

PAPER

Technology for Health

C.R. SENTEIO, D. SOLTOW HERSHEY, T. CAMPBELL. *Diabetes education and intergenerational technology transfer: African American elders using technology to support diabetes self-management. Gerontechnology 2018;17(Suppl):139s; <https://doi.org/10.4017/gt.2018.17.s.135.00>*

Purpose When compared to White elders, elder African Americans are twice as likely to have diabetes and experience diabetes-related blindness and amputations¹, and 2-6 times more likely to have Chronic Kidney Disease². African American elders also experience barriers to access technology designed to support diabetes self-care^{1,3-4}. In this study, we describe the impact of an interactive health education session that promotes self-efficacy of technology designed to support diabetes self-care for elder African Americans.

Method We used a purposeful sample of elder (aged 55+) and younger African Americans (aged 18-38) drawn from two large urban areas in Michigan. The session was designed to promote intergenerational technology transfer between elders with diabetes and younger adults connected to them via family and/or social networks. The health education session was created via a Community-Based Participatory Research (CBPR) approach, using participatory design. The sessions featured elder-young adult pairs that selected smartphones and encouraged each other to use them for a specific task (i.e., downloading a health app focused on nutrition, medications, exercise, etc.). We conducted two sessions at each of the two study sites. We digitally recorded, then transcribed verbatim, the four sessions. At the start and conclusion of each session, participants completed a paper-based questionnaire that solicited demographic information and self-efficacy of technology use using a Likert 5 point scale.

Results & Discussion Elders (n=39, mean age 61.5) and young adults (n=27, mean age 30.6) participated in the sessions. All participants were African American. Participation resulted in statistical increases among the elders for: 1) *belief* that they can access the help they need to use technology, 2) *ability* to download a health 'app', and 3) *desire* to go to others to help them use technology (Table 1). Elders believe that they can get the help they need to learn how to use technology designed to support diabetes self-care. This session was effective at facilitating learning a specific technology skill, and elders were eager to learn about technology from younger adults. Participation in an interactive health education session helps to address persistent barriers to technology self-efficacy and use. Practitioners and health educators should consider interactive sessions designed with input from the target patient populations to help support chronic care patients who experience health disparities and barriers to technology that supports self-care. Future research should include impact of sessions on technology designed to support self-care for other common chronic conditions.

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Table 1. Session Impact on Elders

v.	Pre-test		Post-test		N	95% CI	t	Df
	M	SD	M	SD				
1	3.61	1.05	4.21	0.78	38	0.2318,0.926	3.38	37
2	3.29	1.23	3.85	1.09	38	0.1619,0.8907	2.93	37
3	3.84	0.87	4.15	0.71	37	0.1070,0.4876	3.17	36

p<=0.01