

Evaluating the Effectiveness of AAC Camp Alberta: Parent and Student Counsellor Outcomes

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Abstract

AAC Camp Alberta is a weekend family camp for children who use speech-generating devices. This poster reports the results of pre- and post-camp surveys of students and parents from the 2017 camp. Both students and parents reported increased knowledge and confidence using aided language stimulation to support communication following participation in the camp.

Introduction

Augmentative and Alternative Communication (AAC) is used by individuals without or with limited functional speech to supplement their communication. AAC can range from high-tech devices (e.g., speech generating devices) to low-tech aids (e.g., communication boards) (Light & McNaughton, 2014).

Parents and professionals who interact with children using AAC identify the importance of receiving hands-on training in specific communication strategies (Anderson, Balandin, & Stancliffe, 2015). One such strategy is aided language stimulation, where the AAC system itself is used to model communication (Bruno & Trembath, 2006).

AAC Camp Alberta was held July 28-30, 2017. Students from the Faculty of Rehabilitation Medicine acted as counsellors, under the guidance of practicing speech-language pathologists (SLPs). The purpose of this study was to determine the effectiveness of parent and student counsellor training provided at the 2017 AAC Camp Alberta.

Research Questions

1. Did **student counsellors** who received hands-on training in aided language stimulation report increased knowledge, ability, and confidence when supporting communication with AAC devices post-camp?
2. Did **parents** who received hands-on training in aided language stimulation report increased use of their child's AAC device and increased knowledge and confidence in aided language stimulation post-camp?

Methods

Participants

Participants were recruited from the 20 families and 30 of the 34 student counsellors who attended AAC Camp Alberta at Gull Lake Centre in 2017 (the additional 4 counsellors were authors on this poster and excluded from participation). Participants included:

- 13 female parents (65% response rate)
 - 34-58 years (M = 44 yrs)
 - 5 attended camp the previous year, 8 were new to AAC Camp
- 17 student counsellors (57% response rate)
 - 13 first year SLP students (1:1 counsellors)
 - 3 returning second year SLP students (activity leaders this year)
 - 1 first year Occupational Therapy student (group support)

Surveys

Participants were asked to rate statements on a Likert scale, where 1 was strongly disagree and 5 was strongly agree. Student surveys included statements about knowledge, ability, and confidence. Parent surveys included statements regarding knowledge, experience, and confidence with AAC devices and aided language stimulation. Open-ended question responses were also obtained. The surveys were conducted online through Google Forms.

- Pre-camp surveys were collected the week before the start of camp
- Post-camp surveys were collected within 1 week (students) and 2 weeks (parents) after camp

Training

Student counsellors received training before camp while parents received training during camp. Students and parents learned and practiced strategies to support AAC communication, including aided language stimulation.

