

exponentially. **Objectives:** Objective of this study was to investigate the longitudinal association of physical activity and cognitive function in two deferentl populations; older adults from Mexico representing Latin America and South Korea representing Asia. Based on two large population-based longitudinal studies. **Methods:** This is a secondary analysis of two surveys, MHAS and KLoSA, designed to study the aging process of adults living in Mexico and South Korea. Participants >50 were selected from rural and urban areas. Here we investigate the longitudinal association of exercise and cognition using the two waves of each study. Cross Cultural Cognitive Examination and Mini-Mental State Examinarion were used to analyze the association between physical activity and cognition in Mexican and Korean older adults. Multivariate logistic regression models were used to evaluate the said association. **Results:** In Mexico, the prevalence of physical activity was 40.68%, Physical active older adults obtained a higher score in CCCE ( $0.099 \pm 1.01$ ) p-value < 0.001. They also had more years of education ( $5.63 \pm 4.61$  vs.  $5.10 \pm 4.27$ ) p-value < 0.001, had depression (31.55% vs. 35.25%) 0.0090 and consumed less alcohol (89.91 vs. 93.03) p-value < 0.001. In Korea, the prevalence of physical activity was 35.57%. The physical active group performed better in MMSE ( $-0.123 \pm 1.05$  vs.  $0.046 \pm 0.90$ ) p-value < 0.001. The no physical active group had a higher proportion of women, less alcohol consumption (50.01 vs. 55.22%) p-value < 0.001, fewer years of education p-value < 0.001 and a higher prevalence of depression (5.12% vs 3.64%) p-value 0.0090. In the multivariate analysis an independent association was found in the Korean population between physical activity and MMSE score even after adjusting for confounders (0.0866 (0.0266 ; 0.1467) p value 0.0047). **Conclusion:** Physical activity could have a protective effect on the cognitive decline associated with ageing.

**P86- DOES WORK PER REPETITION AND PHASE ANGLE PLAY A ROLE IN SARCOPENIA?** Sandra Pais<sup>1,2</sup>, Pedro Guerreiro<sup>2,3</sup>, Carla Guerreiro<sup>1,2</sup>, Marta Botelho<sup>1,2</sup> ((1) *Centre of Biomedical Research (CBMR), Universidade do Algarve, Faro, Portugal*; (2) *CENIE- International Center on Aging, Interreg -POCTEP*; (3) *Universidade de Évora, Évora, Portugal*)

**Background:** Aging is related to the increase of several chronic diseases, such as, osteoarthritis, osteoporosis, diabetes, hypertension and sarcopenia. Sarcopenia (progressive loss of muscle mass and physical performance) is related to difficulties in treating other comorbidities, whether pharmacologically or non-pharmacologically. It's important to understand the relations between muscular strength (W), muscular mass and the phase angle (PA) of bioimpedance, in sarcopenic subjects to prescribe more accurate treatments. **Objectives:** To study the relations of Skeletal Muscle Index (SMI) with W, PA and the presents of comorbidities (NC) in elderly subjects. **Methods:** A prospective, observational secondary analysis of data from the "The Sarcopenia Screening and health related issues in the Region of Algarve", was performed. Community independent

living elderly subjects were recruited. Body composition was measured by bioimpedance (Seca analytics 115), knee flexion and extension isokinetic strength (60°/sec) (HUMAC NORM). A screening questionnaire was used to determine the presence of comorbidities. SMI levels were assessed using European Working Group on Sarcopenia in Older People cut-off points. **Results:** A total of 46 female and 12 males, were included, mean age 73,7 ( $\pm 7,64$  sd). Subject were divided into 3 groups according to SMI: normal (n=21), moderated impairment (n=18) and severe impairment (n=19). Pearson Correlation were calculated within each group for W; PA and comorbidities. Normal SMI level, were correlated to knee extensors W in both legs (right:  $r=0,510$ ,  $p<0,05$  and left  $r=0,506$ ,  $p<0,05$ ). No significant correlations were found with PA. Moderate SMI level: were correlated to knee extensors W in both legs (right:  $r=0,742$ ,  $p<0,001$  and left  $r=0,708$ ,  $p\leq 0,001$ ), and also with knee flexors W (Right:  $r= 0,677$ ,  $p< 0,005$ ; Left:  $r= 0,659$ ,  $p<0,005$ ). A Moderate correlation was also found in this group with PA ( $r= 0,472$ ,  $p< 0,05$ ). Severe SMI level: no correlations were found, in this group, with W. A moderate correlation was found with PA ( $r= 0,565$ ,  $p< 0,05$ ). Comorbidities did not have any correlations with SMI levels. **Conclusion:** Our results seem to indicate that isokinetic strength (work) may have in the future a role in understanding Sarcopenia, once it is related to SMI. Also, PA may indicate moderate and severe SMI impairment.

**P87- FAT MASS INDEX AND THE PERFORMANCE OF OLDER PEOPLE IN THE 6-MINUTE WALKING TEST.** Tatiane Lopes de Pontes<sup>1</sup>, Fernanda Pinheiro Amador dos Santos Pessanha<sup>1</sup>, Renato Campos Freire Júnior<sup>2</sup>, Natália Maira da Cruz Alves<sup>1</sup>, Priscila Giacomo Fassini<sup>1</sup>, Olga Laura Sena Almeida<sup>1</sup>, Karina Pfrimer<sup>1</sup>, Eduardo Ferriolli<sup>1</sup> ((1) *Department of Internal Medicine, Ribeirão Preto Medical School, University of São Paulo, Brazil*; (2) *Faculty of Physical Education and Physiotherapy, Federal University of Amazonas, Brazil*)

**Background:** Body characteristics as low muscle mass and high fat mass (FM) affect the physical function of older people. Physical function is a fundamental component for the performance of daily activities and for the maintenance of the independence of older adults. However, the relationship between body composition and physical performance varies in different studies and still demands further research. **Objectives:** This study aimed to investigate the association of fat mass index (FMI) determined by Dual-energy X-ray Absorptiometry (DXA) with physical performance in Brazilian community-dwelling older adults. **Methods:** A cross-sectional study with a sample of 55 participants aged 60 years and older, living in Ribeirão Preto, Brazil, including both men and women, was conducted. FM was measured by DXA and FMI was calculated as fat mass/height<sup>2</sup> (kg/m<sup>2</sup>). The physical performance was assessed by the 6-minute walk test, and walking distance was recorded as the main parameter, considering the distance predicted by sex. The Kolmogorov-Smirnov test was used to verify the normality of data distribution. The association of physical performance and FMI was analyzed using the