

Does 6-minutes walk test predict functional capacity in elderly people?

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Introduction:

Portugal has an accentuated aging tendency, presenting an elderly population (individuals with more than 65 years old) of 19.2%. The average life expectancy is 79.2 years. (1)

Thus, it's important to maintain autonomy and independency as long as possible.

Functional ability concept rises from the need to evaluate the capacity to conduct daily activities in an independent way. (2,3)

It can be estimated with the 6-minute walk test (6MWT) and other validated test. This test is simple, reliable, valid and consists in a daily activity (walk). (2,4)

Purpose:

The goals of this study was to verify associations between functional capacity measured with two different instruments (6MWT and Composite Physical Function (CPF) scale) and between those results and characterization variables.

Materials and Methods:

Descriptive, quantitative and cross design study

30 apparently healthy elderly women from Loures region

Independent and community-dwelling

Functional capacity was assessed with CPF scale and distance walked by the 6MWT.

Results were analysed using a SPSS v21.0 through associations between variables with Pearson's correlation coefficient (quantitative variables) and by Spearman correlation (ordinal qualitative) ($p < 0.05$).

Results:

	Age	Height	Weight	PC	BMI	CPF	Distance
Mean	68,1±2,44	1,54±0,063	70,08±11,55	90,8±11,87	29,37±4,51	19,5±5,37	418,92±92,9

Table 1 – Mean of anthropometric data, functional capacity and distance walked.

9 women	30%	Active
14 women	46,67%	Insufficiently active
7 women	23,33%	Inactive

Table 2 – Results of physical activity level questionnaire.

