

Comparative assessment of functional cerebral lateralization of mentally retarded children having mental age of 5 to 6 years old with normal ones

abstract

Study of the children psychomotor development, is and interdisciplinary interest among medical and rehabilitation specialist. The psychomotor development is mostly dependent on normal ontogenetically evolution of the brain, thus it is reasonable that any defects in this complicated process would be able to cause irreversible cognitive, sensory and motor dysfunction. In addition to mental deficiency in Mental Retarded (MR) children, some other notable defects in motor abilities including gross and fine movement and equilibrium also exist in these children. Hemispheric dominance or lateralization is an important stage in normal brain development which thought to be affected in MR children, and thus effects the outcome of rehabilitation treatment for these children. The present research work is designed to study functional cerebral lateralization between mentally retarded children having mental age of 5 to 6 years old and normal ones of the same age. By using the Neurological Developmental Questionnaire of Delacatom the functional lateralization parameters including footedness, handedness, eye and ear preference were considered in this study. Statistical analysis of the results showed significant differences in above mentioned parameters among MR and normal children of the same age. On the bases of these results, we believe that different pattern of lateralization in MR children could affect the rehabilitation management and should be noted in therapeutic plan.

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