

### **P3: Physical-Frailty as impairment of the functional status in older people after a COVID-19 outbreak: Descriptive Study in a Long-Stay Facility in Chile**

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**Introduction:** Frailty is a common condition among older individuals and is associated with increased vulnerability to adverse health outcomes. The COVID-19 pandemic has further highlighted the impact of viral infections on frail individuals.

**Objectives:** This study assessed the functional and clinical analysis changes in frail patients before and after SARS-CoV-2. This study evaluated the functional and clinical changes in frailty patients before and after SARS-CoV-2 infection in a cohort of 20 frailty patients of a long-stay facility.

**Methods:** Demographic, clinical, and functional data, including the Barthel index, Katz index, and Mini-Mental Examination, were collected. Clinical analyses were also conducted, including a complete blood count and biochemical profile. The functional and clinical analyses were compared before and after SARS-CoV-2 infection using t-tests. Pearson's correlation was used to analyze the relationship between functionality, frailty, and clinical biomarkers.

**Results:** The cohort had a mean age of  $84 \pm 2.42$  years, with 80% female. The most common comorbidities were Arterial Hypertension, Diabetes Mellitus type II, and Alzheimer's disease. The functional assessment showed a significant increase in functional dependence on basic activities of daily living after the SARS-CoV-2 infection. Significant differences were also observed in grooming, bowel, and bladder control. Clinical biomarkers, such as albumin, showed substantial changes post-infection.

**Conclusions:** The findings indicate worsening functional dependence and changes in clinical biomarkers after an illness. These results emphasize the need for targeted interventions and support for frail individuals during viral outbreaks. Further research is warranted to explore the long-term consequences of COVID-19 on frailty and develop strategies to mitigate its impact.

**Keywords:** Frailty, COVID-19, SARS-CoV-2, functionality, disability

### **P4: Functional relationship between muscle strength, gait speed, and cognitive function in elderly people with cognitive impairment: a descriptive cross-sectional observational study**

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**Introduction:** Cognitive function has traditionally been associated with mental abilities, but there are reports that it may be associated with performance in physical function and even in ADLs. This relationship between the mental and the physical raises important questions about comprehensive health across the life course.

**Methods:** A cross-sectional descriptive observational study was carried out with correlation analysis between the main variables under study. The purpose of the research was to establish the functional relationship between muscle strength, gait speed, and cognitive functions in elderly people with or without cognitive impairments at 55 years of age. Cognitive function (MOCA), ABVD (Barthel index), IADL (Lawton and Brody questionnaire), and anthropometric and physical function variables were studied. A descriptive and inferential analysis of the data obtained was performed together with a correlation analysis to establish the functional relationship between the groups of variables. Ethical safeguards were taken in all cases, and informed consent approved by the Ethics Committee of the Catholic University of Temuco, Chile, was applied.

**Results:** The primary findings of this study show that, in older individuals with or without cognitive impairment, muscle strength, gait speed, and cognitive function have a functional relationship. There is also a strong correlation between these variables' performance in the physical domain. In addition, sex-associated differences were detected that are relevant to study and investigate in further studies. The effect of aging was differentiated in the case of women (younger than 75 years and older than 75 years) without detecting significant differences, but there was a tendency to increase deterioration with increasing cognitive and physical age.

**Conclusions:** Cognitive function is related to physical performance variables, and these may be predictors of aging as attenuators or aggravators. Therefore, it is of utmost importance to consider the interrelationship of these variables when addressing the health and well-being of this population. It is necessary to investigate aspects that generate preventive actions aimed at healthy and active aging, especially in the performance of cognitive function related to activities of daily living (basic and instrumental).

**Keywords:** Cognitive impairment; Executive functions; Basic activities of daily living (BADL); Instrumental activities of daily living (IADL).

## **P5: PREMATURE FUNCTIONAL DECLINE IN WOMEN OVER 40 YEARS OF AGE**

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**Introduction:** Early functional changes in women compromise elements such as muscle mass and strength, physical function, and gait speed, leading to a physiological decline that may contribute to frailty in old age.

**Objectives:** This study aimed to relate strength and physical performance to premature functional decline in women aged 40 years and older.

**Methods:** A cross-sectional descriptive observational study was conducted, and two groups of women were contrasted (40 to 60 years old and 60 and over), completing a sample of 31 women. Functional decline, lower limb