A Feature Matching Protocol for Telepractice Augmentative and Alternative Communication (AAC) Evaluation

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Background

- A variety of communication modalities are used by people with communication disabilities.
- Augmentative and Alternative Communication (AAC) refers to systems, strategies, and tools used to support an individual's expressive and/or receptive communication when barriers to spoken/signed language are present.
- Speech-language pathologists (SLPs) provide evaluation and recommendations of AAC systems
- Barriers to effective service delivery
  - limited training
  - lack of research on efficacy of evaluation techniques;
  - barriers to in-person SLP services
- SLPs transitioned clients to telepractice due to COVID-19
- Lack of evidence or guidance for telepractice AAC evaluations

Purpose

- Develop a protocol for an AAC feature matching assessment to be administered via telepractice.
  - Criterion-referenced measures were developed to assess clients using alternative access (e.g., scanning, head-pointing) in the areas of:access methods, symbol set, display type, message organization, and additional features.

Barriers to in-person services including due to COVID-19 pandemic

Individuals continue to need timely access to effective communication supports

The need to communicate about health and safety is critical during global health crises.

Methods

Pre-Assessment

Davies (2020), Curtis (2014), Kanter (2020), Van Tatenhove (2013)

- Asynchronous
  - Video Observation with Permission
  - Questionnaire/Survey
- Synchronous
  - Technology Troubleshooting
  - Interview

Access Method

Beukelman & Light (2020)
Beukelman & Mirenda (2013)

- Direct Access
- Indirect Access (Switches)

Symbol Set Assessment

Beukelman & Light (2020)
Beukelman & Mirenda (2013)

- Receptive Formats
  - Functional Use
  - Receptive Labeling
  - Yes/No
  - Alternative Visual Matching
- Expressive Format
  - Question and Answer
  - Requesting

Vocabulary Presentation

Beukelman & Light (2020)
Beukelman & Mirenda (2013)

- Array Size
- Layout

Message Organization

Fallon, Light, Achenbach (2003)
Beukelman & Light (2020)

- Sorting: taxonomic, syntactic-semantic
- Sorting: activity, pragmatic, syntactic-semantic

Display

Beukelman & Light (2020)
Beukelman & Mirenda (2013)

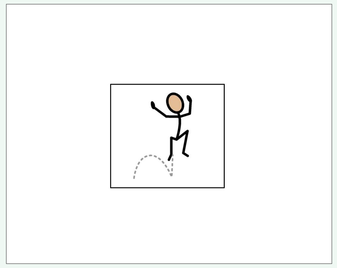
- Static Display
- Dynamic Display

Materials

(Excerpts from Protocol)

Aided Symbol Set Assessment

Identify potential types of representation

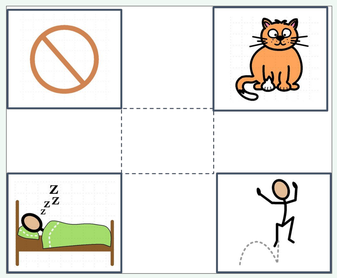


Teach Target

"Look, this symbol means jump."

Teach/Demonstrate Selection

"Let's tell (parent) to jump! We can tell (parent) to jump by choosing the jump symbol."



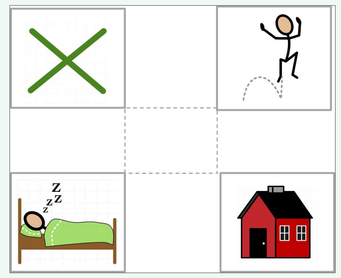
Demonstrate using the identified access method to choose target symbol.

Instruct parent/caregiver to jump when target is selected.

"Now it's your turn!"

Test Items 1-4

"Let's tell (parent) to jump!"



Instruct (parent) to jump if target is selected.

If a non-target cell is selected, label the symbol *"Thats a (non-target item). Let's tell (parent) to jump!"*

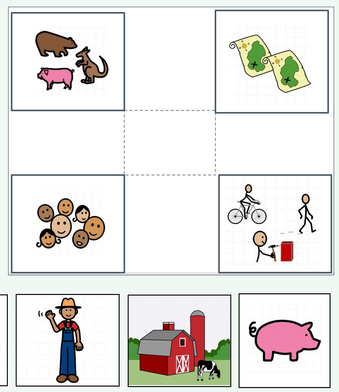
Record selection.
Advance to the next item.

Message Organization

Identify potential organization strategies

Provide categories and ask individual to sort the symbols

1. Teach meaning of each category. (animals, places, people, actions)
2. Instruct client to sort items



Discussion

Next Steps

- Consult with adults with communication disabilities, including individuals who use AAC, using community-based research principles, and make revisions based on input provided
- Increase accessibility of protocol materials for access by clinicians and researchers with disabilities
- Conduct research studies to evaluate the generalizability of the protocol to a diverse set of clients who may benefit from AAC

Limitations

- This project involves co-researchers with communication disabilities, including one AAC user- however AAC user/s were not involved from project onset
- Unaided symbol sets were not included (ex. Signed Language)

"People with disabilities are underrepresented in teams designing and conducting research… Very few published studies in the rehabilitation literature have included consumers in the research process in roles other than research subject."
(Ehde, 2013)

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