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Methods and evaluation outcomes in speech, language, and hearing camps

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METHODS AND EVALUATION OUTCOMES IN SPEECH, LANGUAGE, AND HEARING
CAMPS

A Thesis Submitted
in Partial Fulfillment
of the Requirements for the Designation
University Honors

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University of Northern Iowa
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This Study By: Lindsey Carter

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Date

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Date

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ABSTRACT

This investigation explores survey information on speech, language, and hearing camps throughout the United States. Thirty-seven speech-language pathologists from the United States agreed to complete the survey about their camp and thirteen completed the entire survey. These camps are growing in popularity and express benefits of attendance. There is currently limited research on assessment measures taken pre- and post- camp to determine the effectiveness of these camps. The purpose of this study was to investigate the structure of these camps, pre- and post- camp evaluation methods, how success is defined, and the impact these camps have. Results from the survey indicated that the majority of speech-language pathologists do use some form of evaluation pre- and post-camp. Results also indicated that the impact and benefits these camps have on participants are often measured from qualitative approaches. Speech-language pathologists reported that camp participants show cognitive, social, and emotional growth. Research should be continued to examine these camps as an effective alternative to traditional approaches in the field of speech-language pathology.

CHAPTER I

REVIEW OF LITERATURE

Speech, language, and hearing camps are growing in popularity and have the ability to provide intensive therapy in a shorter period of time in a unique and relaxed environment (Speech Buddies, 2012). Previous research has been conducted on the distinctive and varied framework of speech therapy to accommodate a multitude of communication disorders across a variety of therapy settings (Craig, 2014). These speech camp settings include schools, parks, homes, and research universities (Al Otaiba & Smartt, 2003). Along with the variety of settings, programmatic structure varies. Camps are currently being held as day camps and residential camps. With the increase in popularity of speech, language, and hearing camps, there is currently limited research on assessment measures that are taken before and after this mode of therapy to determine the overall effectiveness of these camps as a treatment delivery model. By examining the speech, language, and hearing camp evaluation methods, speech-language pathologists and related professionals have the ability to use data to implement this information into the process of designing a speech, language, and hearing therapy camp through evidence-based practice.

Therapy Camp Framework in Other Fields

The field of speech-language pathology is not the only field to implement and use therapy camps as a treatment delivery model. In a 2015 study published in the American Occupational Therapy Association's Evidence-Based Literature Review Project, occupational therapy practitioners implemented a two-week summer camp program for children diagnosed with Developmental Coordination Disorder (DCD) (Zwicker, Rehal, Sodhi, Karkling, Paul, Hilliard, & Jarus, 2015). This study indicated that the outcomes of this summer camp led to "increased confidence to try new activities, new learning strategies, and increased relational connection to

being with other children with DCD” (Zwicker et al., 2015, p. 6). Prior to the camp, baseline physiological data was collected and then compared to open-ended survey responses from the parents of the camp participants.

In addition to occupational practitioners using camps as a basis of treatment, Adventure Therapy (AT), which is the use of “...outdoor learning experiences for desired psychotherapeutic and psychological benefit” has been applied to individuals with mental health and other behavioral disorders (Richards, Carpenter, Harper, 2008, p. 83). This form of therapy integrates outdoor adventure activities to promote an experiential method of learning, and is not necessarily focused solely on the task, but rather on the process and the skills learned through completing challenging outdoor activities (Shanahan, McAllister, & Curtin, 2009). This information suggests that providing therapy in outdoor or nontraditional settings may be an appropriate framework. This study also noted that evaluation methods from therapy camps may not always be able to be objectively measured, but rather suggest a more holistic approach to therapy. Similarly, in a 2010 study, Wilderness Adventure Therapy (WAT) was used for cognitive rehabilitation for youth and adults with Traumatic Brain Injury (TBI) (Shanahan et al., 2015). Prior to the use of WAT, baseline information was obtained for measuring depression, anxiety, and stress related to the traumatic brain injury. The results of the study showed that, “The use of real-life contexts coupled with supported and scaffolded learning in both contextualized cognitive rehabilitation and WAT enhances a person’s ability to participate in their daily environments” (Shanahan et al., 2015, p. 1061). The unique framework of WAT for individuals with Traumatic Brain Injury and evaluation methods pre- and post- camp indicates that Wilderness Adventure Therapy is a valid alternative treatment to the traditional clinical setting.

Current Speech, Language, Hearing Camps

In an internet search for speech, language, and hearing camps, 112 were identified in the United States. Many of the therapy camps outlined goals that focused on immersing camp participants in communication opportunities, increasing parent networking, furthering education related to communication disorders, creating participant-specific goals for the duration of the camp, and using an interdisciplinary approach based on the fields of psychology, special education, recreational therapy, and occupational therapy in addition to speech and language intervention (Apraxia Kids, 2020). However, few if any of these therapy camps noted methods of determining success specific to therapy goals. Further investigation of current related research indicates that much of the information regarding the outcomes of these camps is secondary to another research question. A summer camp for treating articulation disorders in cleft palate patients compared two modalities of speech intervention: the first being one-hour sessions, twice a week over a 12-month period; the second being a summer speech camp where children received therapy for four hours a day, five days a week, over three weeks (Pamplona, Ysunza, Patiño, Ramírez, Drucker, & Mazón, 2004). The results of this study showed that, “A speech summer camp is a valid and efficient method of providing speech therapy in cleft palate children with compensatory articulation disorder” (Pamplona et al., 2004, p. 351). These conclusions were drawn from a series of assessments and examinations completed pre- and post- therapy camp (Pamplona et al., 2004). While this study was established to research a specific treatment method, further research should be conducted analyzing the role of these camps as a treatment delivery model not secondary to another research question.

CHAPTER II

METHODOLOGY

Survey Development

A survey was used to collect information on speech, language, and hearing camps. Survey questions were designed to compare and contrast the differences in speech, language, and hearing camps for the participating respondents. Questions focused on demographic characteristics, region, activities, professionals involved, assessment methods, and treatment measures. Open ended questions allowed for expansion to responses and to add additional comments.

Participants

Responses were collected from 37 licensed speech-language pathologists. The participants were asked 36 questions regarding their involvement with speech, language, and hearing camps via the Qualtrics survey online service. The survey was estimated to take 10 to 15 minutes to complete. Participants were asked to provide information about their relationship to the camps in addition to specific information regarding their camp participants and structure. Survey questions focused on camp structure, evaluation methods, measurements of success, and camp impact.

Procedures

Invitation emails to participate in the study were sent out to current licensed speech-language pathologists and camp directors in February 2021. Candidates were identified via speech-language-hearing state associations, online searches for speech camp contact information, and personal connections from university practicing professionals.

An “invitation to participate” email was sent out to all potential candidates with a link to an electronic survey on Qualtrics by the investigators or by the professionals responsible at each state association for them to forward to their members. Some state associations shared the survey information via Facebook.

An electronic link was included that directed participants to the consent form and survey. Research procedures were approved by the Institutional Review Board at the University of Northern Iowa (UNI) (IRB 21-0090). Two follow-up emails were sent to participants as a reminder to complete the survey. The first reminder was sent two weeks after the initial invitation to participate. The second reminder email was sent four weeks after the initial invitation to participate was sent. If no email contact was provided on the camp’s website, the investigators contacted the camps via telephone to invite them to participate in the study.

CHAPTER III

RESULTS

The results of the survey were organized into graphs as visual representations and generated a response and percent count. Thirty-seven people agreed to participate in this study and 13 speech-language pathologists completed the entire survey. Initial survey questions inquired if speech-language pathologists were involved with a speech, language, and hearing camps, the location of their camp, and involvement in the camp. Less than half (42.86%) of the speech-language pathologists who completed the survey were involved with a camp. Of the speech-language pathologists involved with these camps, 26.92% identified themselves as a camp director and 23.08% identified themselves as a camp administrator. See figure 1 & 2 below.

