

A Systematic Investigation into The Generation of Words Using Semantic Priming Experiments

Girija. P C, Nayana.N, Labeeba.K

AWH Special College, India

ABSTRACT

semantic priming describes the facilitation of reaction that happens when a semantically associated word is presented, making it easier to generate a related word. Therefore, semantic priming enhances each person's ability to generate related words. However, this beneficial effect of semantic priming may tend to diminish as a result of the inherent neurobiological changes resulting from ageing. Our study aims to investigate the impact of aging on word generation tasks in different domains of semantic categories. 150 healthy aging individuals, ages 31 to 80, were selected for the study and placed into five age groups: 31–40, 41–50, 51–60, 61–70, and 71–80. There were thirty people in each group. Words which were selected in the category of synonym, antonym, abstract and concrete words were presented through DMDX software. Each of the 10 words within each experiment were presented through the software and subjects were asked to generate as many words for respective categories within the prescribed time limit. The number words generated and errors made were noted. A time gap of 10 seconds was given between each word and the responses were recorded. The study revealed a significance difference in ($p < 0.05$) the distributions of number of words generated between all groups except Age 71-80-Age 61-70 and Age 51-60-Age 41-50, age 31-40 age 41-50. The immediate age groups i.e., 31-40 & 41-50, 41-50 & 51-60, 61-70 & 71-80 years did not show significant difference as the neurobiological changes in them are very subtle. Reduced performance in older adults could be attributed due to their reduced ability to strategically access and retrieve appropriate lexical word forms or from semantic stores that represent meaning.

Keywords: Aging, Language, Priming, Semantics, Reaction time, Word generation