

Natureza do trabalho: Resumo

TÍTULO

MAPPING OF THE CORTICAL ELECTRIC ACTIVITY PATTERN IN CHILDREN WITH ATTENTION DEFICIT DISORDER AND HYPERACTIVITY AFTER APPLYING AND INTERACTIVE PHYSICAL EXERCISES PROGRAM

FABRÍCIO BRUNO CARDOSO, IRIS LIMA E SILVA, ANNA CAROLINA MIGUEL, ALFRED SHOLL FRANCO

UNIVERSIDADE FEDERAL DO RIO DE JANEIRO, UFRJ, RIO DE JANEIRO, RJ, BRASIL
UNIVERSIDADE FEDERAL FLUMINENSE, RIO DE JANEIRO, RJ, BRASIL

RESUMO

The purpose of the current study was to evaluate the effects of an interactive physical exercise program (IPEP) in the pattern of motor response and cortical electric activity in children with ADHD, during the motor planning phase. Eight children participated in this study, with ages between 6 and 7 years old, of both genders, students of a private school in the city of Rio de Janeiro. The protocols that were used were approved by the ethics committee of the UFRJ university (opinion No. 517.483). The participants were divided four groups (A1 - children with ADHD which carried out the IPEP; A2 - children which did not present ADHD and which carried out the IPEP; B1 - children with ADHD which did not carry out the IPEP; B2 - children without ADHD which did not carry out the IPEP), the IPEP being carried out by means of the Wii Fit Plus equipment, 12 sessions, with duration of 15 minutes each. For evaluating the cortical pattern we used an electroencephalographic register in 21 channels (10/20 channels). Our results show that performing the IPEP reduced the time for carrying out the motor task in 24.45% in the children without ADHD and 28.23% in the children with ADHD. In regard to the cortical activity register, the children with ADHD initially presented a temporal disorganization when analyzing the alpha waves obtained in the frontal and parietal regions in comparison with the pattern obtained in children without ADHD. When evaluated once again, the children with ADHD which were submitted to the IPEP presented the frequency and power of the alpha waves more organized and temporally distributed, which suggests a more favorable cortical scenario for carrying the proposed motor task.