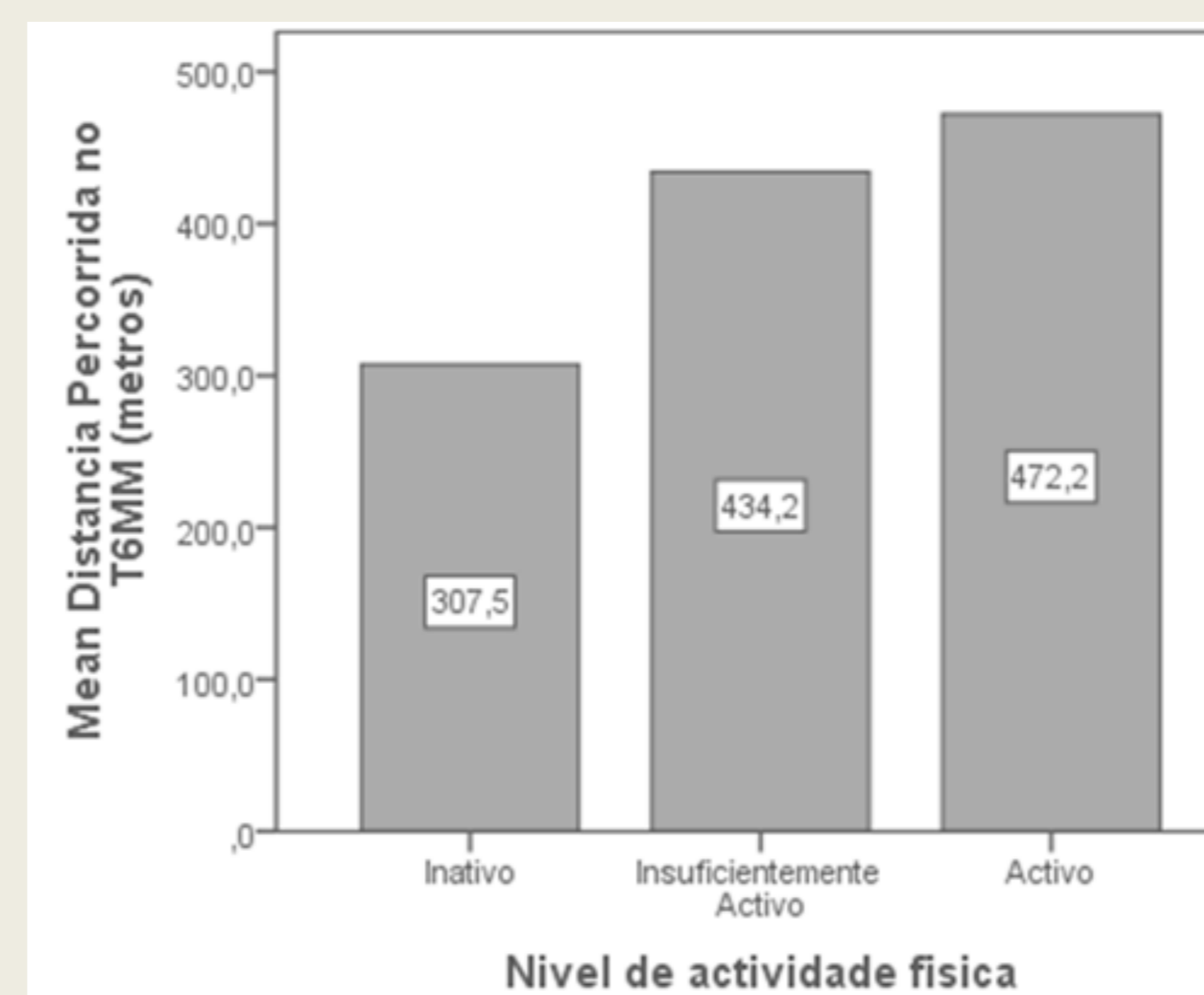


Fig. 1 – Distance walked and physical activity level

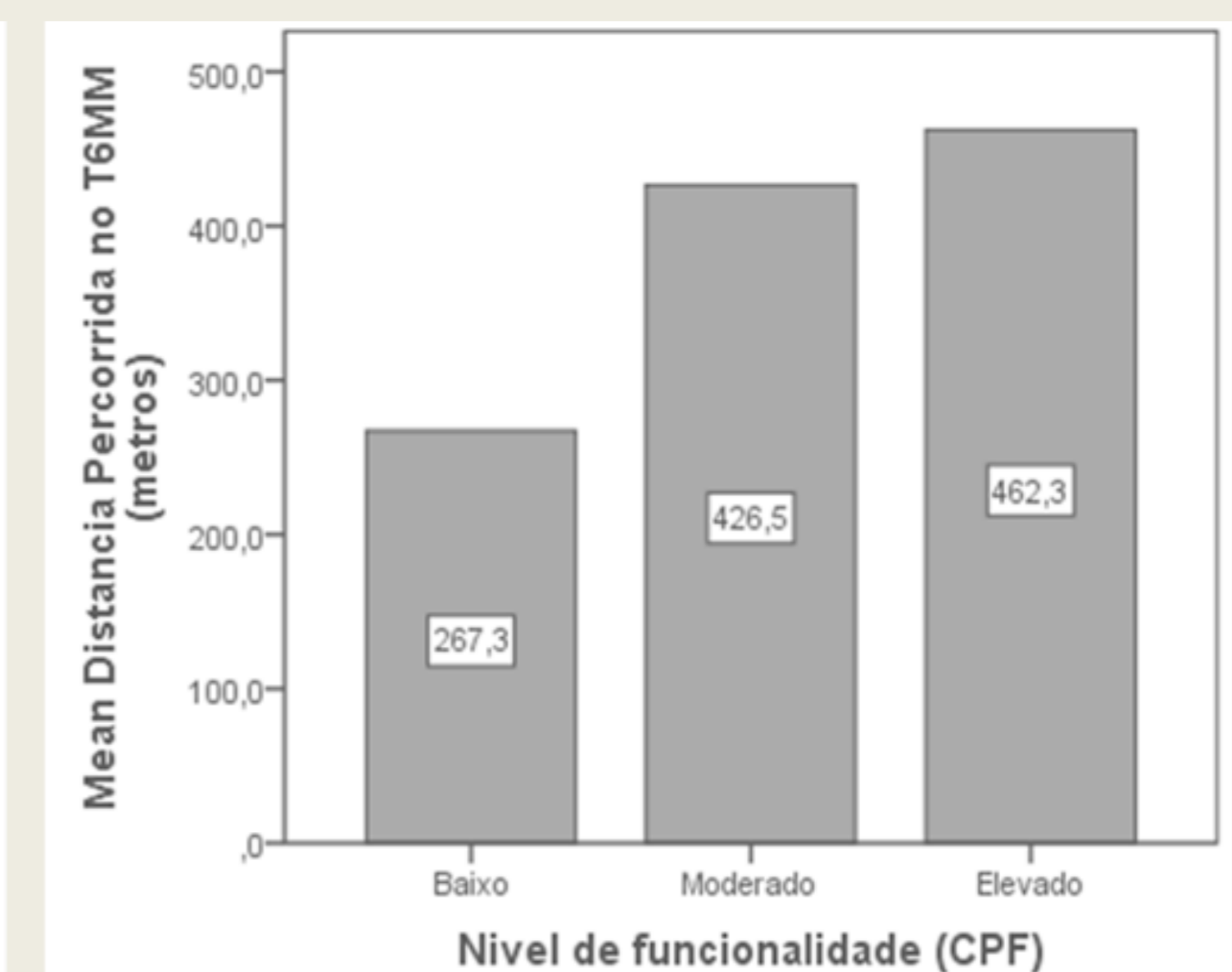


Fig. 2 - Distance walked and functional capacity

- Statistically significant associations in positive way and moderate intensity of walked distance with height ($r=0,406$; $p=0,026$);