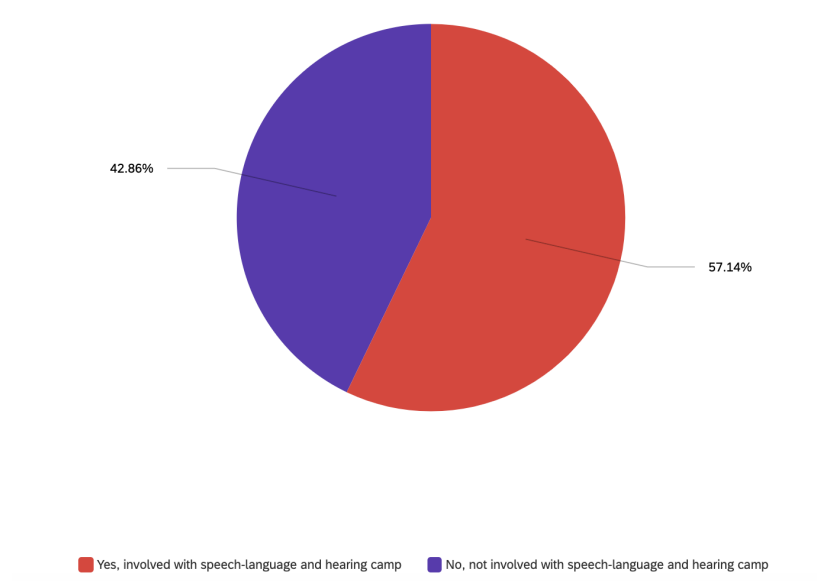


Figure 1. The percentage of licensed speech-language pathologists involved with speech, language, and hearing camps.

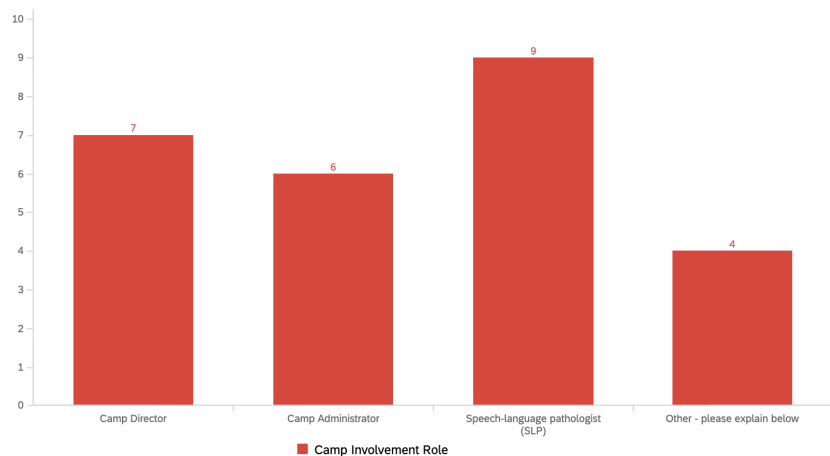


Figure 2. The role of speech-language pathologists involved with camps.

Speech-language pathologists were asked to select their camp participant's communication disorders served from the American Speech-Language-Hearing Association (ASHA) 'Big 9' SLP treatment competencies. These competencies include articulation, fluency, expressive and receptive language, hearing, swallowing, cognitive assessments of communication, social aspects of communication, and communication modalities. Social aspects of communication (22%) and expressive and receptive language (16%) were the two most common populations treated in the camps through the survey conducted. These are shown in Figure 3.

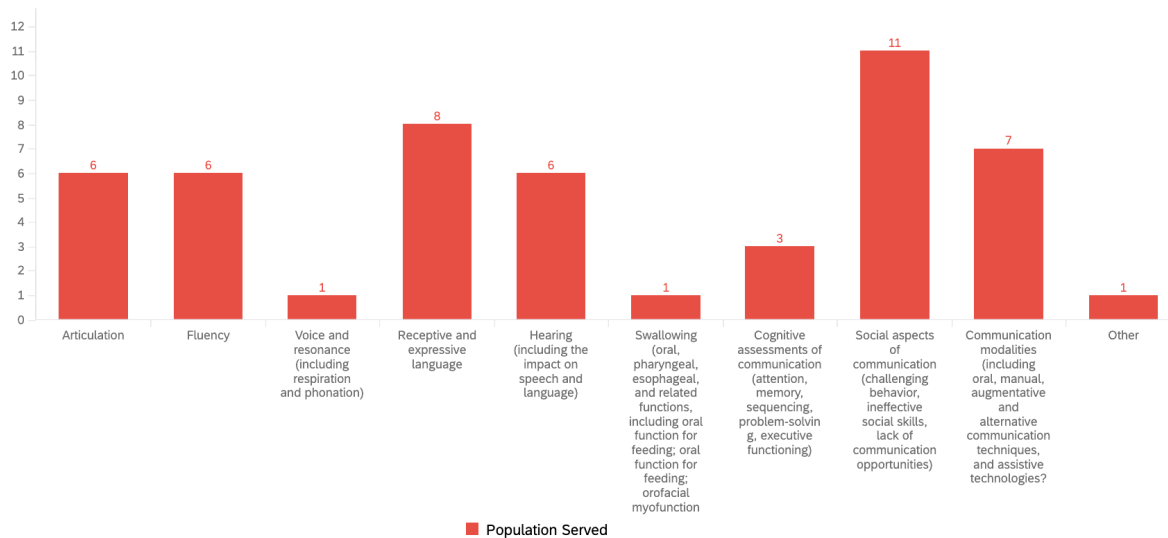


Figure 3. Participant population served in camp.

Speech-language pathologists were also asked to identify the participant age range that is involved with their camp. The most common age range was school-age children (57.89%). See Figure 4.

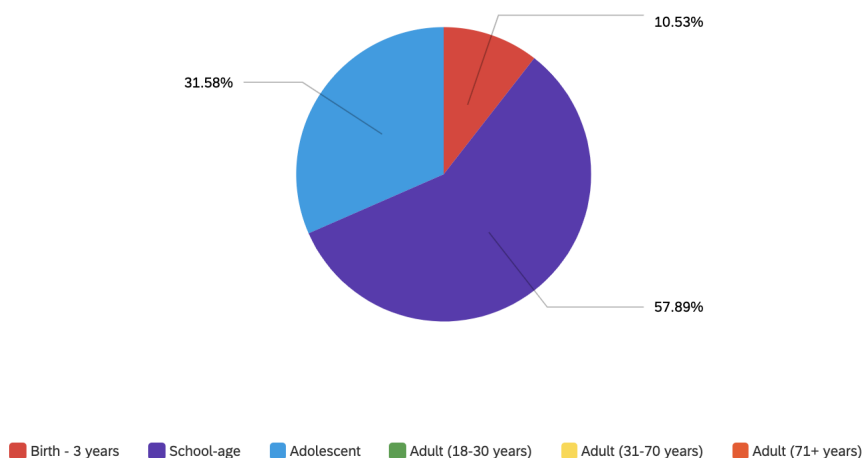


Figure 4. Age ranges of participants involved in speech, language, and hearing camps.

When asked to identify their camp format structure, 46.15% of participants identified their camp as a summer camp and 30.77% identified their camp as a day camp. Additionally, 30.77% of participants identified the setting of their camp as taking place at a university, 23.08% taking place at a private location, and 46.15% of camps taking place at other locations. One speech-language pathologist identified the camp as being “held at a smaller campus along with other summer day camp programs.” Another speech-language pathologist reported that the camp was held at a “university + overnight in the Great Smoky Mountains.” Other locations listed include fitness facilities, wilderness camps, and a rented summer camp. See Figures 5 and 6.

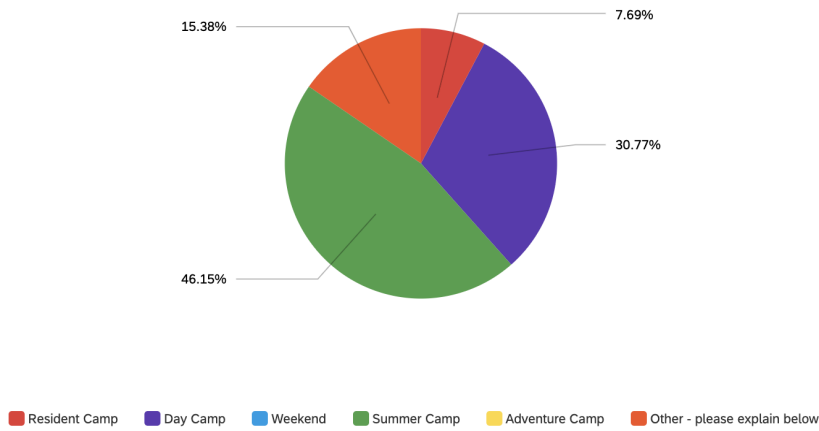


Figure 5. Format of camp.

