

# Relationships between cognition, depression, health status, mobility, physical activity and grip strength – what is important for physiotherapists?

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## INTRODUCTION

The effects associated with aging may lead to changes in the functional status and cognitive ability, resulting in a set of functional weaknesses and limitations, with consequent loss of mobility, autonomy and quality of life and a higher probability of an increase of health problems. A better understanding of the factors that contribute to quality of life related to health can help physical therapists to select, to develop and implement strategies to promote the health of the elderly.

## OBJECTIVES

Evaluate the functionality of the elderly, through strength, mobility and physical activity level and relate to cognitive status, depression, and health status; understand which instruments are better related to the variables.

## METHODS

Descriptive, cross-sectional and correlational study. Sample of 118 subjects, predominantly female (71.2%) with mean age of 79.53 ± 7.815 years, mostly residing in institutions for the elderly (55.1%). The instruments used were the MMSE (cognition), the Geriatric Depression Scale (depression), the Mos-SF12 (health status), the IPAC (physical activity levels), the TUG (mobility) and handgrip strength.

## RESULTS

We have found significant correlations between the cognitive status, depressive mood and dimensions of health outcomes. It was possible to identify significant relationships between these variables and the level of physical activity, as well as measures of physical function (grip strength, mobility). There were also significant relationships with sociodemographic variables and the consumption of health care.

Table 1 – Correlations - Cognitive state and SF-12, IPAQ, TUG and hand grip

MMSE	Correlation Coef.	SF-12 (Physical Dimension)	SF-12 (Mental Dimension)	IPAQ	TUG (seconds)	Hand Grip (Right Hand) (Kg)	Hand Grip (Left Hand) (Kg)
		,224*	,261**	,275**	-,411**	,314**	,206*
	p	,015	,006	,003	,000	,001	,026
	N	117	117	118	117	116	116

Table 2 – Correlations – Geriatric Depression Scale and SF-12, IPAQ, TUG and hand grip

GDS (Geriatric Depression Scale)	Correlation Coef.	SF-12 (Physical Dimension)	SF-12 (Mental Dimension)	IPAQ	TUG (seconds)	Hand Grip (Right Hand) (Kg)	Hand Grip (Left Hand) (Kg)
		-,462**	-,635**	-,331**	,410**	-,384**	-,413**
	p	,000	,000	,000	,000	,000	,000
	N	117	117	118	117	116	116

## CONCLUSIONS

The relationship between cognitive and physical dimensions, their relationship to depressive states, with sociodemographic factors and the perception of health status allow us to understand the functionality as a decisive global dimension in the understanding of aging and its effects. The mobility measured by the TUG, is revealed as an appropriate assessment instrument for physiotherapists in subjects with cognitive deficit and SF-12 (Mental dimension) appropriate in subjects with depression.

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