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
• Rote contexts/scenarios

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
• Researcher implemented
• 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

Apparent Strengths of High-Tech Interventions

- 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 or components of them
- 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
  - Incorporating mobile technology

### Future Directions: Feasibility

- Ease of use and to program
- Likelihood of adoption and maintenance
- Implementation across contexts for generalization and maintenance
- 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
• Measures of social validity
• Consistency with assessments of participants

Future Directions

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

Final Points

• Success of an intervention has more to do with the intervention techniques than materials/technology
• Communicative competence: People with ASD deserve access to the full range of communicative functions and broad vocabularies
References
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