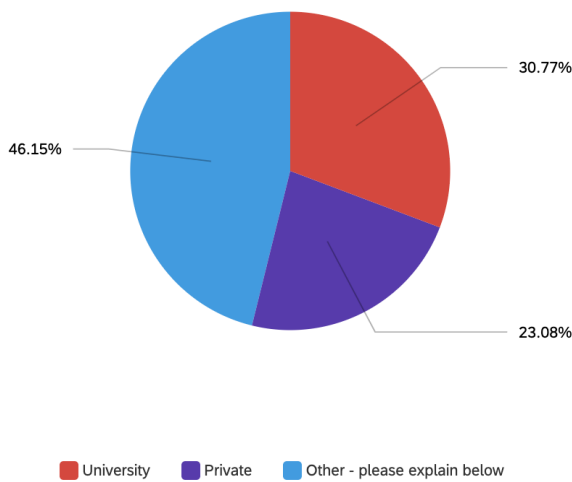


Figure 6. Camp setting type.

Speech, language, and hearing camp locations were widespread throughout the United States. Locations gathered from the survey include Idaho, Oklahoma, Pennsylvania, Virginia, Illinois, Michigan, Colorado, Iowa, and multiple locations in both Texas and Tennessee. The duration of

camps varied. A majority of speech-language pathologists classified their camp as 1 to 5 days or greater than four weeks. See Figure 7.

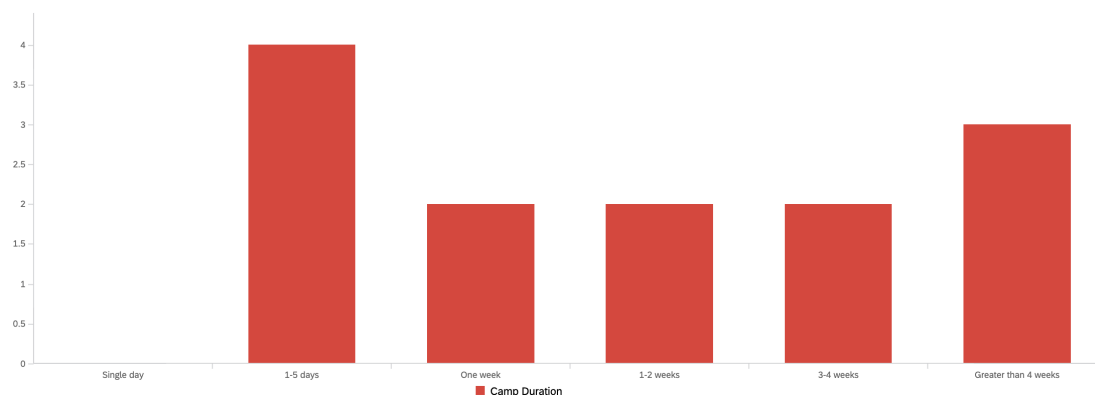


Figure 7. Duration of speech, language, or hearing camps.

When asked about the number of camp participants, 46.15% of speech-language pathologists reported that 11-20 participants attend their camp and 30.77% reported that more than 30 attend their camp. All thirteen speech-language pathologists report that they limit the number of camp participants. See Figure 8 and 9.

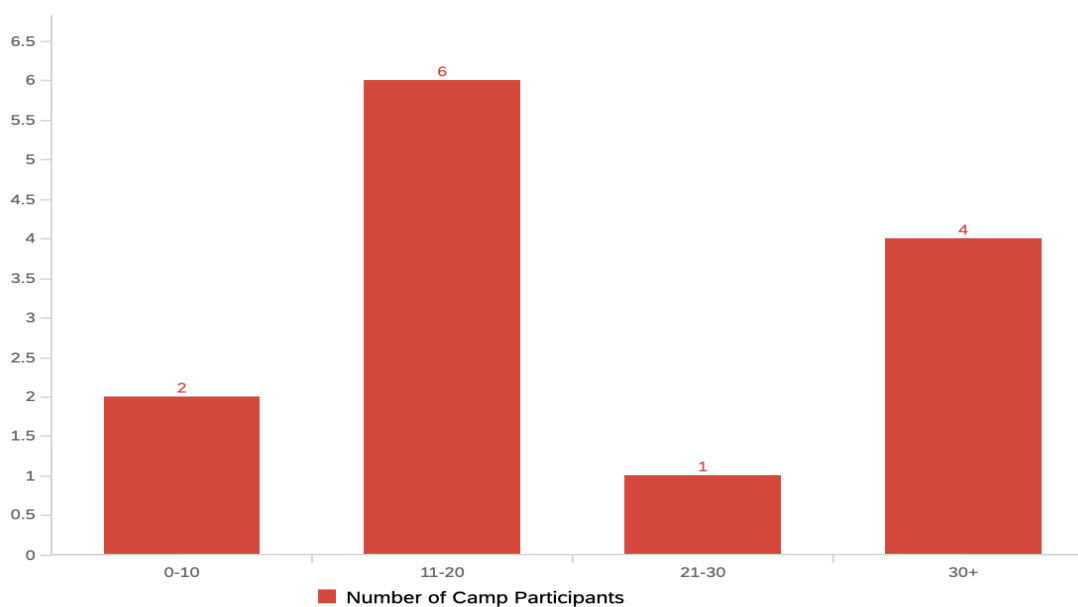


Figure 8. Number of camp participants.

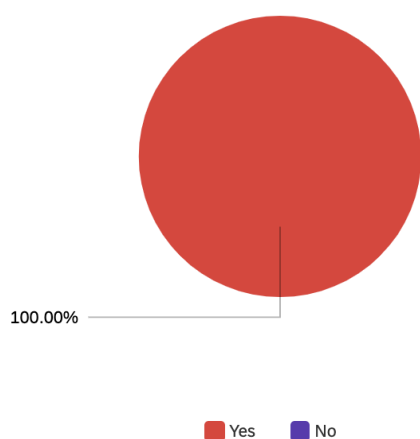


Figure 9. Limit of camp participants at the camp.

Speech-language pathologists were asked to identify other professionals involved with their speech, language, and hearing camps. Nursing (17.39%) was the most common professional, followed by occupational therapy (13.04%), and teaching (8.70%). Physical therapy, audiology, social work, and a physician were also noted but were not common related professionals involved. Music therapy, behavioral therapy, environmental educators, pet therapy professionals, and speech-language pathology assistants were other professionals identified as taking part in these camps. See Figure 10.

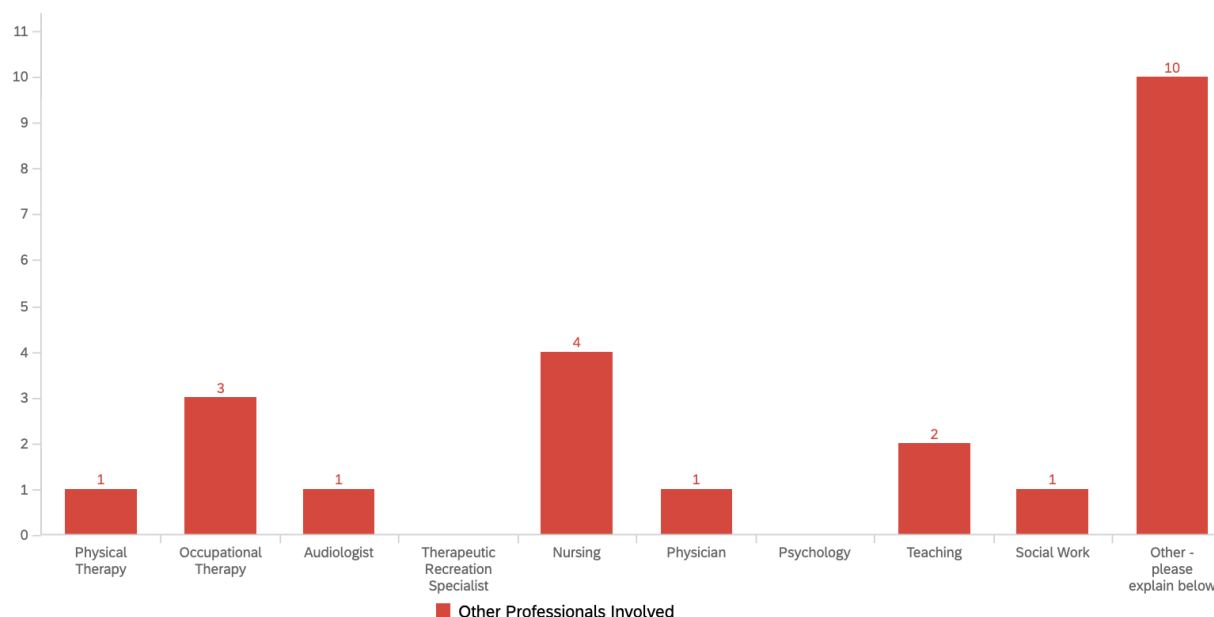


Figure 10. Other professionals involved with speech, language, and hearing camps.

