Thirty-six (50%) SLPs “strongly agree” that AAC is helpful for their patients when implemented. Twenty-six SLPs “somewhat agree” and six “neither agree nor disagree.” One SLP chose “strongly disagree” and three chose “somewhat disagree.” On the topic of successful use of AAC systems, SLPs were asked to rate how successful with AAC they believed their patients to be. Twenty-nine SLPs, or 41%, chose “probably yes,” and 12 SLPs chose “definitely yes.” Twenty-five SLPs chose the “might or might

not” option, with only four choosing “probably not” and zero choosing “definitely not.” Two SLPs did not answer this question.

For the final question in the survey, SLPs were asked to list a memorable experience with AAC, if they had one. Of the 72 SLPs who submitted a survey response, 44 SLPs responded to this question, which was the only open-ended one in the survey. A variety of responses were received, which included various memorable moments involving AAC that the SLPs had experienced. Twenty-four responses indicated a memorable occurred experience when their patients were able to functionally communicate with others using their AAC system. Nine of the responses involved success with implementing an AAC system with their patient to facilitate successful communication with the SLP or the patient’s family and friends. Assessment was another common theme found in the responses, with five SLPs reporting that their most memorable moment with AAC involved assessing a patient and pairing them with a suitable AAC system. One SLP’s most memorable moment involved broadening her education regarding AAC. Other responses involved difficulties surrounding AAC that SLPs have encountered during their careers.

CHAPTER IV: Discussion

Previous researchers have determined that many SLPs who work with adults are not adequately prepared to assess for and implement AAC systems for their patients (Crema & Moran, 2012), although some participants in this survey reported that they have extensive experience implementing AAC systems. Of the SLPs who submitted the survey, 65% reported that they had implemented 4 or more AAC systems in their career. When compared to how well-versed they are on an array of AAC systems, there was a wide discrepancy; less than half reported that they have a working knowledge of a multitude of systems they can implement for their patients. As mentioned previously, some SLPs, especially ones who may be lacking experience, are unaware of resources that are available to further their training in AAC systems (Crema & Moran, 2012). This lack of may explain why such a large number of SLPs have only a narrow window of knowledge when finding the right AAC system for their patient. Staying current on AAC developments and the success of patients are intertwined; a lack of current knowledge regarding AAC systems can mean patients are not paired with the best AAC systems possible for their situations.

An SLP should regularly communicate with patients regarding the success of their AAC system implementations. When asked about a patient's success with AAC, slightly over half of respondents reported that patients have successfully utilized AAC systems. Thirty-six percent, however, did not have a definite answer on their patients' success; they chose "might or might not." This can be an indicator of patients and/or SLPs not following up after implementation of the AAC system; as Smith and Connolly (2008)

stated, there was an alarmingly high number of participants who had no professionals to reach out to if a problem arose with their AAC systems.

According to ASHA, AAC is “an area of clinical practice that supplements or compensates for impairments in speech-language production and/or comprehension, including spoken and written modes of communication” (para. 1). Of the 72 SLPs who submitted a survey, 63 selected an answer for the question regarding the correct definition of AAC. The overwhelming majority of SLPs chose the correct definition. Six SLPs, however, chose the definition “a system that involves the physical exchange of pictures to communicate with another person for the purpose of requesting and commenting,” a definition similar to the correct one, but one stating that pictures are the only mode of communication used in AAC. The other two choices, which were more vague and had little similarity to the actual definition, were not chosen by any of the respondents. This provided evidence that most SLPs have at minimum a basic knowledge of AAC, as the only incorrect choice that was chosen was the one most similar to the correct answer.

Although the target demographic for this survey was SLPs who currently work with the adult population, only 39 SLPs selected the “adult” option in the survey; 33 selected “children” as the primary population they work with. This is likely due to the ASHA profiles of those SLPs not being recently updated, as SLPs were filtered based on what information they had selected to include in their profiles at the time the survey was sent out. Out-of-date profile information could be one possibility as to why many respondents felt as though they were not current on AAC developments and not well-versed on a variety of AAC systems. Interestingly, over half of respondents implement a

mixture of both low-tech and high-tech devices in their patient's treatments. Only 15% of respondents exclusively implement high-tech devices. The lack of high-tech devices being implemented could explain why numerous respondents do not stay current with AAC development; as technology is advancing rapidly, so are high-tech AAC devices. Low-tech devices, such as picture boards, can be mostly inflexible and not subject to any major advancements. Regardless of which type of AAC systems they may regularly implement for their patients, SLPs should systematically check for updates on AAC systems and for information regarding new AAC systems in order to properly provide the widest array of AAC systems for their patients.

