



(PMI;

and provided guidance throughout the intervention. The facilitators were trained by the research team. Peers were trained regarding facilitative, student-specific strategies and how to be a positive model. The peer network intervention involved social groups of 3-6 peers and a focus student meeting once per week throughout one semester, outside of classroom time. Outcome measures included study-specific measures and student report to evaluate social contacts, friendship gains, and maintenance and generalization information, a questionnaire for social validity, and a psychometrically-sound rating scale to evaluate social skills. These measures were completed at four different time points – pre-intervention, post-intervention, one semester follow up, and two semesters follow up. Results revealed substantial improvements in the reported social relationships of students with disabilities, including increases in social contacts and number of friends without disabilities. As well, social contacts between peer partners and focus students were reported at follow up in the next semester and one year post. Teacher-reported data showed parallel results.

Strengths of this study include a strong design, an adequate sample size, detailed inclusion criteria and intervention procedures, high treatment fidelity and social validity, and the use of appropriate scales, assessments, and data analysis techniques to evaluate various outcome variables. Limitations of this study include the absence of direct observations of the quality and quantity of interactions between focus students and their peers, and the fact that peers were not necessarily age-matched to the focus students.

Overall, this study provides compelling evidence that strengthening social connections between students with and without CCN is possible and effective via regular, supported opportunities to interact during non-instructional contexts, and that these peer-mediated interventions facilitate increased social contacts and friendship development.

Using a multiple-probe across participants design, *Biggs et al. (2017)* investigated the efficacy and social validity of peer support arrangements for 4 middle school students (ages 10-16) with CCN who used an AAC device. Each student was grouped with 2 classmates without disabilities that served as peer partners (n = 8). Peers received training from members of the research team regarding how to provide academic, social, and communication support to focus students using four general AAC interaction strategies – provision of communication opportunities, expectant delay, prompting, and responding appropriately, as well as individualized, focus-student specific strategies outlined during a collaborative planning meeting between the

research team and the special education team. Trained paraprofessionals facilitated interactions and provided support. The intervention involved peers sitting in close proximity to the focus students on a daily basis in the classroom over the course of a semester, providing support via the use of the strategies taught. Outcome measures included a checklist for treatment implementation, a social validity questionnaire completed at the end of the semester, and observational measures conducted two to four times per week across the baseline, intervention, and generalization conditions. Results demonstrated increased engagement in a variety of social and academic interactions, more frequent initiations, and increased communication to and from peers. Regarding social validity, focus students and peers considered each other friends. S



session across the baseline, intervention, and generalization conditions, as well as student report and questionnaires completed by parents, SLPs and teachers during and after intervention to evaluate social validity. Results indicated that all three children with CCN took significantly more turns during the intervention than during baseline in Cohort 1. Moreover, the average frequency of turn-taking during generalization probes increased from baseline.

increase social contacts and strengthen social connections between students with CCN and their peers.

A second way in which the studies varied was regarding whether the intervention was single- or multi-component in nature. Half of the studies trained peers using both interaction strategies and AAC, whereas the remaining three studies trained peers using interaction strategies alone. Though all studies alluded to the positive impact that PMI has on social outcomes, multi-component interventions may facilitate a more equal balance in the social relationship. Pairing AAC with interaction strategies, like in Therrien and Light (2016; 2018) and Thiemann-Bourque, McGuff and Goldstein (2017), provides dyads with a shared means of communication, aiding both students as a general support as opposed to being a dedicated technology for a single student.

A third way in which the studies varied was regarding whether both the peer and the student with CCN were trained or just the peer only. Both the peers and the students with CCN were trained in Therrien and Light (2016; 2018), whereas the remaining four studies trained the peers only. Regardless of training specifications, all studies demonstrated that the use of PMI can result in improved social outcomes for students with CCN. Although, training both the peers and the students with CCN may result in a more equal status relationship. In these cases, the peer is not trained to be

*References*

- \*Asmus, J. M., Carter, E. W., Moss, C. K., Biggs, E. E., Bolt, D. M., Born, T. L.,... Weir, K. (2017). Efficacy and social validity of peer network interventions for high school students with severe disabilities. *American Journal on Intellectual and Developmental Disabilities*, 122(2), 118-137. doi:10.1352/1944-7558-122.2.118
- Batorowicz, B., Campbell, F., Von Tetzchner, S., King, G., & Missiuna, C. (2014). Social participation of school-aged children who use communication aids: the views of children and parents. *Augmentative and Alternative Communication*, 30(3), 237-251.
- \*Biggs, E. E., Carter, E. W., & Gustafson, J. (2017). Efficacy of peer support arrangements to increase peer interaction and AAC use. *American*

*health (ICF)*. Geneva: World Health Organization.

\*Indicates studies included in the critical review