

**The BRAIN App: Building Relationships Using Artificial Intelligence
and Nostalgia**

NCT05515679

Statistical Analysis Plan

7/27/22

The BRAIN app will be considered successful if persons with dementia exhibit higher levels of positive engagement/affect and lower levels of negative engagement--as measured by the Menorah Park Engagement Scale (MPES) and Engagement of Persons with Dementia scale (EPWDS)--during the intervention, as compared to standard programming at baseline. First, multiple observations of participants will be taken at both baseline and treatment on both scales. Then, means will be calculated for each participant for each item (on the MPES) or positive and negative subscale (for the EPWDS). Then, we will conduct a paired sample *t*-test to determine whether there are significant differences from baseline to treatment. We will also conduct paired sample *t*-tests to examine whether participants exhibit an improvement in quality of life (based upon the DEMQOL) and) a reduction in responsive behaviors (based upon the NPI-NH).