Respondents reported a wide array of diagnoses for their patients, with the most common being stroke (57 SLPs) and aphasia (52 SLPs). Since the primary population is adults, it is understandable that the most commonly seen diagnoses in patients who use AAC are strokes and aphasia, which is a disorder which can stem from a traumatic brain injury (TBI). Diagnoses selected by the respondents were a mixture of congenital and acquired diagnoses, including chromosomal disorders such as Down Syndrome and Pierre Robin Syndrome. SLPs were also asked their level of knowledge regarding AAC options for their patients; for this question, 70% of respondents agreed to some extent that they had knowledge of AAC options. As mentioned in the results, however, many SLPs do not possess a strong knowledge of a multitude of systems. It can be determined, then, that although a number of SLPs possess an adequate enough working knowledge of AAC systems to implement them with their patients to some degree, their knowledge does not spread far enough to encompass a wide range of systems and give their patients the best opportunities for success. To curb this issue, Moorcroft et al. (2019)

recommended that SLPs should regularly engage in both theoretical and practical experience involving AAC systems. By regularly reviewing possible new AAC systems and refreshing themselves on systems they may not implement often, SLPs can feel confident in assessing for and implementing a wide array of AAC systems.

Not keeping a current profile can also explain the wide range of responses received when respondents were asked how confident they were in serving the adult population. With this being a survey focused on SLPs who have experience working with adults, it can be expected to see the vast majority of respondents showing some level of confidence regarding working with adults. Although a large portion of the respondents agreed they felt some level of confidence in serving adults, 20% of the 71 respondents did not feel confident (one SLP did not answer this question). As discussed above, this is likely due to the fact that a large percentage of the respondents currently work with children and have likely not updated their ASHA profiles recently to the current population they are serving.

As noted in the results, a number of respondents did not feel confident serving adults; this may correlate with the comfort levels of SLPs regarding AAC assessment. The most chosen answer choice was “somewhat comfortable,” with 42% of respondents selecting this choice. Although this may seem like a promising statistic, 32% of all respondents did not feel comfortable. It is pertinent that SLPs, as healthcare professionals, properly assess their patients to determine which AAC systems best suit their needs; without proper knowledge, a SLP can choose an ill-fitting system and create further communication issues (Rackensperger et al., 2005). This lack of comfort may be due to a host of reasons, some of which will be discussed in the paragraphs following.

In order for SLPs to feel confident assessing for and implementing AAC systems for adult patients, they should be well-versed in AAC and keep current with new developments and systems that can potentially benefit their patients. As mentioned previously, the majority of SLPs who responded felt as though they knew about AAC options to an extent, but they felt uninformed about the true extent of options available for their patients. The most commonly chosen option when asked about knowledge of AAC options was “somewhat agree,” with 47% of all respondents selecting it. So, although numerous SLPs know about AAC options, their knowledge is likely limited to a select few AAC systems. This can prove to be an issue when deciding which system pairs well with a patient, as they are limited to only the AAC systems with which the SLP is most familiar.

When asked to select how well-versed they are on implementing a variety of AAC systems, the results were more skewed. Forty percent of respondents did not feel well-versed; 39% did, to a certain extent. Again, SLPs may not be aware of resources that can provide them with pertinent information regarding AAC, especially the development of new AAC systems and the implementation and assessment of those systems. This directly correlates to an SLP’s confidence in assessing for AAC and their knowledge of AAC options, as all of these aspects must come together for SLPs to give their patients the best chance at successfully using AAC to communicate regularly. As mentioned above, 42% of respondents have implemented seven or more AAC systems in their career. This indicates that although SLPs can implement a multitude of systems in their careers, they do not necessarily feel confident when implementing those systems.

