ABSTRACT

The role of figurative language is to inspire and enrich meaning. It is used to transmit thoughts, emotions and ideas which might not be expressed, or rather the way of expression might be less effective, without the use of figurative language. The use of figurative language requires the use of abstract and sophisticated thinking processes, and often also necessitates high labial register (Qualls & Harris, 2003). The present study aimed to test hemispheric processing of figurative language among adults with learning disabilities, focusing on idioms and ironies. Research literature has shown that people with learning disabilities in general and dyslexics in particular, have difficulties in using and understanding figurative language (Cooke, 2001). Concerning hemispheric processing of figurative language, imaging studies and behavioral studies indicate the involvement of the right hemisphere when it comes to tasks that include semantic ambiguity and figurative language comprehension (Mashal et al., 2008).

The purpose of this study, based on present and other data, was to examine the processing of ambiguous idioms and ironies using the split visual field paradigm when a lexical decision (with dialects) and a semantic decision (with ironies) is being made by learning-disabled adults. The study population consisted of 50 subjects, including 25 adults (aged 18-35) with learning disabilities (excluding ADD / ADHD) and a control group of 25 adults devoid of past diagnosed learning disabilities. The subjects were given background and evaluation tests designed to examine cognitive abilities and reading skills (speed and accuracy). Also, a self-report questionnaire was distributed monitoring and denying the existence of ADHD. As part of the behavioral experiments, two experiments were conducted examining hemispheric involvement in processing idioms and ironies (respectively), using the divided visual field paradigm. In addition, the objective was to examine how does exposure to ironic content affect hemispheric processing among learning-disabled adult population. For research purposes a program has been set up, including exposure to ironic content in short film excerpts. Following the exposure to ironic content, the hemispheric processing was again tested through behavioral hemispheric experiments using divided visual field paradigm.

A hypothesis has been set forth that normal subjects would demonstrate a left-hemisphere advantage in idiomatic interpretation and a right-hemisphere advantage in the literal interpretation of idioms (Mashal et al., 2008). By contrast, subjects with dyslexia would show a right-hemisphere advantage in idiomatic interpretation. Also, it has been assumed that exposure to ironic content would improve comprehension of the ironies in learning- disabilities population, similar to standard population. Furthermore, it has been assumed that a difference would arise in hemispheric processing of sentences with ironic significance among people with learning disabilities in such a way that a greater involvement of the left hemisphere (as in standard population), compared to their functioning prior to exposure to ironic content.

It has been seen that, during hemispheric processing of idioms, adults with dyslexia show opposite brain asymmetry compared to adults with normal development. In the latters, the left hemisphere has advantage when processing idiomatic meaning, and in contrast the right hemisphere has advantage when processing literal meaning. However, when the difference in processing hemispheres is examined through ironies, no significant differences between the groups has been revealed. Furthermore, when examining the effect of exposure to ironic content, there was again no significant difference in improvement percentage between the two groups. It seemed however clear from the results of the hemispheres processing of ironies, that in both study groups, improvement in accuracy percentage of the left hemisphere was significantly higher compared to the accuracy percentage of the right hemisphere.

The current findings certainly emphasize the importance of figurative language study among the general population at early age, in the education system, particularly among populations with learning disabilities. Moreover, research findings indicate that the figurative interpretations among adult dyslexics are processed in the brain as literal interpretations in normal population. Hence, special attention should be given to the means by which figurative language is acquired and processed in populations with dyslexia. As a result, it is recommended to expand similar researches in order to validate these results in relation to other aspects of figurative language.