Speech-language pathologists were asked to identify what types of camp activities were provided during a typical day of camp. The survey question allowed for selection of multiple choices and the ability to select as many as applied to the camp. Responses to the question include crafts (22.45%), outdoor activities (20.41%), sports (12.24%), other games (20.41%), and a combination of activities (24.49%). Other reported activities include water play, pet therapy, music therapy, fine motor and sensory activities, literacy-based activities (e.g., book club, read aloud), and cooking. See Figure 11.

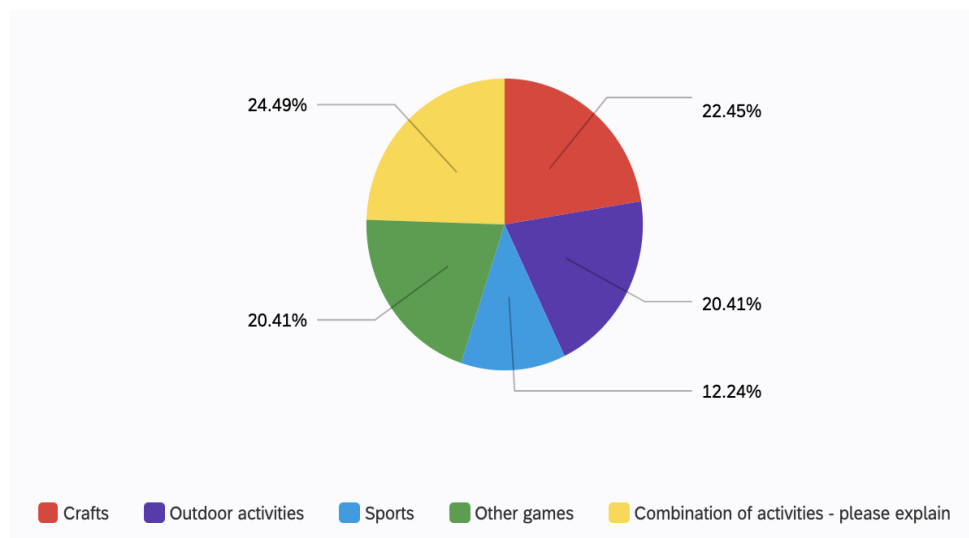


Figure 11. Camp activities identified as part of camp programming structure.

Speech-language pathologists were asked to identify implementing activities as individual (0%), group (23.08%), or both (76.92%). See figure 12. When asked the amount of time dedicated to participants in group and individual activities, 38.46% reported participants spending four or more hours in group activities. See Figure 13. Speech-language pathologists reported giving less than one hour (46.15%) and 1-2 hours (46.15%) for individual activities. See figure 14.

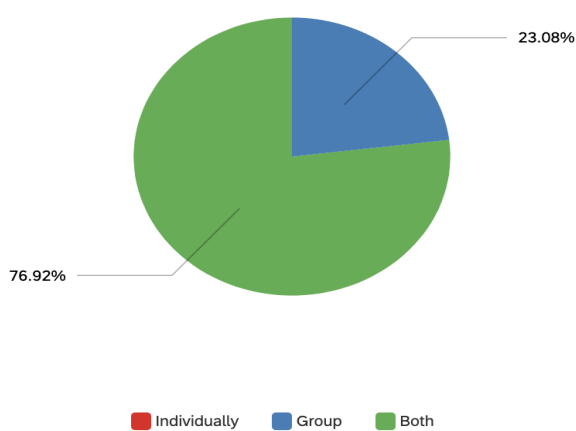


Figure 12. Speech-language pathologists identified how activities were implemented

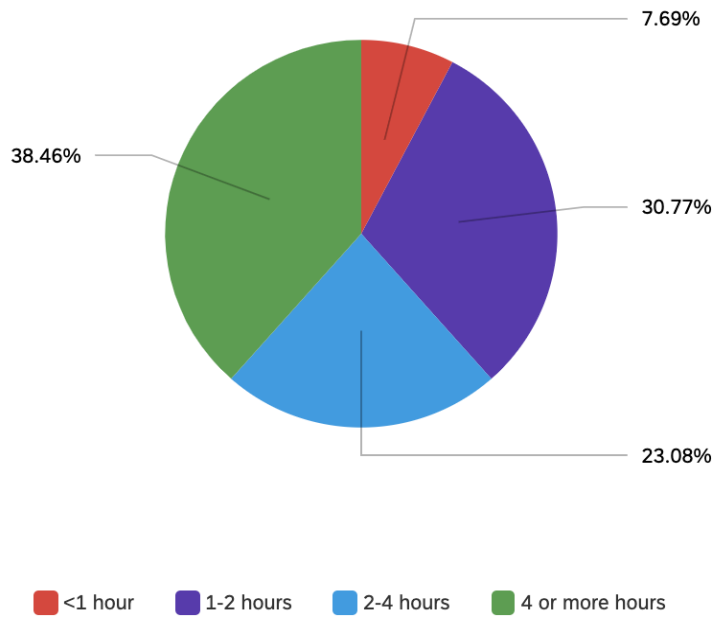


Figure 13. The amount of time dedicated to group activities.

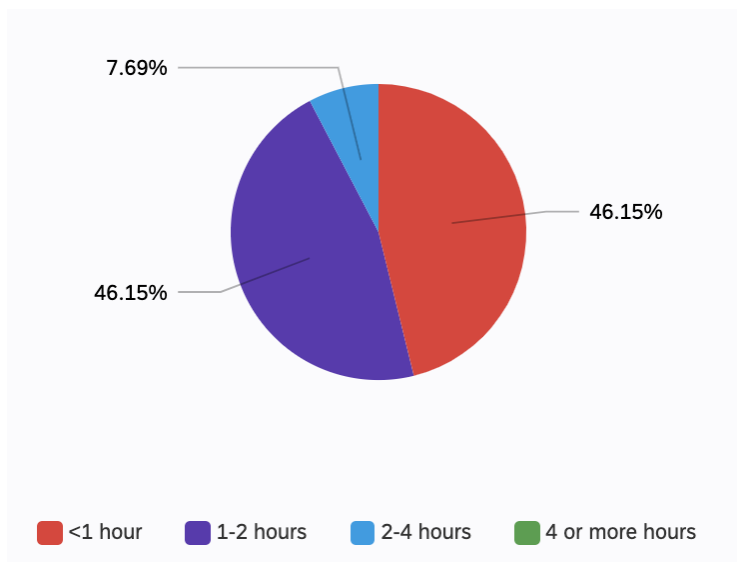


Figure 14. The amount of time dedicated to individual activities.

Speech-language pathologists were asked to report whether they perform a pre-camp screening to determine someone's ability to participate in their camp. The results are as follows: yes (15.38%), no (15.38%), and yes - please explain (69.23%). When asked to explain the screening tool/criteria used, speech-language pathologists reported using IEPs, parent questionnaires, parent interviews, and assessment reports. Some noted performing pre-camp evaluations. See Figure 15.

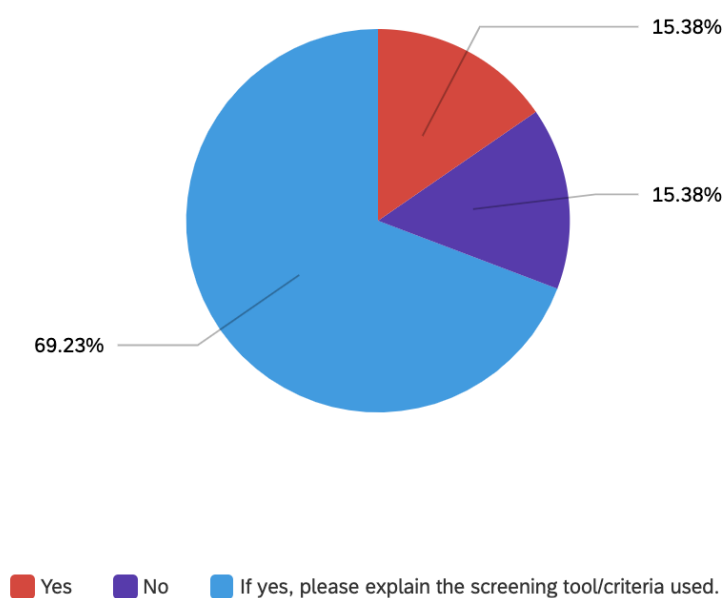


Figure 15. Speech-language pathologists reported if a pre-camp screening tool was used.