The best way for SLPs to combat this lack of confidence regarding AAC is to regularly educate themselves through continuing education opportunities.

Another important aspect to consider is how current SLPs are on new developments in AAC. As Moorcroft et al. (2019) reported, SLPs should regularly engage in both theoretical and practical experience involving AAC systems to inform themselves about new developments. Not staying current on new developments can have the same impact on a patient as if the SLP did not familiarize themselves with a wide range of AAC options. Thirty-nine percent of respondents stated they did not keep current with new developments, along with 18% who neither agreed nor disagreed that they stay current on new developments. This, along with limited knowledge of systems and how to implement them, can have a significant impact on a patient and their communication. Being exposed to a wide variety of systems and keeping current on developments allows SLPs to give their patients the best opportunities for success, by choosing the system that best suits the patients and their needs.

Although numerous respondents felt as though they were not well-versed in AAC implementation and did not stay current on new developments, an overwhelming 86% of respondents agreed that AAC is helpful for their patients when implemented correctly. This demonstrates that if SLPs display confidence in implementing AAC systems and educate themselves regularly so that they stay current and are familiar with a wide range of systems, their patients will likely display successful communication through their properly paired AAC systems. Similar results were found when respondents were asked if they felt as though their patients were successful with their AAC systems. Fifty-nine percent believed that their patients found success with their AAC systems, while 36%

were unsure. This uncertainty could be resolved if SLPs regularly checked in with their patients after system implementation to ensure they are having continued success and to address any issues or concerns that may arise. Attitudes, a lack of proper training, and a lack of support are the most common reasons why patients inappropriately abandon their AAC systems (Johnson et al., 2006). It is pertinent that SLPs regularly check in not only with their patients, but also their support systems, regularly to ensure there are no issues arising with any party involved.

For the last question, SLPs were asked to provide a memorable experience involving AAC. Responses were of most positive experiences, with a few negative included. The majority of responses centered around functional communication. One SLP's most memorable moment involved programming an AAC system for a different language. The patient's primary language was Choctaw, so the SLP programmed a Touch Talker for the patient, who had been diagnosed with severe cerebral palsy. After the SLP implemented the system and trained the patient on how to properly use it to communicate, the patient was able to communicate with family members in their native language and dialect. The second most common theme in the open-ended response question was the implementation of AAC systems. One SLP's patient suffered from amyotrophic lateral sclerosis (ALS) with severe neurological impairments. The SLP implemented a high-tech AAC device with eye gaze technology, which allowed the patient to communicate with the SLP and their family. The SLP stated that it was truly a "great experience."

Assessment was another theme found in the responses, though not as common as the ones mentioned previously. The patient of one respondent was diagnosed with a TBI

and had developed his own sign language that neither the SLP nor any of their colleagues were able to understand. According to the SLP, the patient's communication skills were at a 3rd-5th grade level; the SLP assessed the patient for AAC and determined that an iPad app was best suited for the patient and his needs. The SLP customized the app to include his specific wants and needs and he was able to use the app to communicate with his family and the staff. One SLP's most memorable experience pertaining to AAC was when she attended a summer camp for AAC while attending graduate school. Although the responses received for this open-ended question were overwhelmingly positive, there were some negative experiences reported as well. Interestingly enough, the theme for the complaints received were similar; SLPs have difficulty getting the patient's support system, including family and other staff members on the patient's care team, to utilize AAC outside of the therapy session. The SLPs reported they felt AAC implementation and therapy was unsuccessful due to the fact that AAC communication was not always practiced outside of therapy sessions.

CHAPTER V: Limitations

Although a systematic process, research is rarely streamlined. This study may provide valuable experience and information pertaining to AAC, but it had several limitations. These limitations included a relatively small sample size and outdated ASHA profile information. First, even though over 500 surveys were sent out to potential participants at different intervals, only 72 surveys were submitted. Of those 72 submitted surveys, 61 were complete, not including the optional open-ended question; if the open-ended question's response is factored in, only 39 surveys were completed. This was perhaps due to distraction, where they possibly began the survey on a portable device such as a cell phone or tablet and could not complete it due to time constraints or became distracted by other responsibilities. Another possible explanation is that since many of the participants did not work primarily with adults at the time the survey was distributed, some SLPs may not have felt comfortable answering certain questions. For future surveys, responses will be required instead of optional in order to increase the sample size.