- High intensity of walked distance and obtained results in CPF scale ($r=0,682$; $p=0,000$) and physical activity level ($r=0.594$; $p=0.001$).

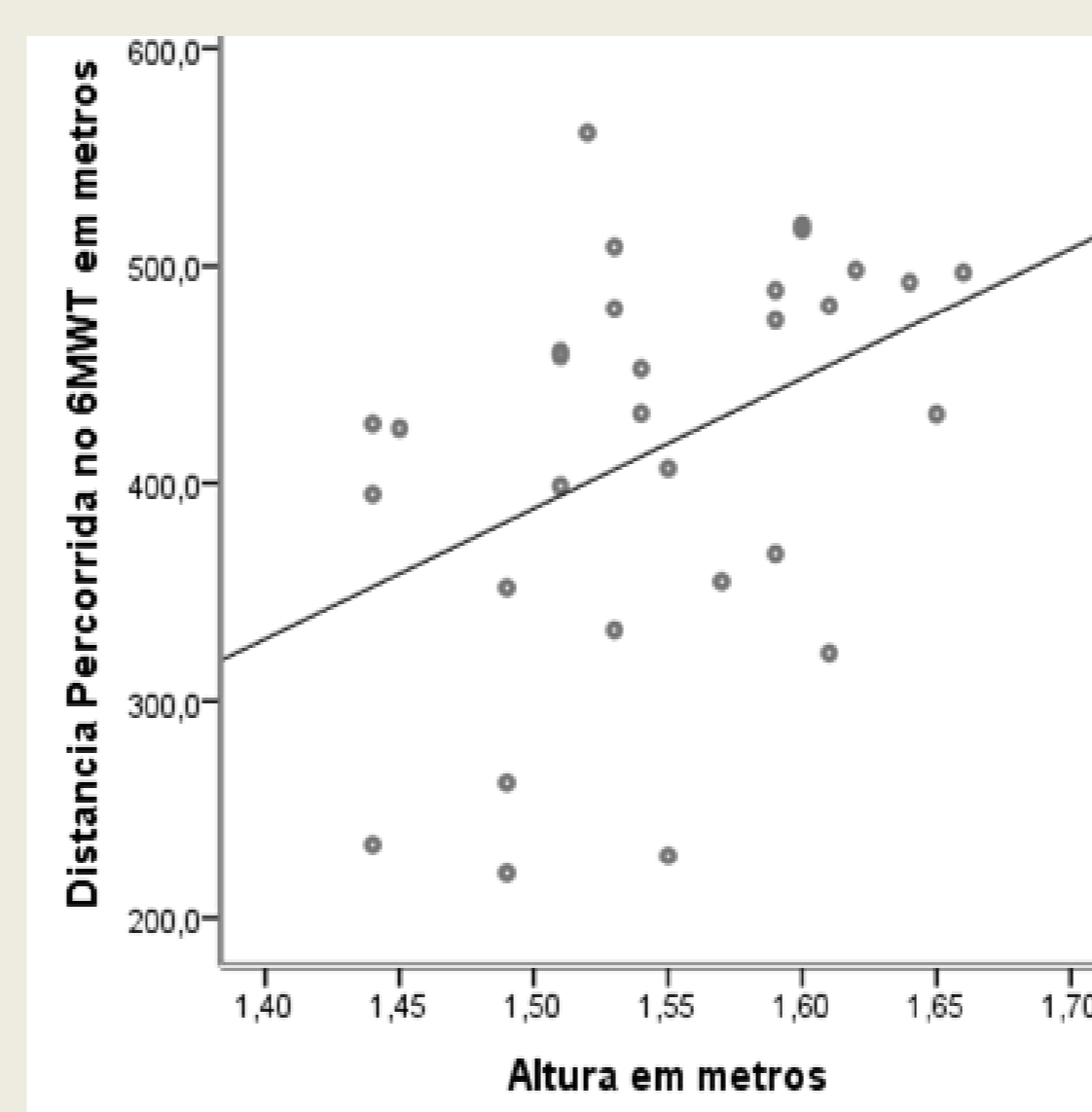


Fig. 3 – Associations between walked distance and height.