Design and Analysis

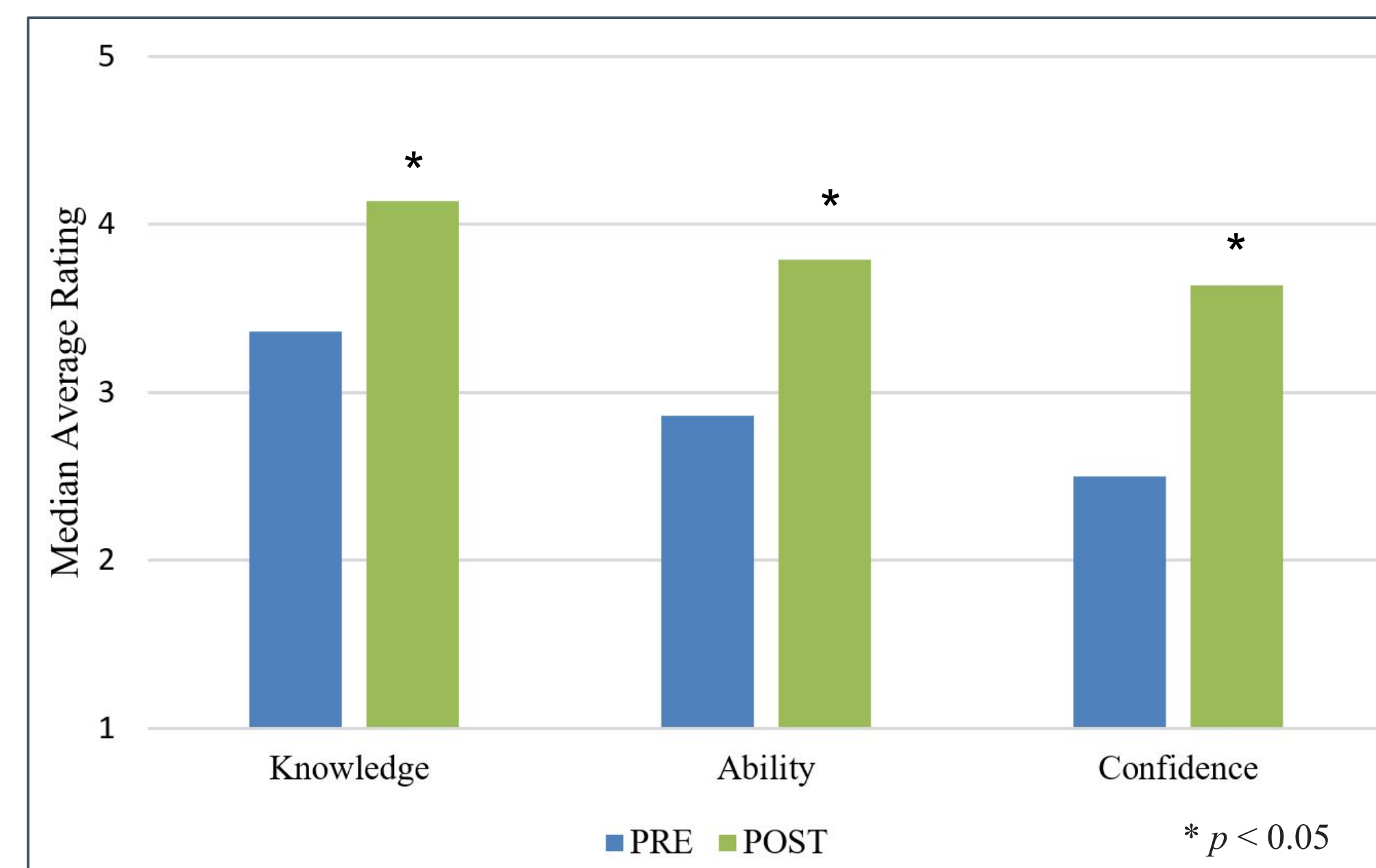
Study design was a within subjects pre-post experimental design for both parent and student participants. Wilcoxon signed-rank tests (SPSS) and Excel were used to manage, review and analyze data.

Results: Student Counsellor Outcomes

Wilcoxon Signed-rank tests revealed statistically significant differences between pre- and post-camp ratings in all categories (knowledge, ability, confidence) with large effect sizes. Post-camp ratings were higher than pre-camp ratings: $Z = -3.63, p < 0.001, r = 0.62$ for knowledge; $Z = -3.63, p < 0.001, r = 0.62$ for ability; $Z = -3.55, p < 0.001, r = 0.61$ for confidence. There were no statistically significant differences ($p > 0.05$) between groups when comparing first year SLPs ($n=13$) and other students ($n=4$) in any of the categories. For knowledge, pre-camp range was 1.93 to 4.07, and post-camp range was 3.00 to 4.64. For ability, pre-camp range was 1.57 to 3.79, and post-camp range was 2.71 to 4.57. For confidence, pre-camp range was 1.14 to 3.57, and post-camp range was 1.86 to 4.64. (See Figure 1.)

Cronbach's alpha values for knowledge, ability, and confidence on the pre- and post-surveys ranged from 0.908 to 0.948.

