

population-based sample of older people without dementia. Participants ( $n=350$ , mean age  $71.9\pm 7.1$ ) were randomly selected from the electoral roll. Variability in step time, step length, step width and double support time (DST) were calculated as the standard deviation of each measure, obtained from the GAITRite walkway. MRI scans were processed through FreeSurfer to obtain cortical thickness of 68 regions. Bayesian regression was used to determine regional associations of mean cortical thickness and thickness ratio (regional thickness/overall mean thickness) with gait variability. Smaller overall cortical thickness was only associated with greater step width and step time variability. Smaller mean thickness in widespread regions important for sensory, cognitive and motor functions were associated with greater step width and step time variability. In contrast, smaller thickness in a few frontal and temporal regions were associated with DST variability and the right cuneus was associated with step length variability. Smaller thickness ratio in frontal and temporal regions important for motor planning, execution and sensory function and, greater thickness ratio in the anterior cingulate was associated with greater variability in all measures. Examining individual cortical regions is important in understanding the relationship between gray matter and gait variability. Cortical thickness ratio highlights that smaller regional thickness relative to global thickness may be important for the consistency of gait.

#### THE ASSOCIATION BETWEEN PERSONALITY AND HOMEBOUND STATUS IN OLDER ADULTS: RESULTS FROM THE NHATS

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Personality is associated with predictors of homebound status like frailty, incident falls, and depression. It has been rarely investigated whether personality predicts homebound status among older adults. Using the combining cross-sectional data of the Year 2013 and Year 2014 data from the National Health and Aging Trends Study (NHATS), this study examined the association between personality traits and homebound status in a sample of community-dwelling older adults aged 65 years and older ( $N=2,788$ ). Homebound status (non-homebound, semi-homebound, and homebound) was determined by the frequency, difficulty, and help of outdoor mobility. Personality traits, including conscientiousness, agreeableness, openness, extraversion, and neuroticism were assessed using the 10-item Midlife Development Inventory on a rating scale from 1 (not at all) to 4 (a lot). Each personality trait was included as a predictor in an ordinal logistic regression model to examine its association with homebound status after adjusting demographic and health-related covariates. The sample was on average  $79\pm 7.53$  years old, non-Hispanic White (72.0%), female (58.6%), living alone (35.4%) or with spouse/partner only (37.4%). Seventy-four percent, 18%, and 8% of participants were non-homebound, semi-homebound, and homebound,

respectively. Homebound participants tended to be less-educated older females. The average scores of conscientiousness, agreeableness, openness, extraversion, and neuroticism were  $3.19\pm 0.75$ ,  $3.57\pm 0.56$ ,  $2.81\pm 0.83$ ,  $3.13\pm 0.75$ , and  $2.22\pm 0.86$ , respectively. Among these five personality traits, high conscientiousness ( $OR=1.34$ ,  $p<0.001$ ) and extraversion ( $OR=1.16$ ,  $p=.03$ ) were associated with a reduced likelihood of being homebound. These findings provided a basis for potential personality assessment to identify and protect individuals with high homebound risk.

## SESSION 2908 (POSTER)

### FALL RISK AND FALL PREVENTION

#### A PRACTICAL AND VALIDATED FALL RISK SCREENING INSTRUMENT: A SYSTEMATIC REVIEW

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Early detection of a high fall risk is important to start fall preventive interventions in time and to reduce fall risk among older people. Several fall risk screening instruments are available, however it is unclear which instrument is validated and most suitable for the primary care setting. This systematic review aims to identify the most suitable fall risk screening instrument(s) for the primary care setting (i.e. requires limited time, no expensive equipment and no additional space) with good prognostic ability to assess high fall risk among independently living older people. An extensive search was conducted in the databases PubMed, EMBASE CINAHL, Cochrane and PsycINFO. Twenty-six out of 2277 articles published between January 2000 and February 2019 were included. Six fall risk screening instruments were identified; TUG test, Gait Speed test, BBS, POMA, FR test, Fall History. Most articles reported AUCs ranging from 0.5-0.7 for all instruments. Sensitivity and specificity varied substantially across studies (e.g. TUG, sens.: 10-83.3%, spec.: 37-96.6%). The results showed that none of the included screening instruments had sufficient ( $AUC>0.7$ ) predictive performance (Šimundić, 2009). As suitability for the primary care setting prevails for now, Fall History appears to be the most suitable screening instrument. Compared to the other instruments, Fall History requires the least amount of time, no expensive equipment, no training, and no space (adjustments). Patient's fall history together with a health care professional's clinical judgment, might be a promising screening strategy for the primary care setting to identify high fall risk among older people.

#### ACCURACY OF NURSES' FALL PREVENTION INTERVENTIONS IN PATIENTS WITH COGNITIVE IMPAIRMENT AND BEHAVIORAL SYMPTOMS

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Over 50 percent of older residents in nursing homes (NHs) fall each year. Many falls occur among NH patients with