**Cognitive Training Improvement.**

Since the active control games were casual games that did not have a data saving system, the improvement of performance was only definable in the CT group. Each exercise has multiple levels, presented to participants from easy to complex levels. Participants set the baseline score during the initial trial and potential best score with the repeated trials at each given exercise level. Since the best score was achieved during training, we have used the term “best” in order to distinguish the performance gain achieved in the middle of training from the performance improvement measured after completion of training (i.e., “post” for cognitive assessment measure). The baseline and best-score of each game was calculated by averaging normed baseline and best-scores of all levels. Normed baseline and best scores from each exercise were averaged to produce a composite score for each cognitive domain. Mixed-effects linear regression was performed for each cognitive domain separately with time (baseline and best) as a factor. In all cognitive domains, CT participants showed improvement from training to their best score (*z* = 18.71, *p*<.01, *z* = 24, *p*< .01, *z* = 15.42, *p*<.01, *z* = 17.14, *p*<.01, for processing speed, attention, memory, and executive control, respectively).Chart, line chart, scatter chart

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The training performance improvement was similar across two sites, except executive control training exercises. Participants in University of Iowa showed higher improvement from training on the executive control exercises than those in University of Texas at Dallas (time by site interaction, *z* = 2.03, *p* = 0.041).

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