In support of this theory, researchers using single concept paradigms have established that PWA had left hemisphere damage, anomic aphasia produce nouns within narrative discourse that have higher frequency, higher imagability, higher familiarity, and a younger age of acquisition compared to healthy controls. For example, Dell et al. (1997) demonstrated that lexical access in PWA can be modeled by increasing the noise or weakening the connections between the semantic layer and phonological layer.

In support of this theory, researchers using single concept paradigms have determined that PWA have easier access to words that: have a higher frequency (Dede, 2012, Haley & Jacks, 2014); are more imaginable/concrete (Kiran et al., 2009); are more familiar (DeDe, 2012); acquired at an earlier age (Hirsh & Funnel, 1995). Currently, no one has measured lexical production within a discourse task in respects to word frequency, imagability/concreteness, familiarity, or age of acquisition.

**METHOD**

**Discourse Measure:**

Cinderella (Grimes, 2005)

**Noun Extraction in CLAN:**

Separate Cinderella Narrative:

\[ \text{gem} + \text{PAR} + \text{sCinderella} + \text{d} + \text{d} + \text{d} + \text{n} \]

Generate Morphological Analysis:

\[ \text{mor} + \text{PAR} + \text{gem.cex} \]

Generate Syntactic Categories:

\[ \text{post} + \text{PAR} + \text{gem.mor.cex} \]

Clearpond Database & MRC Psycholinguistic Database

- Frequency: How often a word is used
- Imagability/Concreteness: How easy it is to picture the word
- Age of Acquisition: Mean age of acquiring a word
- Familiarity: How familiar the concept is to individuals

**RESULTS**

<table>
<thead>
<tr>
<th>Anomic Aphasia</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>F:M</td>
<td>52:62</td>
</tr>
<tr>
<td>Age (SD)</td>
<td>62.89 (11.85)</td>
</tr>
<tr>
<td>Education (SD)</td>
<td>16.00 (2.83)</td>
</tr>
<tr>
<td>WAB AQ</td>
<td>84.36 (7.01)</td>
</tr>
</tbody>
</table>

- PWA had left hemisphere damage, anomic aphasia, chronic aphasia, no reported history of neurodegenerative disorders, and passed hearing and visual screeners
- Controls had no history of stroke or head injury, passed hearing and visual screenings, and had normal cognitive function as indicated by MMSE
- The results extend connection strength research into the realm of narrative discourse.
- The similar factor structure and loadings agree with Dell et al. (1997) who suggested that PWA and healthy controls have a similar cognitive apparatus when accessing lexical items.
- The results extend connection strength research into the realm of narrative discourse.
- The factor loading agree with single concept research that suggest to overcome the noise within the lexical access system, lexical items need to be:
  - more frequent
  - more familiar
  - more concrete
  - acquired earlier.
- Discourse is more sensitive than standardized tests (Marini et al., 2011), and the current study extends the usefulness of discourse samples in assessing lexical access.
- Future research should determine if this method of assessing lexical access is correlated with other standardized tests of lexical access and aphasia impairment.