

Abstract

The theory of weak central coherence in autism suggests that autistic individuals have the tendency to have relatively local information processing rather than a wholistic one. The aim of the present study was to investigate the global and local processing of hierarchical patterns with variations of exposure duration and display size of stimuli in autistic children, so that the refined hypotheses derived from the weak central coherence theory could be verified. In order to have a comprehensive understanding of the underlying information processing, the eye-movement patterns in performing letter and object search tasks were also recorded. Results revealed that neither global nor local advantage was shown in both autistic and control groups. However, a greater local-to-global interference was found in autistic group. In regard to eye-movement, the autistic children tended to have fewer fixations in the designated areas and to have “diffuse” fixations. It implies that autistic children are more susceptible and less inhibited to react to local information, and have a diffuse searching strategy in performing search-tasks.