

POSTER

Health and Self-Esteem

E.R. HARRELL, W.R. BOOT. The influence of participant and intervention characteristics on adherence to technology-based cognitive interventions. Gerontechnology 2018;17(Suppl):162s;

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Purpose An important question is whether cognitive training interventions, including “brain games,” can produce broad, generalizable, and meaningful cognitive change¹. Aside from questions of efficacy, an equally important question relates to adherence. If interventions are to be effective, the target population must be willing and able to engage with them over an extended period of time. However, adherence to medication, exercise, and other health interventions suggest long-term adherence may be difficult to achieve². Further complicating matters, many cognitive interventions rely on technology platforms that older adults may be unfamiliar with, or that may not be designed with the needs, abilities, and preferences of older users in mind³. **Method** To uncover the best predictors of adherence to technology-based cognitive interventions, adherence data were extracted from published studies conducted between 1987 and 2016 and adherence metrics were derived from the percentage of sessions/days participants completed and participant attrition. The following patterns emerged: (1) Consistent with the proposed effect of social influence, interventions that involved few contacts with research staff (i.e., were conducted online) were adhered to much less compared to lab-based studies; (2) Not surprisingly, interventions with a duration greater than eight weeks had greater attrition compared to shorter interventions, but this was true regardless of whether compensation was offered; and (3) Participants seemed to prefer gamified cognitive tasks and commercial video games over non-gamified cognitive training tasks. In studies that used both gamified cognitive tasks and commercial games as interventions, adherence rates tended to be higher among participants assigned to the gamified cognitive task condition. **Results & Discussion** These findings and findings from related literatures are synthesized into a hypothesized model developed to predict adherence to technology-based cognitive interventions. Although the main focus of this review is interventions to support cognition, this model has important implications for the adoption of, and adherence to, other interventions that are technology-based (e.g., telehealth interventions). Another important finding was that adherence data, both in terms of the number of sessions completed and participant attrition, were often not reported or underreported in the literature, highlighting the need for the collection and reporting of additional data related to this important topic.

References

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