LUCIA SCHEFFEL, August 2013

Speech Pathology and Audiology

DO FEATURE IMPORTANCE AND FEATURE RELEVANCE DIFFERENTIALLY INFLUENCE LEXICAL SEMANTIC KNOWLEDGE IN INDIVIDUALS WITH APHASIA? (109 pp.)

Directors of Dissertation: Kate Krival, Ph.D.

Anna M. Schmidt, Ph.D.

This study investigated two classifications of semantic features, feature importance and feature relevance, to verify if they differentially influence lexical semantic knowledge in individuals with aphasia. Feature *importance* is defined as "how important a feature is in defining a concept" Hampton (1979), while feature relevance represents the "core meaning of a concept" (Sartori, Lombardi & Mattiuzi, 2005).

A sorting task was utilized with 20 aphasic volunteer participants to investigate the semantic processing involved in the association of semantic features with their appropriate nouns. A corpus of 18 nouns was displayed in front of each participant in groups of three along with a card containing the word "UNRELATED". The participants were given a deck of 18 cards containing features corresponding to the nouns and to the unrelated category, and were verbally instructed to sort the deck of cards into one of the four designated piles. The semantic features on the cards were rated as high, mid and low importance (HI, MI, LI) and high, mid and low relevance (HR, MR, LR).

Analysis was completed using a two-way between-subjects ANOVA to determine was whether the mean scores at the three different levels (e.g., low, mid and high) of importance, and relevance differed and to analyze if there was an interaction between the

two classifications. The participants were able to sort *high importance* features with their nouns more accurately than they did *mid* and *low importance* features. Feature *relevance* did not differentially influence noun-feature association. These results indicated that the ability of individuals with aphasia to associate features with their nouns is influenced by levels of feature importance.

In conclusion, this study found that individuals with aphasia are more cognitively sensitive to *high* level versus *low* level feature importance and the effect does not extend to a *mid* level of importance. The study also demonstrated that the condition of feature *relevance* did not differently influence the ability of individuals with aphasia to associate semantic features with their appropriate nouns. Potential clinical implications and study limitations were discussed.