Cross-sectional Association between Television Watching and Cognitive Function in the Arizona APOE Cohort Study in Maricopa County, Arizona

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ABSTRACT

Excessive television (TV) watching may be a marker of a sedentary lifestyle which in turn may lead to health problems including cognitive disorders. Thus, we investigated the relationship between TV watching time and cognitive function. We hypothesize that there is an association between the number of hours of TV watching and cognitive function in a sample of cognitively unimpaired individuals.

We conducted a cross-sectional study derived from the Arizona APOE Cohort study. The participants completed a survey which assessed frequency of TV watching. The sample consisted of 150 cognitively unimpaired participants (75.3% female). The median (IQR) age was 72.0 (67.0, 77.0) years. The frequency of television watching was converted into a TV score, which ranged from 1 (> 8 hours of TV/day) to 6 (< 1 hour of TV/day), where a higher TV score is indicative of watching less TV. The mean (SD) TV score was 4.4 (±1.0). We conducted a general linear regression analysis, adjusted for age, sex, education and APOE e4 status. We observed a positive association between a higher TV score and Rey's Auditory Verbal Learning Test (AVLT) total learning (a measure of episodic memory). Each 1-point increase in TV score is associated with an increase of total learning AVLT score by 2.064 (p=0.0119).

These preliminary findings suggest that less TV watching is associated with an increase in the total learning scores of the RAVLT. However, this cross-sectional observation needs to be confirmed by a cohort study.

Key Words: Television, Cognitively Unimpaired, Episodic Memory

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