

from conversations with a trained interviewer using the Term Frequency-Inverse Document Frequency (TF-IDF) method. Data came from a randomized controlled behavioral clinical trial (ClinicalTrials.gov: NCT01571427) to examine effects of conversation-based cognitive stimulation on cognitive functions among older adults with normal cognition or MCI, which served as a pilot study for I-CONNECT. From the collected spoken utterances we first constructed a fixed-dimensional feature vector using TF-IDF. Next, to distinguish between MCI and healthy controls, we trained a support vector machine (SVM) classifier on per-subject feature vectors according to 5-fold cross-validation procedure. Our results verify the effectiveness of TF-IDF features in this classification task with Receiver Operating Characteristic Area Under Curve of 81%, well above chance at 65%.

#### OVERCOMING THE CHALLENGES OF TECHNOLOGY IN GERONTOLOGICAL RESEARCH

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Many older adults express a lack of confidence in using technology and this can become a barrier to participating in technology heavy research. This presentation will introduce the face-to-face digital communication, electronic medication adherence tracking, and online recruitment technology used in the I-CONNECT study (ClinicalTrials.gov: NCT02871921). In particular, we will demonstrate how the project has simplified enterprise video conferencing for in-home use, removed obstacles related to remote hardware troubleshooting, and further discuss how it has been received by older adults who have participated thus far. Finally we will cover particular hurdles related to I-CONNECT (e.g., targeting social isolated older adults, aiming to recruit 50% of participants being African American older subjects living in the Detroit Metropolitan area). Our experience indicates that such high tech gerontological research is feasible given a creative and solution-focused research approaches and multi-disciplinary team.

#### PERSONALITY MODERATES INTERVENTION EFFECTS ON COGNITIVE FUNCTION: A 6-WEEK CONVERSATION-BASED INTERVENTION

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Conversation-based interventions have positive effects on cognitive health, though determining who benefits most is still unclear, and individuals' personality may play a role. We utilized data from a 6-week randomized controlled trial to determine if conversation-based intervention effects were moderated by personality traits in 83 older adults (Mean age = 80.51 years, 49 cognitively intact, 34 with mild cognitive impairment). The intervention group participated in daily 30-minute face-to-face semi-structured conversations with trained interviewers for six weeks. Baseline psychosocial

questionnaires and a neuropsychological battery were completed. Intervention group participants with high agreeableness, conscientiousness, and extraversion exhibited significantly more improvement in language-based executive function tasks compared to a control group ( $p < .05$ ). An opposite pattern for delayed recall memory and working memory tasks emerged among highly extraverted participants ( $p < .05$ ). Findings suggest the adaptive role of personality traits in conversation-based cognitive interventions and offer evidence for personalized approaches to cognitive health in late life.

#### SESSION 1200 (SYMPOSIUM)

##### INEQUALITIES IN FRAILTY BY SOCIO-ECONOMIC POSITION: IT'S ALL IN THE TIMING

Chair: Carol Jagger, *Newcastle University, Newcastle upon Tyne, United Kingdom*

Discussant: Mark D. Hayward, *University of Texas at Austin, Austin, Texas, United States*

A number of studies have found that higher socio-economic position (SEP) appears protective of becoming frail. However, not only can SEP be defined in early, mid or late life, by education, occupational status or income/material disadvantage respectively, but frailty may occur in the young old as well as the very old. Do the same measures of SEP reflect inequalities in frailty in the young old as the very old? Does it matter when in the lifecourse SEP is measured? Have inequalities in frailty between SEP groups changed across the generations of older people? We seek to answer such questions from cohorts across the spectrum of later life. The first presentation, from the 1958 British Birth Cohort Study, examines the association between early-life SEP and frailty at age 50 and whether this association is due to continued disadvantage into mid-life. The second presentation moves to very old age, examining the role of early, mid and late life disadvantage on the progression of frailty between ages 85 and 90 in the Newcastle 85+ cohort. The third presentation, based on the electronic health records of adults aged 75 years and over in England, focuses on whether SEP modifies frailty trajectories in the last year of life. The final presentation examines whether SEP inequalities in frailty have changed over different generations of older people, and utilises data from the Cognitive Function and Ageing Studies. Together these presentations increase understanding of which SEP groups should be targeted for interventions to reduce frailty throughout later life.

##### SOCIOECONOMIC INEQUALITIES IN TRANSITIONS BETWEEN FRAILTY STATES IN THE VERY OLD: THE NEWCASTLE 85+ STUDY

Carol Jagger,<sup>1</sup> Nuno Mendonca,<sup>2</sup> Andrew Kingston,<sup>2</sup> Louise Robinson,<sup>2</sup> Mohammad E. Yadegarfar,<sup>3</sup> Helen Hanson,<sup>4</sup> and Rachel Duncan<sup>2</sup>, *1. Newcastle University, Newcastle upon Tyne, United Kingdom, 2. Newcastle University, Newcastle upon Tyne, England, United Kingdom, 3. University of Leeds, Leeds, England, United Kingdom, 4. Institute of Cellular Medicine, Newcastle upon Tyne, England, United Kingdom*

Early-life socio-economic position (SEP), defined by education, remains a significant factor in disability progression in