When asked if individual goals were created for each camp participant at the beginning of camp, 84.62% of speech-language pathologists reported that they do create goals and 15.38% reported no goals were created. See Figure 16. If goals were established at the beginning of camp, 90.91% of speech-language pathologists reported utilizing parents or caregivers in establishing goals. See Figure 17.

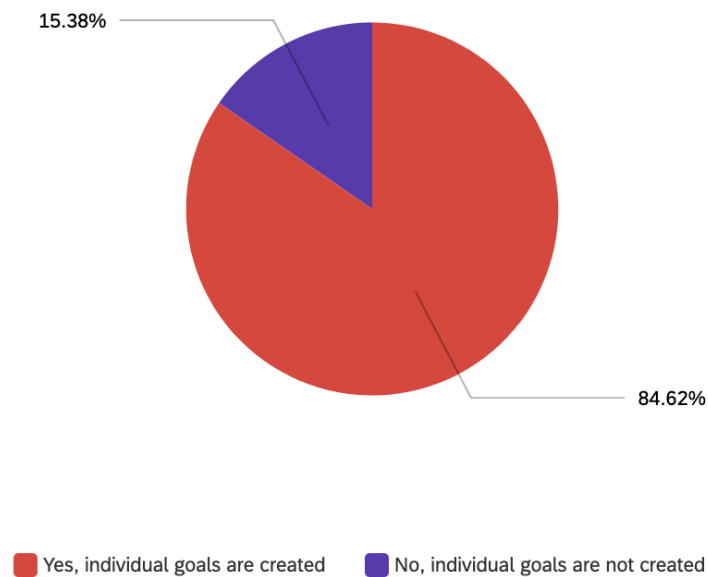


Figure 16. Speech-language pathologists reported if individual goals were created at the beginning of camp.

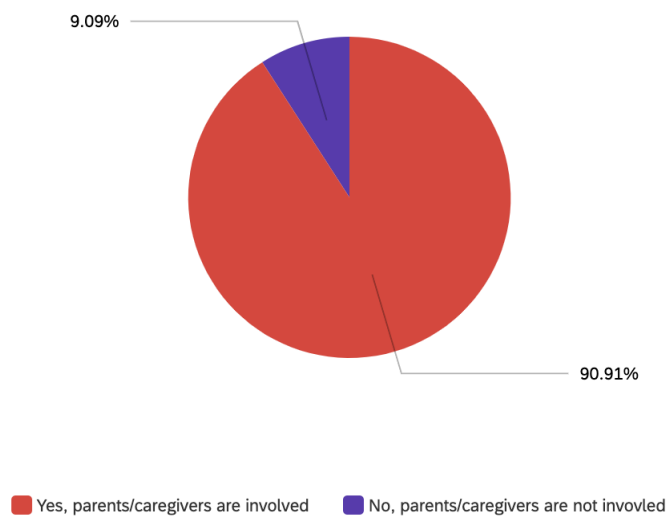


Figure 17. Speech-language pathologists reported if parents or caregivers were involved in establishing goals.

Speech-language pathologists were asked to report if data is collected throughout the duration of their camp regarding a participant's progress towards their goals. The majority (84.62%) reported that data was collected throughout camp. See Figure 18.

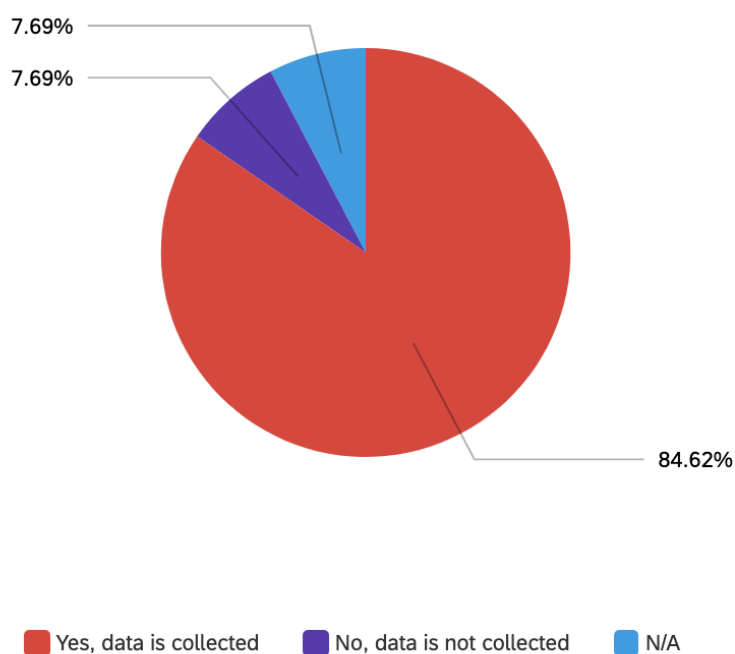


Figure 18. Speech-language pathologists reported if data was collected throughout camp.

Speech-language pathologists were asked to identify if pre-camp and post-camp baseline data was collected related to the disorder treated at camp. Answers varied in relation to whether pre-camp data was related and are as follows: yes (38.46%), no (30.77%), and yes - please explain (30.77%). See Figure 19. When asked about post-camp baseline data collection, 53.85% of speech-language pathologists reported collecting data and 38.46% reported not collecting data after camp. See Figure 20.

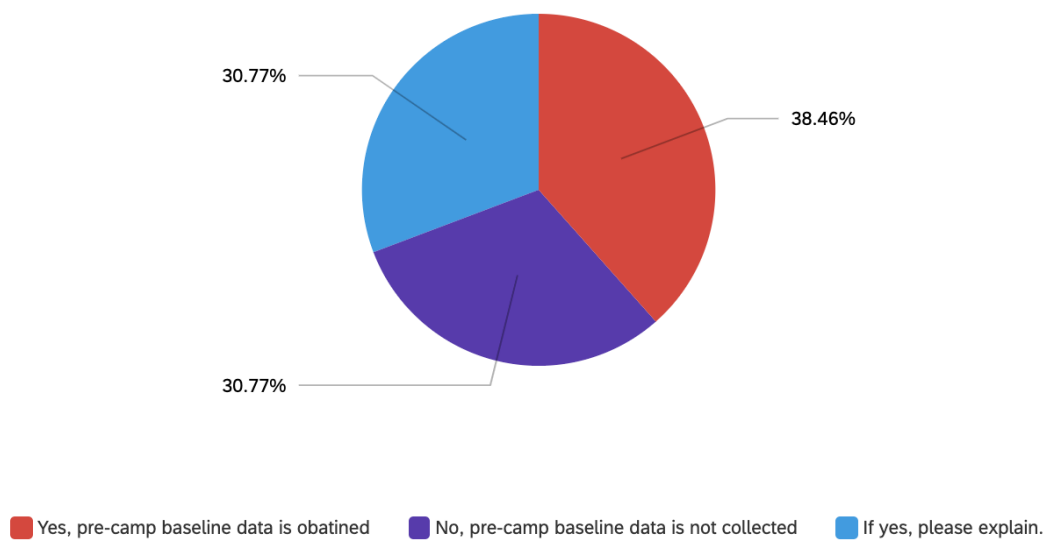


Figure 19. Speech-language pathologists reported if pre-camp baseline data was collected.

