Background

• Individuals with language disorders demonstrate impaired narrative ability and a resultant decline in functional communication.1
• Current discourse measures have standardized instructions but few norm-references.
• Main Concept Analysis (MCA) is a reliable, valid method of assessing gist production2 and standardized and norm-referenced lists have recently been developed for 3 discourse tasks.3

Core Lexicon (CoreLex) checklists provide a time-efficient and informative index of functional communication ability.4,5

Specific Aim 1: To develop Main Concept and Core Lexicon lists for Cat Rescue and Refused Umbrella sequential picture description tasks from the AphasiaBank protocol.

Specific Aim 2: To report normative performance on these lists.

Methods

Database:
• Transcripts of control participants were retrieved from the AphasiaBank database. All participants completed the AphasiaBank protocol with standardized administration.
• Transcripts from 92 individuals (55 female, 37 male; 88 Caucasian, 2 African American, 2 Hispanic/Latino) were selected to serve as the normative sample to match that used previously.1
  • 5 participants did not complete Cat Rescue due to a change in the protocol. Matched controls were identified to replace these participants and maintain sample size.
• Demographics for each story area:
  • Refused Umbrella: mean age 58.3 (±21.6); mean education 15.6 (±2.5)
  • Cat Rescue: mean age 58.6 (±21.7); mean education 15.6 (±2.4)

Relevant Concepts (RCs):
• RCs are defined as correct utterances about the story that contained a subject, one main verb, and object (if appropriate).
• A master list of all relevant concepts was developed for the two stories.
• As new concepts were identified, they were added to the list.
• All normative sample transcripts were analyzed and frequency counts gathered.

Main Concepts (MCs):
• Relevant concepts spoken by 33% or more of the normative sample were MCs.
• After identifying MCs, the normative sample transcripts were coded according to published guidelines.6 The possible codes are:
  • Absent (AB): The participant did not produce any portion of the MC.
  • Inaccurate/Incomplete (II): The participant attempted to produce a portion of the MC, but it was missing at least one essential element and another essential element was incorrect.
  • Inaccurate/Complete (IC): The participant produced a complete MC, but at least one essential element was inaccurate.
  • Accurate/Incomplete (AI): The participant produced an accurate MC, but at least one essential element was missing.
  • Accurate/Complete (AC): The participant produced all essential elements, and all essential elements were correct.
• Codes were assigned a numeric value with AB = 0, II = 1, IC = 2, AI = 2, AC = 3.
• Scoring system was adapted7 to give equal weight to semantic and phonemic errors.

Scores for each MC for each story were summed to yield a Story Composite. Core Lexicon (CoreLex):
• The entire lexicon for the picture descriptions was identified using the CLAN command: freq+[T+PAR+"n+"a+"e+"r+"o+"s+"h+"g+"m+"c+"e+x+"d+"s+"t+"s+"t+"e+"x] +[C0].
• Lemmas produced by 50% or more of control participants were considered core.
• CoreLex production was scored using this list:
  • Individuals received a “1” if the lemma was produced and a “0” if it was absent.
  • The sum of values across a story served as the CoreLex score.

Normative Lists

Cat Rescue Main Concept List
1. The little girl was riding her tricycle.
2. The cat was stuck in the tree because the dog chased/scarred it.
3. The dog was barking at the tree.
4. The man climbed the tree to get the cat.
5. The ladder fell down.
6. The father is stuck in the tree with the cat.
7. Someone called the fire department.
8. The fire department comes with a ladder.
9. The fire department rescues them.

Cat Rescue Core Lexicon
A And Back Bark Be Call Cat
Climb Come Dad Department Dog Down
Fire Get Girl Go Have He
Her In Ladder Little Not Out
So Stick The Their There To
Tree Up With Fireman

Refused Umbrella Main Concept List
1. The mother says it is going to rain today.
2. The mother says you need to take the umbrella.
3. The boy doesn’t want (or actively refuses) the umbrella.
4. The boy walks to school.
5. It is raining.
6. The boy gets soaking wet.
7. The boy runs back and goes into the house.
8. The mother is [negative emotional state].
9. The boy gets the umbrella.
10. The boy goes back to school/with the umbrella.

Refused Umbrella Core Lexicon
A And Back Bark Be Boy Do
Get Go Have She He Home
In It Little Mother I Need
Not Out Rain Say School So
Start Take That The Then To
Umbrella Walk Wet With Your

Discussion
• We have established a set of standardized and normed results for two additional discourse tasks that clinicians can use to quickly evaluate discourse and compare to same-age peers.
• There now exist MC and CoreLex lists for all of the picture elicited discourse samples in the AphasiaBank protocol.
• The generated lists could serve as clinically useful non-transcription-based checklists for narrative assessment when discourses are elicited according to AphasiaBank protocols.
• The availability of these lists for the Broken Window, Cat Rescue, and Refused Umbrella tasks may allow for analysis of a comparable discourse task when using the same task is not ideal (i.e., short test-retest intervals) since these tasks yield lists of approximately the same length.
• However, the comparability of these lists should be directly examined.