Impact of perceptual strength in a lexical decision task in the semantic form of primary progressive aphasia

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Background: The embodied and situated approach to cognition postulates that knowledge emerges through the interaction between the environment and our sensory-motor processes. In order to study the importance of sensory-motor processes in the conceptual system, the perceptual strength (i.e., the extent to which a word can be experienced through the different senses ; PS) of a word is particularly relevant. Indeed, previous research has shown in a lexical decision task (LDT) that words with high PS, that are semantically richer, are easier to recognize (i.e., shorter reaction time) than words with low PS, that are semantically poorer (Miceli et al., under review). The aim of our research is to explore the impact of PS in a LDT in the semantic form of primary progressive aphasia (PPA-S), a neurodegenerative disorder in which semantic knowledge is selectively deteriorated.

Method: A lexical decision task, including 28 words with high PS, 28 words with low PS, and 56 non-words, will be proposed to 3 patients with PPA-S and a control group (N=30). Participants have to decide whether the word presented is a word of the French language or not. Reaction Time and accuracy will be used to compare the performance between the groups of subjects for determined the impact of PS on semantic processing. Multiple cases study will be conducted.

Results: Data are being collected and results will be presented at the conference. This study has the potential to contribute to the understanding of semantic disorders in PPA-S with an embodied approach of cognition.

Keywords (5) : Semantic Memory ; Embodied Cognition ; Perceptual Strength ; Semantic variant of Primary Progressive Aphasia ; Lexical decision task.