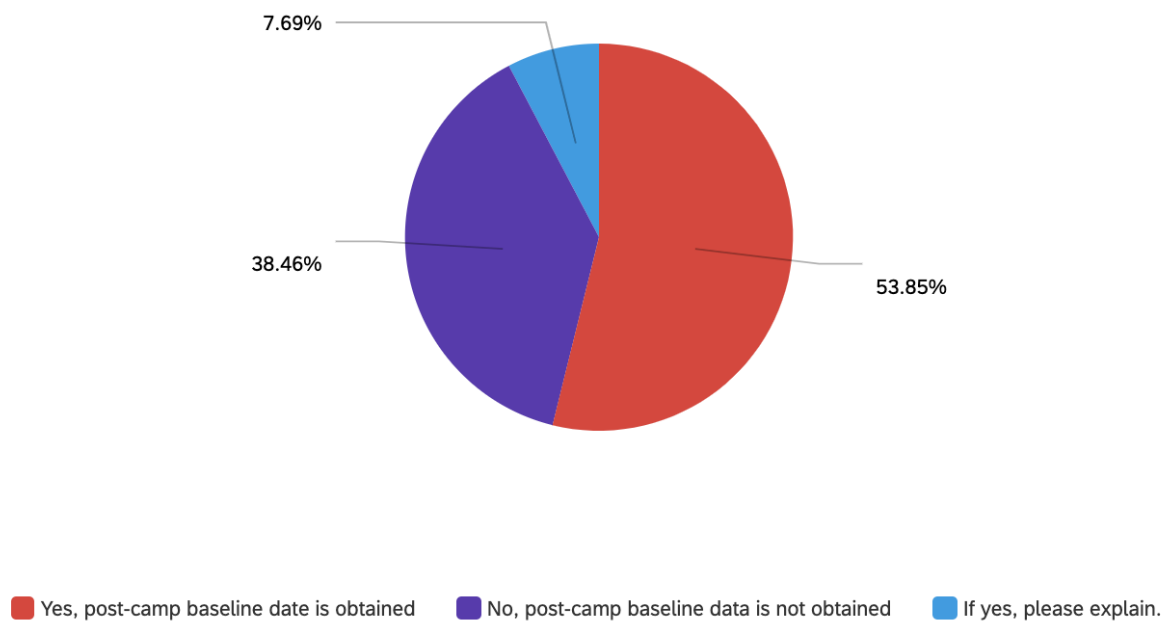


Figure 20. Speech-language pathologists reported if post-camp baseline data was collected.

When asked how speech-language pathologists measure improvement in their participants, the results are as follows: conventional (18.18%), traditional (9.09%), qualitative (50%), project-based (18.18%), standardized testing (4.55%). See Figure 21.

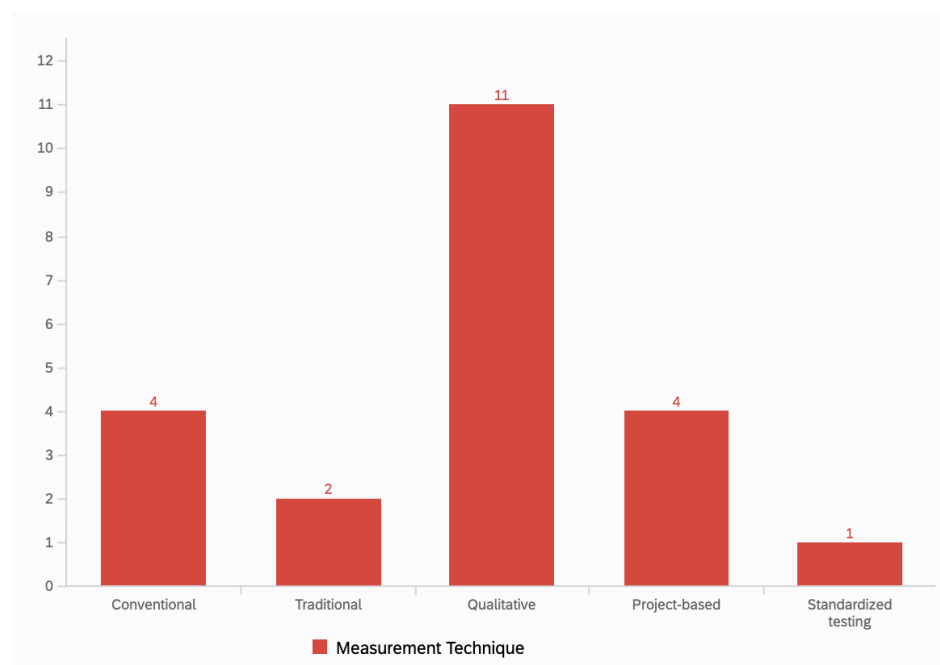


Figure 21. How speech-language pathologists measure outcomes during camp.

When speech-language pathologists were asked an open-ended question about how they would describe success at the end of their camp, a variety of responses were received. Several common themes in response to this question were increased communication skills, independence, socialization, and interaction. One speech-language pathologist reported that:

“Success looks very different for each kid that participates. By the end of the camp, data on targeted goals shows progress. However, the real success stories come from the parents/families of the children that participate. We always have our graduate students ask the families how things are going at home. This is where we hear the real success

stories. The intensive format we utilize for the summer camps seems to facilitate progress more effectively.”

Speech-language pathologists were also asked to describe the impact their camp has on participants through an open-ended question. Response themes to this question include improved quality of life for clients and caregivers, increased access to speech, language and hearing services in an engaging environment, and significant improvements in confidence as communicators. One speech-language pathologist reported that these camps, “Provide a safe place where children with social-cognitive deficits can be coached and practice social competencies.” Another speech-language pathologist reported that:

“The camp participants make progress on their speech/language goals. However, the summer program is often the only summer opportunity that these kids can participate in. Children with typically developing language have many opportunities (e.g., church camp, sports, camp, craft camps) that aren’t always options for the kids that come to see us in the summer. So, it’s a great opportunity for them socially and for growth in speech and language.”

Speech-language pathologists were asked about if they have implemented additional health safeguards to ensure the safety of camp participants and staff due to the COVID-19 global pandemic. The majority (84.62%) of speech-language pathologists reported that they did implement additional safeguards. See Figure 22. Some of the adjustments made reported by speech-language pathologists include: limited participation, COVID-19 screening, increased sanitization, temperature checks, more outdoor activities, and socially distanced interactions. Several speech-language pathologists reported that their camp will be virtual in 2021. Another

speech-language pathologist described sending “camp kits” to be mailed to camp participants who were unable to attend.

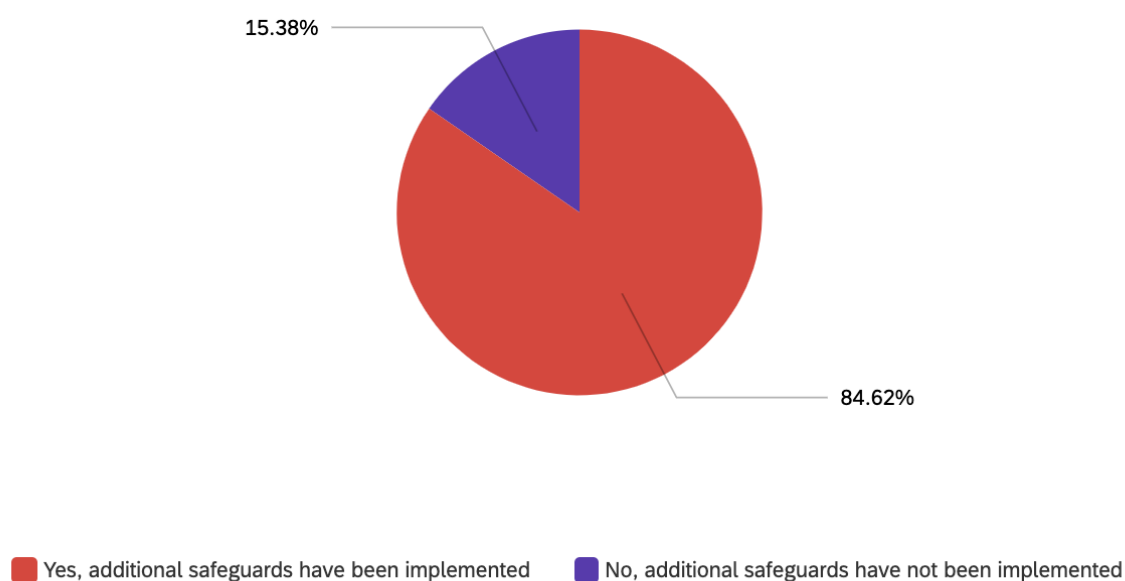


Figure 22. Speech-language pathologists were asked if additional safeguards were implemented to protect camp participants and staff due to COVID-19.

Finally, speech-language pathologists were asked in an open-ended question if their camp integrates typical individuals into their camp. Three speech-language pathologists reported that they integrate peers to model and participate in activities alongside campers. One speech-language pathologist also reported that siblings of campers are encouraged to attend and are engaged at meals, rest, and evening activities. Other speech-language pathologists reported siblings were able to participate if there was room available.

