Abstract

Introduction: The study of patients with acquired brain injury shows the existence of several double dissociations in the calculation system. In this paper, we focus on the double dissociation observed between oral and written calculation. Method: Instrument: Battery of Evaluation and Numerical Processing and Calculation. Participants: Six patients with acquired brain injury who have different alterations in the processing of numbers and calculations. Data analysis: Difference of proportions. Results: MC and BET have impaired the written calculation but they preserve oral calculation (addition, subtraction and multiplication). The same is observed in MNL for addition and multiplication and in PP for subtraction. The reverse pattern is observed in IRS and ACH who have alterations in written calculation but preserve oral calculation (in multiplication and subtraction, respectively). Conclusions: The results demonstrate the functional independence of oral and written calculation. This could indicate that the calculation system is not unitary and responsible for any calculation task, but a multicomponential system involving different processes and of a different nature.

Keywords

Cognitive neuropsychology; calculation; brain injury; number processing.