Computer-based training studied in children with fragile X syndrome

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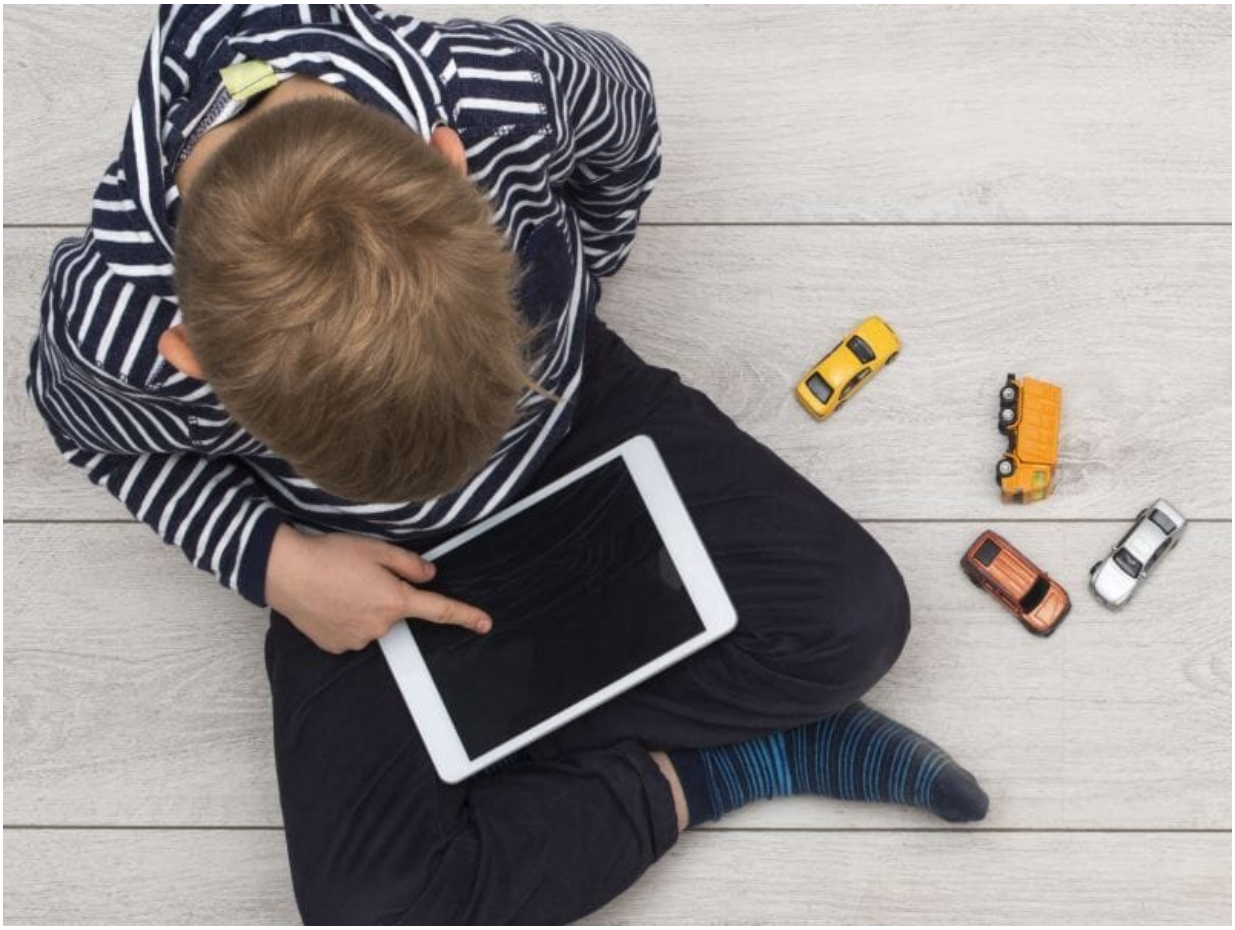

(HealthDay)—No significant difference in outcomes was observed in

children and adolescents with fragile X syndrome (FXS) receiving adaptive versus nonadaptive in-home cognitive training, according to a study published online April 15 in the *Journal of Neurodevelopmental Disorders*.

David Hessl, Ph.D., from the MIND Institute at the University of California Davis Medical Center, and colleagues evaluated the efficacy of Cogmed, a computer/tablet-based working memory (WM) training program for patients with FXS. Participants (63 male and 37 female; mean age, 15.28 years) were randomly assigned to either adaptive (difficulty level adjusted to performance) or nonadaptive (control) Cogmed training. At-home assessments of WM and executive function (EF) were conducted at baseline, following 20 to 25 caregiver-supported sessions over five to six weeks, and at three months following completion of training.

The researchers found that the WM composite, selective domains of EF (distractibility, cognitive flexibility), and parent- and teacher-reported attention and EF significantly improved across the full study sample. Many of these changes were maintained at follow-up. However, no significant differences were noted in improvement between the two groups, indicating that progressively challenging the WM system by expanding span length did not provide added overall benefit.

"Future analyses examining inter-individual differences (e.g., baseline capacity, training efficiency, co-morbidity, training environment, characteristics of training aide) may help to link this intervention to outcomes and potential transfer effects," the authors write.

More information: Abstract/Full Text