A small sample size also restricts population diversity of the survey participants. For the survey, all respondents were female; 85% of respondents were Caucasian and 10% were African American. All other ethnicities were marginal. One might ponder if the overwhelming majority of respondents being Caucasian females could skew the data received, but 2021 national data pulled from ASHA shows that 95.6% of ASHA-certified SLPs are female and 79% are Caucasian (ASHA, 2022). While the demographics presented by ASHA vary slightly from the demographics displayed in this study, there is no evidence that this slight difference had any effect on the data received.

Hispanic/Latino, Pacific Islander, and American Indian were not represented in this research.

CHAPTER VI: Conclusion

The purpose of this study was to gather information regarding how SLPs perceive the assessment and implementation of AAC systems for adult patients and to gauge their confidence levels regarding working with adult patients and AAC systems. The researcher determined that although many respondents had implemented a number of AAC systems throughout their career, that did not necessarily mean that the respondents were confident when implementing those systems. To add to that, many respondents did not follow up with their patients after implementation of an AAC system. This in turn can cause AAC implementation to fail, as the SLP has no way of knowing whether their patients are having issues with their systems.

This study is important to the field of Speech-Language Pathology because it demonstrates the need for more research focused on AAC assessment and implementation in adults. In addition, findings revealed that although the majority of respondents were able to successfully implement an AAC system for their patients regardless of their knowledge surrounding a multitude of AAC systems, SLPs would benefit from more accessible resources that could help further their training in regard to AAC systems.

APPENDIX A: STANDARD INFORMED CONSENT



INSTITUTIONAL REVIEW BOARD STANDARD (ONLINE) INFORMED CONSENT

STANDARD (ONLINE) INFORMED CONSENT PROCEDURES

- **Use of this template is optional.** However, by federal regulations ([45 CFR 46.116](#)), all consent documentation must address each of the required elements listed below (purpose, procedures, duration, benefits, risks, alternative procedures, confidentiality, whom to contact in case of injury, and a statement that participation is voluntary).

Last Edited August 13th, 2021



Today's date: September 4, 2021		
PROJECT INFORMATION		
Project Title: Speech-Language Pathologists' Perceptions Regarding Augmentative and Alternative Communication Assessment and Implementation in the Adult Population		
Principal Investigator: Emilee McGahee	Phone: 228-224-3653	Email: emilee.mcgahsee@usm.edu
College: Nursing and Health Professions	School and Program: School of Speech and Hearing Sciences - Speech Pathology Program	
RESEARCH DESCRIPTION		
<p>1. Purpose: The purpose of this study is to bring awareness to a part of the population that is severely lacking in both representation and research in regard to the use of AAC, bringing attention to the scarcity of studies centered around AAC use in adults. This study hopes to increase the number of SLPs who are comfortable in assessing and implementing AAC in adults.</p> <p>2. Description of Study: Participants will review survey questions pertaining to their personal experiences as Speech-Language Pathologists and they</p>		

will provide their answers using the form provided. Participation will take approximately 20 minutes to complete.

3. Benefits:

Participants will be entered to win a \$250 giftcard.

4. Risks:

There are no known risks.

5. Confidentiality:

Confidentiality will be maintained throughout the duration and completion of the study.

6. Alternative Procedures:

7. Participant's Assurance:

This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5125, Hattiesburg, MS 39406-0001, 601-266-5997.

Any questions about this research project should be directed to the Principal Investigator using the contact information provided above.

CONSENT TO PARTICIPATE IN RESEARCH

I understand that participation in this project is completely voluntary, and I may withdraw at any time without penalty, prejudice, or loss of benefits. Unless described above, all personal information will be kept strictly confidential, including my name and other identifying information. All procedures to be followed and their purposes were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected. Any new information that develops during the project will be provided to me if that information may affect my willingness to continue participation in the project.