Figure 1. Change in student counsellor survey ratings for the categories of knowledge, ability, and confidence.



Student Perceptions of Improvement:

When asked to rate if the camp increased their knowledge, ability, and confidence, students agreed with these statements with medians as followed, knowledge: 5, ability: 5, and confidence: 4.



Student Counsellor Comments

"[The camp] really gave me an inside look into AAC and made me feel a lot more confident in myself and my skill set (sic) in that area."



"It was a wonderful experience to be able to talk to the individuals who use AAC and their families. It was a really valuable opportunity and I learned a lot from watching the families interact and listening to their stories."

Results: Parent Outcomes

Parents' Knowledge of Aided Language Stimulation:

A Wilcoxon Signed-rank test revealed a statistically significant increase in parents self-reported **understanding** of aided language stimulation, $Z = -2.32, p < 0.05$, with a medium-large effect size ($r = 0.44$). No significant difference was found between pre- and post-camp for parents' ratings of their **confidence**, $Z = -1.73, p = 0.08$, with a small-medium effect size ($r = 0.25$). No significant difference was found between pre- and post-camp for parents ratings of **use** of aided language stimulation, $Z = -1.34, p = 0.26$, with a medium-large effect size ($r = 0.46$). (See Figure 2.)

Parents' Ability to Define Aided Language Stimulation:

Although 6 of 13 parents reported an increase in understanding of aided language stimulation (pre-camp $Mdn = 3$; post-camp $Mdn = 4$), only 3 of the 6 were able to correctly define and provide an example of the term.

A total of 7 of 13 parents demonstrated an understanding, via a definition and example, of aided language stimulation post-camp, an increase of 1 from pre-camp.

Figure 2. Change in parents' reported understanding, use of, and confidence using aided language stimulation.

