

State of the Science and Future Directions in Communication Interventions for People with ASD

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Uniqueness of Communication Deficits in ASD

- Compounded by deficits in:
 - Social connectedness/orientation toward other humans
 - Understanding/using nonverbal communication
 - Responding restricted to particular stimuli
- Complex communication needs



Access to Communication as a Basic Civil Right

- Communication is
ubiquitous



Difficulty communicating leads to...



Evidence-Based Communication Interventions

- Behavioral interventions (prompts, task analysis, time delay, reinforcement)
- Augmentative and alternative communication interventions
- Functional communication training
- Naturalistic behavioral interventions (PRT, Incidental teaching)
- Modeling (video and in vivo)
- Peer-mediated interventions
- Visual scripts



Research Support: Skills Taught

- Supports limited communicative functions
 - Behavior regulation
 - Information exchange
 - Social Interaction
- Supports early phases of communication instruction
- Unfounded concerns regarding AAC and speech



Research Support: Participant Characteristics

- Primarily preschool and elementary ages
- More support with people with ASD without co-occurring conditions
- Girls/women tend to be underrepresented
- Little support for use of interventions with culturally and linguistically diverse learners



Research Support

- Small scale:
 - Much of the research has been conducted with small numbers of participants
- Limited contexts:
 - Only limited research has been conducted in natural settings/contexts
 - Instructional strategies tend to be didactic
- Mobile tech revolution...



High-Tech Versus No- or Low-Tech

- Limited research
- Little apparent difference in results between high- and low- or no-tech
 - Exception: unaided AAC (such as sign language)
- This is an emerging area of research



Strengths of High-Tech-Based Interventions for Communication

- Social validity/ acceptability
- Portability
- Affordability
- Increasingly intuitive
- Flexibility and just-in-time use
- Integrate communication with other tech tools



Mobile Tech-Based Interventions May Not be Suited for Everyone

- Preference
- Distractions on the device
- Difficulties with funding
- Future research on mobile tech...



Future Directions

- Characteristics of participants
 - Large group studies
 - Adolescents and adults
 - Matching participant characteristics to interventions
- Communicative functions
 - Behavior regulation
 - Information exchange
 - Social Interaction



Future Directions

- Intervention packages
 - Overlap between intervention components across packages
 - Same thing, different name
 - Multimodal communication interventions
 - Expansion to broader communicative functions/skills
 - Incorporating mobile technology



Future Directions: Feasibility

- Ease of use and to program
- Likelihood of adoption and maintenance
- Implementation across settings/contexts for generalization and maintenance of skills
- Social validity/acceptability
- Treatment fidelity among natural communicative partners
- Costs (money and time for implementation and training)
- Preference of individual with ASD and caregivers



Future Directions

- Improving standards in single-case research
 - Procedural integrity/treatment fidelity
 - Description of interventionists



Future Directions

- *Addressing unestablished/controversial treatments accepted by the public*



Final Issues

- Success of an intervention has more to do with the intervention techniques than materials/technology
- Avoid controversial/unproven “treatments”
- Communicative competence: People with ASD deserve access to the full range of communicative functions and broad vocabularies



References

- Ganz, J. B. (2015, July). A perspective on access to communication as a basic human right. *Hawks Hopes Blog: Change is a Collaborative Act* (University of Kansas Special Education Department). Retrieved from: <https://hawkhopesblog.wordpress.com/2015/07/12/a-perspective-on-access-to-communication-as-a-basic-human-right/>
- Ganz, J. B. (in press). AAC interventions for individuals with autism spectrum disorders: State of the science and future research directions. *Augmentative and Alternative Communication*. doi: 10.3109/07434618.2015.1047532
- Light, J., & McNaughton. (2015). Designing AAC research and intervention to improve outcomes for individuals with complex communication needs. *Augmentative and Alternative Communication*, 31(2), 85-96. doi:10.3109/07434618.2015.1036458
- National Autism Center. (2015). *Findings and conclusions: National Standards Project, Phase 2: Addressing the need for evidence-based practice guidelines for autism spectrum disorder*. Randolph, MA: Author.
- Odom, S. L., Thompson, S., Hedges, B. A., Boyd, J. R., Dykstra, M. A., Duda, K. L., . . . Bord. (2014). Technology-aided interventions and instruction for adolescents with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, doi:10.1007/s10803-014-2320-6
- Wong, C., Odom, S. L., Hume, K., Cox, A. W., Brock, M. E., Plavnick, J. B., Schultz, T. R., Fettig, A., & Kucharczyk, S. (2012). *Evidence-based practices update: Reviewer training*. Chapel Hill: The University of North Carolina, Frank Porter Graham Child Development Institute, Autism Evidence-Based Practice Review Group. doi: 10.1007/s10803-014-2351-z
- Wong, S. L., Odom, K. A., Hume, A. W., Cox, A., Fettig, S., Kucharczyk, M. E., . . . Schultz. (2015). Evidence-based practices for children, youth, and young adults with autism spectrum disorder: A comprehensive review. *Journal of Autism and Developmental Disorders*, 45(7), 1951-1966. doi:10.1007/s10803-014-2351-z



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