CHAPTER IV

DISCUSSION

The results of this study indicate that speech, language, and hearing camps provide a unique opportunity for utilizing a varied framework to meet the needs of a multitude of populations. The populations surveyed were identified by the American Speech-Language-Hearing Association (ASHA) ‘Big 9’ SLP treatment competencies. Research indicates a growing number of these camps throughout the United States. Upon an Internet search for speech, language, and hearing camps, 112 camps were identified and contacted. A strong distribution of survey respondents was received across the continental United States, including Idaho, Oklahoma, multiple locations in Texas and Tennessee, Pennsylvania, Virginia, Illinois, Michigan, Colorado, and Iowa. There was no clear regional density of camps. Although a large number of camps were identified, participation in this survey was low with 37 participants agreeing to participate in the study and 13 speech-language pathologists completing the entire survey.

To determine how speech, language, and hearing camps operate, speech-language pathologists were asked multiple choice and open-ended questions to describe their camp. The information gathered addressed the type of patient population served, age ranges, number of participants, duration of camp, individual and group activity time, camp setting and location, and other professionals involved. Additional questions were asked to obtain information about pre-camp screening tools, pre- and post- camp data collection, individual participant goal writing, outcome measures, success definition, and the impact their camp has on participants. Results were varied across questions.

Although there was variation among speech, language and hearing camps, each of ASHA's "Big 9" SLP competencies was addressed in one of these camps. This is consistent with previous research that concluded camps provide a unique opportunity and utilize a different framework to cater to a specific population across a variety of settings (Craig, 2014). When searching for speech, language, and hearing camps on the Internet, the most common competency targeted was expressive and receptive language and social communication. The survey conducted found this to be true. This is consistent with camps found during the literature review. It was also found that there are an increasing number of camps that target other communication modalities like augmentative and alternative communication.

When looking at the setting used to implement speech, language, and hearing camps, nearly half of the participants identified their camp as being a summer camp and one-third stated their camp is held at a university. This brings into question the benefits summer programming may have on preventing regression in school-age children with communication disorders who may not have access to intervention during this time period. Further research on camps run by university speech-language pathology programs is also necessary to determine whether the camp was run as a unique treatment delivery model or if the camp was structured to target a specific research question. Several speech-language pathologists reported that their camps utilize graduate speech-language pathology students supervised by clinical instructors to serve as a forum for their students to obtain direct clinical hours. These camps not only serve a specific population, but also provide learning opportunities for students entering the field of speech-language pathology in a controlled and supervised environment.

Additionally, speech, language, and hearing camps engage a wide range of related professionals into these camps. When reviewing literature, many camps outlined goals that focused on using an interdisciplinary approach with allied professionals such as psychologists, special educators, recreational therapists, and occupational therapists. The survey indicated that nursing and occupational therapy were the most common allied professionals. No psychologists were found to be involved in the camps who completed the survey. Survey participants also reported that music, behavioral, environmental, and animal therapy were implemented into the camp structure. Further research should be conducted to determine the effectiveness of multi-disciplinary camps.

Speech-language pathologists were also surveyed to gather information about whether pre- and post- camp data was collected to determine camp effectiveness in reaching participant's individual goals. Researchers found that more than 70% of speech-language pathologists reported collecting data related to the treatment area at the beginning of camp and 60% reported collecting data at the end of camp. It was perceived by researchers that data may not be collected before and after camp intervention to show results of treatment. Surprisingly, the majority of speech-language pathologists did report collecting data to show progress towards participant's goals.

Next, when reviewing literature and information posted on camp websites, many speech, language and hearing camps focused on increasing communication opportunities, parent networking, and creating participant-specific goals. The results of this study indicated that the majority of camps did create individual goals with input from family and caregivers, Individualized Education Program (IEP) information, and assessments. This indicates that these

camps have the ability to reach a specific treatment population while also serving the individual needs of the camp participant.

The majority of speech-language pathologists used qualitative data collection to measure improvement in their camp participants following initial evaluations. This type of data measurement is consistent with information gathered when reviewing the literature of speech, language, and hearing camps, as well as camps in related therapeutic fields. Previous studies indicated that evaluation methods from therapy camps may not always be able to be objectively measured but suggests a holistic approach to therapy. Speech-language pathologists reported success as an increase in interaction and communication skills, improved auditory function, and independence with communicating. Much of the information was anecdotal from parental reports, post camp surveys, and interviews.

The impact speech, language, and hearing camps have on participants is wide-ranging. Several common themes that emerged from this study include cognitive, social, and emotional changes in participants, as well as improved quality of life for clients and caregivers. One speech-language pathologist reported that “campers often meet others who use devices for the first time” and that it can be life-changing [for camp participants] to meet others.” Another speech-language pathologist stated that participants can meet “lifetime friends” in a safe environment. Speech, language, and hearing camps have the potential to make a meaningful impact in the lives of individuals with communication disorders and the benefits these camps have goes beyond what may be typically measured. Further examination of these camps should focus on cognitive, social, and emotional impacts.

Limitations and Future Research

There were several limitations to the current study. It was limited to the small sample size of speech-language pathologists who were directly involved with speech, language, and hearing camps. Additionally, a limited amount of literature available that critically evaluated speech, language, and hearing camps hindered the examination. Similar camps were designed in other fields (e.g., occupational therapy, physical therapy), but there is limited research for the field of speech-language pathology. Next, speech, language, and hearing camps were referenced in other research articles as the framework for a study, but there was no examination of the camp itself. In the future, speech, language, and hearing camps should be studied to examine how these camps may be used as an effective alternative to traditional approaches in the field of speech-language pathology. Additionally, further examination of these camps should focus on the cognitive, social, and emotional impact on camp participants.

Conclusion

The current study provides information regarding details on the framework, pre- and post- camp evaluation techniques, outcome measurements, and the impact speech, language, and hearing camps have. These camps are an effective way to provide intervention for a variety of populations treated by speech-language pathologists. This is demonstrated by the use of data collection to support individual goals and intervention. The impact and benefits these camps have on participants are often measured from qualitative approaches, where camp participants show cognitive, social, and emotional growth that may not be typically measured. However, these camps should continue to be examined as they grow in popularity in order to continue to be an effective alternative to traditional approaches in the field of speech-language pathology.

REFERENCES

- Al Otaiba, S. & Smartt, S.M. (2003). Summer sound camp involving parents in early literacy interventions for children with speech sound delays. *Teaching Exceptional Children*. 35 (3), 30-34. <http://www.cec.sped/org>
- Apraxia Kids (2020). Summer speech & language camps for apraxia. http://www.apraxia-kids.org/apraxia_kids_library/summer-speech-language-camps-for-apraxia/
- Craig, H. (2014). Speech, language, and hearing therapy camps: Framework, Benefits and Efficacy.
- Pamplona, C., Ysunza, A., Patiño, C., Ramírez, E., Drucker, M., & Mazón, J. (2004). Speech summer camp for treating articulation disorders in cleft palate patients. *International Journal of Pediatric Otorhinolaryngology*. 69(3), 351-359. doi: 10.1016/j.ijporl.2004.10.012
- Richards, K., Carpenter, C., & Harper, N. (2011). Looking at the landscape of adventure therapy: Making links to theory and practice. *Journal of Adventure Education & Outdoor Learning*. 11(2), 83-90. doi: 10.1080/14729679.2011.632877
- Shanahan, L., McAllister, L., & Curtin, M. (2009). Wilderness adventure therapy and cognitive rehabilitation: Joining forces for youth with TBI. *Brain Injury* 23(13), 1054-1064. doi: 10.3109/02699050903421115
- Speech Buddies. (2012). Speech camps increasingly popular for speech therapy. <http://www.speechbuddy.com/blog/news/summer-camps-increasingly-popular-for-speech-therapy/>
- Zwicker, L.G., Rehal, H., Sodhi, S., Karkling, M., Paul, A., Hilliard, M., & Jarus, T. (2015). Effectiveness of a summer camp intervention for children with developmental coordination disorder. *Physical & Occupational Therapy in Pediatrics*, 35, 163-177. doi:

10.3109/01942638.2014.957431

APPENDIX A

Methods and evaluation outcomes in speech, language, and hearing camps

Start of Block: Default Question Block

Q1 UNIVERSITY OF NORTHERN IOWA HUMAN PARTICIPANTS REVIEW INFORMED CONSENT

Methods and evaluation outcomes in speech, language, and hearing camps

Dear Participant,

You have been invited to participate in a research project conducted via online survey through the University of Northern Iowa (UNI). UNI requires that you give your signed agreement to participate in this project (if 18 or older) or your consent and parent consent (if under age 18). The following information is provided to help you make an informed decision whether or not to participate.