()

CONSENT TO PARTICIPATE IN RESEARCH

By clicking the box below, I give my consent to participate in this research project. ***If you do not wish to participate in this study, please close your browser now.***

- Yes, I consent to participate.

APPENDIX B: SURVEY

1. How many years of clinical experience do you have?

- a. 1-5 years
- b. 6-10 years
- c. 11-15 years
- d. 16-20 years
- e. 21-25 years
- f. 26-30 years
- g. 31-35 years
- h. more than 35 years of experience

2. What is your gender?

- a. Male
- b. Female
- c. Transgender Male
- d. Transgender Female
- e. Gender Queer
- f. Non-Binary
- g. Gender Non-Conforming
- h. Other
- i. Prefer Not to Answer

3. What is your race/ethnicity?

- a. American Indian or Alaskan Native
- b. Asian

- c. African American
 - d. Hispanic or Latino
 - e. Native Hawaiian or Pacific Islander
 - f. Caucasian
 - g. Unknown
 - h. Other
 - i. Prefer Not to Answer
4. What is your age?
- a. 23-34
 - b. 35-44
 - c. 45-54
 - d. 55-64
 - e. 65+
5. What setting do you primarily work in?
- a. School
 - b. Private Practice
 - c. Hospital
 - d. Rehabilitation Center
 - e. University
 - f. Skilled Nursing Facility
 - g. Other
6. What population do you primarily work with?
- a. Children

- b. Adults

7. What is AAC?

- a. An area of clinical practice that supplements or compensates for impairments in speech-language production and/or comprehension, including spoken and written modes of communication.
- b. A system that involves the physical exchange of pictures to communicate with another person for the purpose of requesting or commenting.
- c. A system that is used for other main functions outside of communication.
- d. The expression of or the ability to express thoughts and feelings by articulate sounds.

8. How many AAC devices have you implemented in your career?

- a. 0
- b. 1-3
- c. 4-6
- d. 7 or more

9. Check all diagnoses that apply to what your patients have had.

- a. TBI
- b. Stroke
- c. Autism Spectrum Disorder
- d. Cerebral Palsy
- e. Aphasia
- f. Apraxia
- g. Parkinson's Disease

- h. ALS
 - i. Other
10. Are the majority of the AAC devices implemented into your clients' treatments low-tech, high-tech, or a mixture of both?
- a. Low-tech
 - b. High-tech
 - c. Both
11. I feel confident in serving the adult population.
- a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
12. I feel comfortable assessing for AAC.
- a. Extremely uncomfortable
 - b. Somewhat uncomfortable
 - c. Neither comfortable nor uncomfortable
 - d. Somewhat comfortable
 - e. Extremely comfortable
13. I know about AAC options for my patients.
- a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree

- d. Somewhat agree
 - e. Strongly agree
14. I stay up-to-date on the latest developments in AAC.
- a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
15. I am well-versed on how to implement a variety of AAC devices for my patients.
- a. Strongly Disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
16. I find AAC to be helpful for my clients when implemented.
- a. Strongly disagree
 - b. Somewhat disagree
 - c. Neither agree nor disagree
 - d. Somewhat agree
 - e. Strongly agree
17. Do you feel as though your clients are successful with AAC?
- a. Definitely not
 - b. Probably not

- c. Might or might not
- d. Probably yes
- e. Definitely yes

18. What experiences do you have with AAC? List a memorable one.

APPENDIX C: IRB APPROVAL LETTER

Office of Research Integrity



118 COLLEGE DRIVE #5116 • HATTIESBURG, MS | 601.266.6756 | WWW.USM.EDU/ORI

NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: 21-062
PROJECT TITLE: Speech-Language Pathologists' Perceptions Regarding Augmentative and Alternative Communication Assessment and Implementation in the Adult Population
SCHOOL/PROGRAM: Speech & Hearing Sciences
RESEARCHERS: PI: Emilee McGahee
Investigators: McGahee, Emilee-Mathews, Laura~
IRB COMMITTEE ACTION: Approved
CATEGORY: Expedited Category
PERIOD OF APPROVAL: 15-Oct-2021 to 14-Oct-2022

Donald Sacco

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

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