OBJECTIVE: To investigate the profile of changes in the use of the upper extremity in three children with hemiplegia submitted to an adapted protocol of constraint-induced movement therapy (CIMT). METHODS: A single-subject design (ABA) was replicated in three children aged 8 to 11 years old. Baseline phases (A1) and (A2) and the intervention phase (B) lasted 2 weeks each. During the intervention period, children wore a splint on the non-affected extremity for 10 hours a day and were submitted to 3 hours of therapy a day during 10 days. Training consisted of activities with the affected upper extremity, with gradually increasing complexity and verbal feedback. Hand function was classified according to the Manual Ability Classification System (MACS). Children were assessed four times every week with the Toddler Arm Use Test (TAUT) and three adapted tasks from the Jebsen-Taylor Hand Function test (JTHF), and once a week with the Pediatric Motor Activity Log (PMAL) and self-care scales of the Pediatric Evaluation of Disability Inventory (PEDI). Celeration Line, Two-Standard Deviation Band and visual analysis methods were used for data analyses. RESULTS: Significant improvements in the amount and quality of upper extremity use (PMAL), TAUT quality of use for children 2 and 3, and participation for child 1, as well as decreased time to complete JTHF tasks for children 2 and 3 were observed. No changes were observed in the PEDI self-care scales. CONCLUSION: CIMT effects were associated with improvements in manual dexterity, amount and quality of use of the affected upper extremity in children with hemiplegia.

Keywords
constraint therapy, hemiplegia, cerebral palsy, manual function