Investigators: Lindsey Carter, Undergraduate Honors Student, & Todd A. Bohnenkamp, Ph.D., CCC-SLP

Nature and Purpose: This study is collecting survey information on speech, language, and hearing camps. There are an increasing number of specialized camps across the country. Individuals from all aspects of life with differing and challenging conditions participate in these camps on a yearly basis. Methods of intervention and measures of success vary (e.g., subjective, objective, qualitative, descriptive). These camps provide a meaningful experience for their participants and this study is important in understanding how these camps are established and conducted, as well as adapting over time. Studies like this one are important in providing new treatment options for those who may benefit from a change in intervention or therapy environments.

Explanation of Procedures: The project will involve completing an online electronic survey that may take 10-15 minutes to complete. The questions will include questions that focus on demographic characteristics, region, activities, professionals involved, and assessment and treatment measures and tools. Open-ended questions are provided to allow you to expand on your responses or to add comments.

Discomfort and Risks: The potential risks to you are low. You may experience some inconvenience in completing the survey or discomfort in having to answer questions regarding a perceived problem. The procedures being used involve minimal risks to the participants.

Benefits: You may not receive any direct benefits from participating in this study. Findings from the proposed study might benefit speech-language pathologists by adding to the existing literature on understanding and treating speech, language, and hearing disorders in a camp environment. The benefits of this study outweigh the risks, as the benefits are significant and the risks are minimal.

Confidentiality: Information obtained during this study which could identify you will be kept strictly confidential. The summarized findings with no identifying information may be published in an academic journal or presented at a scholarly conference. Data from this study may be used for future studies and you have the option to provide contact information for continued follow-up by the investigators.

Right to Refuse or Withdraw: Your participation is voluntary. You are free to withdraw from participation at any time or to choose not to participate at all, and by doing so, you will not be penalized or lose benefits to which you are otherwise entitled.

Questions: If you have questions about the study or desire information in the future regarding your participation, please contact Lindsey Carter or Todd A. Bohnenkamp at unispeechvoice@gmail.com or (319) 273-3709 or the Department of Communication Sciences and Disorders at (319) 273-2496. You can also contact the office of the Human Participants Coordinator, University of Northern Iowa, at 319-273-6148, for answers to questions about rights of research participants and the participant review process.

By clicking on the link to the survey below, you are indicating that you are fully aware of the nature and extent of your participation in this project as stated above and the possible risks arising from it. By completing the survey you are agreeing to participate in the research and acknowledge that you are 18 years of age or older.

- I agree (1)
- I do not agree (2)

Skip To: Q2 If Q1 = I agree

Skip To: End of Survey If Q1 = I do not agree

Q2 Are you involved with speech-language and hearing therapy camps?

- Yes (1)
- No (2)

Skip To: Q3 If Q2 = Yes

Skip To: End of Survey If Q2 = No

Q3 Where is your speech-language and hearing camp located?

Q4 How are you involved within the camp? Select all that apply

- Camp Director (1)
- Camp Administrator (2)
- Speech-language pathologist (SLP) (3)
- Other - please explain below (4) _____

Q5 If you are a camp director - how many hours per day are you involved in therapy for the specific type of camp you operate?

- <1 hour (1)
- 1-2 hours (2)
- 3-4 hours (3)
- > 4hours (4)

Q6 If you are an SLP and not the camp director - how many hours per day are you involved in therapy for the specific type of camp?

- <1 hour (1)
- 1-2 hours (2)
- 3-4 hours (3)
- >4 hours (4)

Q7 How long have you been running your camp?

- 1 year (1)
- 2-5 years (2)
- 5-10 years (3)
- 10+ years (4)

Q8 Select all professionals involved in the camp you operate.

- Physical Therapy (1)
- Occupational Therapy (2)
- Audiologist (3)
- Therapeutic Recreation Specialist (4)
- Nursing (5)
- Physician (6)
- Psychology (7)
- Teaching (8)
- Social Work (9)
- Other - please explain below (10) _____

Q9 Select all areas within the American Speech-Language-Hearing Association's (ASHA) "Big 9" SLP competencies you treat.

- Articulation (1)
- Fluency (2)
- Voice and resonance (including respiration and phonation) (3)
- Receptive and expressive language (4)
- Hearing (including the impact on speech and language) (5)
- Swallowing (oral, pharyngeal, esophageal, and related functions, including oral function for feeding; oral function for feeding; orofacial myofunction) (6)

- Cognitive assessments of communication (attention, memory, sequencing, problem-solving, executive functioning) (7)
- Social aspects of communication (challenging behavior, ineffective social skills, lack of communication opportunities) (8)
- Communication modalities (including oral, manual, augmentative and alternative communication techniques, and assistive technologies?) (9)
- Other (10)

Q10 Does your camp integrate typical individuals into the camp? Please describe

Q11 What age range(s) do you serve at your camp?

- Birth - 3 years (1)
- School-age (2)
- Adolescent (3)
- Adult (18-30 years) (4)
- Adult (31-70 years) (5)
- Adult (71+ years) (6)

Q12 Which of the following best describes the attendance options for your camp?

- Resident Camp (1)
- Day Camp (2)
- Weekend (3)
- Summer Camp (4)
- Adventure Camp (5)

Other - please explain below (6) _____

Q13 How would you describe the setting of your camp?

University (1)

Private (2)

Other - please explain below (3) _____

Q14 What is the duration of the camp?

Single day (1)

1-5 days (2)

One week (3)

1-2 weeks (4)

3-4 weeks (5)

Greater than 4 weeks (6)

Q15 How many participants attend your camp?

0-10 (1)

11-20 (2)

21-30 (3)

30+ (4)

Q16 Do you limit the number of camp participants?

Yes (1)

No (2)

Q17 What general camp activities are provided? Select all that apply

- Crafts (1)
 - Outdoor activities (2)
 - Sports (3)
 - Other games (4)
 - Combination of activities - please explain (5)
-

Q18 How are speech-language and hearing activities implemented?

- Individually (1)
- Group (2)
- Both (3)

Q19 Approximately how much of the day is dedicated to **group** activities?

- (1)
- 1-2 hours (2)
- 2-4 hours (3)
- 4 or more hours (4)

Q20 Approximately how much of the day is dedicated to **individual** activities?

- (1)
- 1-2 hours (2)
- 2-4 hours (3)
- 4 or more hours (4)

Q21 Do you perform a **pre-camp** screening to determine someone's ability to participate in your camp?

- Yes (1)
- No (2)
- If yes, please explain the screening tool/criteria used. (3)
-

Q22 Do you create individual goals for each camp participant at the beginning of the camp?

- Yes (1)
- No (2)

Q23 If goals are established at the beginning of camp, are parents or caregivers involved in creating these goals?

- Yes (1)
- No (2)
- N/A (3)

Q24 Is data collected throughout the camp regarding a participant's progress towards goals?

- Yes (1)
- No (2)
- N/A (3)

Q25 Do you obtain **pre-camp** baseline data related to the disorder you treat?

- Yes (1)
- No (2)
- If yes, please explain. (3) _____

Q26 Do you obtain **post-camp** baseline data related to the disorder you treat?

- Yes (1)
- No (2)
- If yes, please explain. (3)

Q27 How do you measure improvement in your participants?

- Conventional (1)
- Traditional (2)
- Qualitative (3)
- Project-based (4)
- Standardized testing (5)

Q28 Do you survey participants post-camp regarding their experience with the camp?

- Yes (1)
- No (2)

Q29 What challenges do you face when evaluating in the therapy camp setting?

Q30 How would you describe "success" at the end of your camp?

Q31 How would you describe the impact your camp has on participants?

Q32 Due to the COVID-19 global pandemic, have you implemented additional safeguards to ensure the safety of camp participants and staff?

- Yes (1)
- No (2)

Q33 If you are planning to run a camp in 2021, what adjustments have been made to ensure the safety of camp participants and staff due to the COVID-19 global pandemic?

Q34 Is there any additional information regarding speech-language and hearing camps that you would like to provide?

Q35 Thank you for participating in this research survey. May I contact you with specific questions in the future? These questions would focus on qualitative and descriptive aspects of the camp.

Yes (1)

No (2)

Q36 Please provide your contact information (email and/or telephone) and preferred time of day for contact. Thank you!