

ABSTRACT

Increasing prevalence of smartphones prompts the question if smartphone-games will result in any effect to cognitive functions. Among the range of cognitive enhancements subsequent to playing video games, improvement in visual attention was one of the most widely proven cognitive alternations. In particular, executive control, which majored in responding to targets but inhibiting responses to distracters, was fundamental to the visual attention system. Narrowing the focus of research to study the effect of cognitive priming, current study hypothesized that the performance in executive control should increase after being primed with a game, targeting at activating the executive control. The experiment consisted of a 2 X 2 mixed factorial design. It involved in comparing the difference between two randomly-assigned groups in their pre-and post test performances on a cognitive filtering task. Results showed that the performance of the experimental group enhanced after playing a smartphone-game, which involved in making responses to targets but inhibiting responses to distracters. Most importantly, the performance of the control group decreased after playing the same game with no distracters. Therefore, it is inferred that not only improvement, but decrease in cognitive ability was possible through priming.

Keywords: Smartphone, games, cognitive priming, effects, benefits, harm, Fruit Ninja, executive control, visual attention