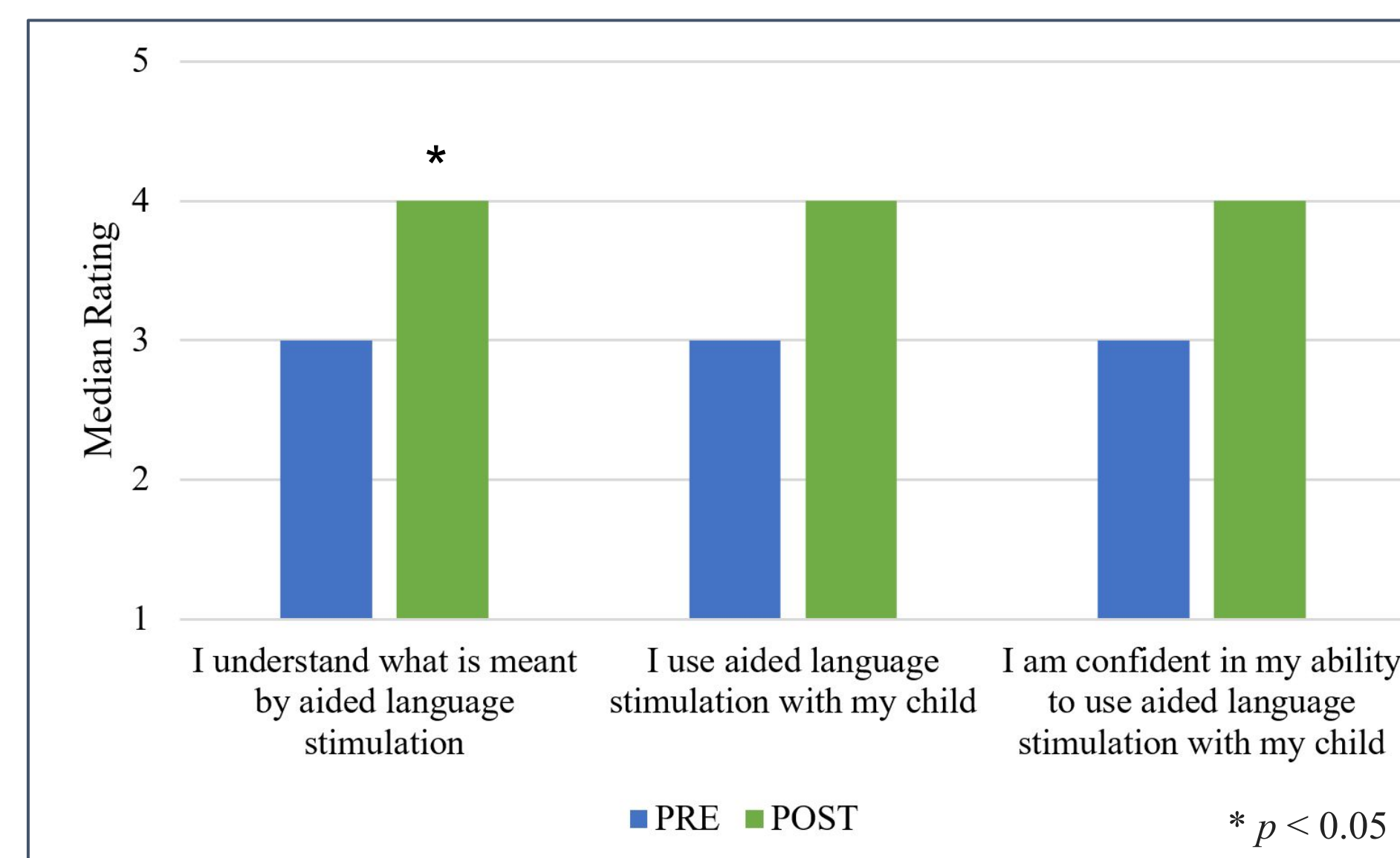
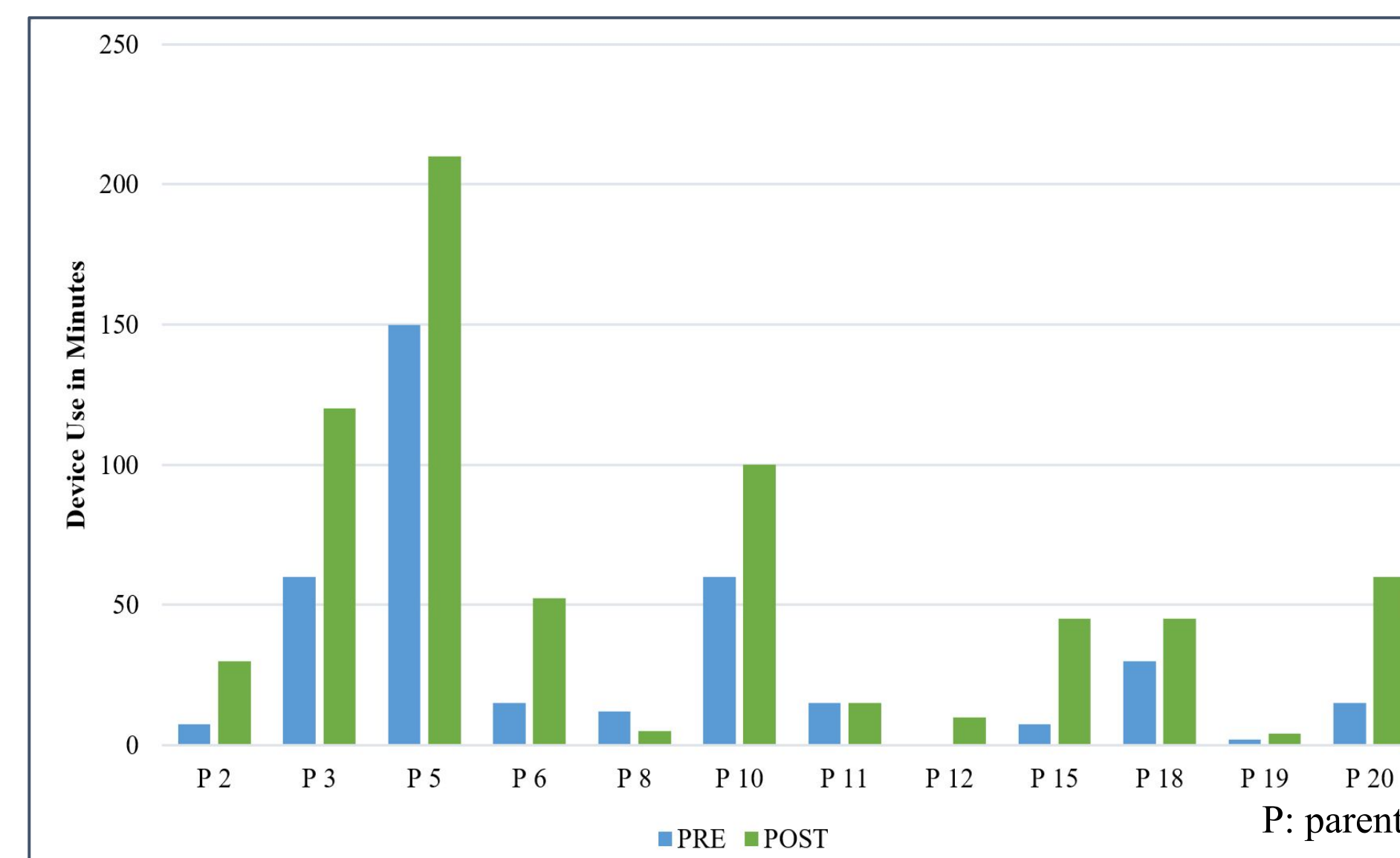


