

B. Hage. *Bridging the digital divide: the impact of computer training, internet, and email use on levels of cognition, depression, and social functioning in older adults. Gerontechnology 2008; 7(2):117.* In this quasi-experimental study, we examined the impact of computer training and access to Internet and e-mail on levels of depression, social isolation, and cognition in long-term care (LTC) residents aged 55 or greater. The study population consisted of 23 LTC residents in two counties in northeast Pennsylvania. **Method** Inclusion criteria included a Mini-Mental State Exam (MMSE)<sup>1</sup> score of 24 or greater, the ability to read a computer screen and use an input device. Pre-test post-test measures included the Mini-Mental State Exam (MMSE), Geriatric Depression Scale-Short Form<sup>2</sup>, and SF-36 Short-Form Survey<sup>3</sup>. Subjects received technology training using the ACTION curriculum<sup>4</sup>. Generations Online, a software tool designed specifically for elders, was used for email and Internet searches<sup>5</sup>. **Results and discussion** Using repeated measures t-test on square root transformations of pre and post GDS-SF2] scores the researchers detected no significant difference in depression following the intervention (M(Pre)=1.347; M(Post)=1.449;  $t=-0.672$ ,  $p=0.512$ ). Pre and post SF subscale scores showed no significant difference in social functioning following the intervention (M(Pre)=89.8438; M(Post)=89.8438). Repeated measures t-test on original MMSE<sup>1</sup> scale scores pre and post intervention showed no significant differences in cognition (M(Pre)=28.56; M(Post)=28.06;  $t=0.696$ ,  $p=0.497$ ). There was a high degree of skew in some of the pre-test, post-test responses within the SF-36<sup>3</sup> measures. Square root and inverse transformations did not completely correct the skew with all measures. A review of the raw data showed that subjects had low levels of depression or no depression at baseline. A one-way ANOVA of GDS-SF<sup>2</sup> scores by number of training sessions detected a significant difference between groups (interaction) on both pre and post intervention scores (F(Pre)=12.83,  $p=0.001$ ; F(Post)=8.22;  $p=0.005$ ). This finding suggests that increasing the number of training sessions may offer a beneficial effect on level of depression due to the increased interaction during training.

#### References

1. Folstein MF, Folstein SE, McHugh PR. *Journal of Psychiatric Research* 1975;12:189-198
2. Yesavage, J.A., Brink, T.L. *Journal of Psychiatric Research* 1983;17:37-49
3. Ware JE. SF-36® Health Survey Update 2002; [www.sf-36.org/tools/sf36.shtml](http://www.sf-36.org/tools/sf36.shtml)
4. ACTION Simple Language Computer Lessons; 2008; [www.caaellii.org/action\\_download.htm](http://www.caaellii.org/action_download.htm)
5. Generations Online; 2008; <http://generationsonline.com/>

**Keywords:** older adults, depression, cognition, social functioning, computer training

**Address:** Misericordia University, USA; E: [bhage@misericordia.edu](mailto:bhage@misericordia.edu)