Figure 3. Change in parents' reported use of their child's AAC device (n=12: P1 excluded due to no response).



Parent Comment

"Attending this camp motivated me to increase my entire [family's] exposure to his device."

Parents' Use of Their Child's AAC Device:

A Wilcoxon Signed-rank test revealed a statistically significant increase in parents self-reported **use of their child's device**, $Z = -2.76, p < 0.05$, with a large effect size ($r = 0.56$). The median reported parental device use increased from 15 minutes/day pre-camp (range = 0-150) to 45 minutes/day post-camp (range = 4-210). (See Figure 3.)

Discussion

Aided language stimulation training in a camp setting provides a naturalistic and social learning environment for children who use AAC, their families, and student counsellors. Following student training and the hands-on experience provided by the camp, student counsellors reported increased knowledge, ability and confidence communicating with children who use AAC devices. As most SLP graduate student programs contain limited exposure to AAC, this camp was reported to be a valuable experience to the students involved (Ratcliff, Koul, & Lloyd, 2008).

Parents reported using their child's device more often after camp; this may be due to actual changes in use or participant response bias. Regardless, increased language input is beneficial for pediatric language development (Allen, Schlosser, Brock, & Shane, 2017).

Although parents rated themselves as having understood aided language stimulation, only about half were able to correctly define it. Combined, this difficulty defining and lack of significant change in parent's confidence and use of aided language stimulation suggests a possible participant response bias. It is also possible that parents may accurately use aided language stimulation, without being able to define it. Overall, the results indicated that more time could be devoted to parent training in future years.

Conclusion

Participation in AAC Camp Alberta

- Provided an interdisciplinary hands-on experience for rehabilitation students likely to encounter AAC devices in their future careers
- Fostered collaboration between student counsellors, parents/families, and supervising SLPs which enabled students to gain a broader perspective on AAC device use
- Facilitated interaction between rehabilitation students, families, and supervising clinicians, allowing them to learn from each other, develop their skills, and build relationships with each other
- Provided an opportunity for parents and children to connect with other families who use AAC devices
- May promote increased device use in the short-term

Future research could

- Further examine parent and student outcomes via qualitative analyses
- Investigate the long-term impact of camp on device use
- Examine the effectiveness of sibling training at AAC camp
- Explore other parent training opportunities in addition to camp



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