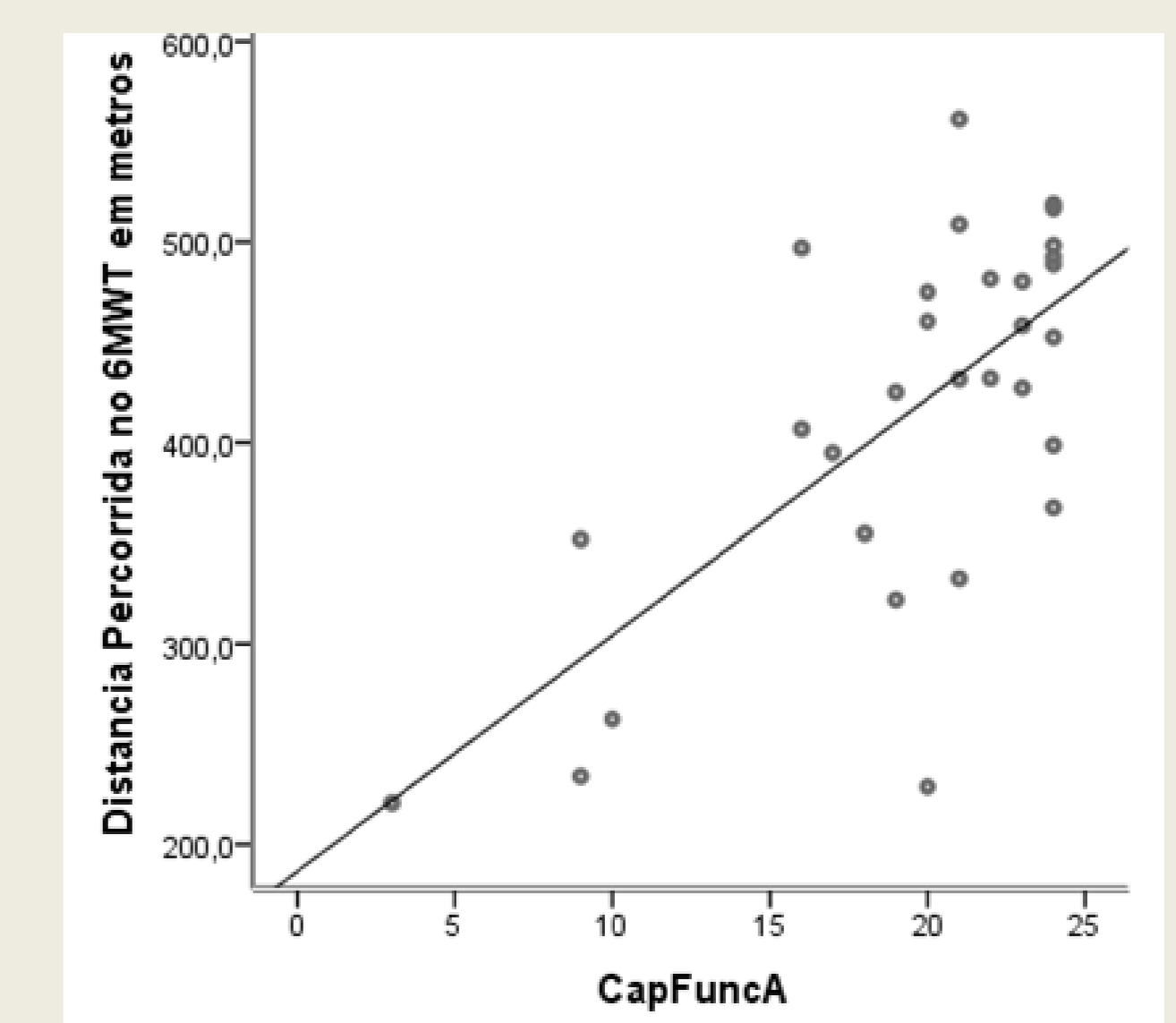


Fig. 4 – Associations between walked distance and functional capacity

Conclusion and clinical implications:

The statistically significant results shows trough positive associations that higher height, activity level and functional capacity results in higher distance walked in 6MWT

The height is associated with a larger step length, which makes an efficient gait.

Regular physical activity can reduce the negative effects of aging, which explains the best results in physical tests.

Furthermore, we verified that the functional capacity has more influence in the walked distance, then it does height or physical activity level. The distance walked in the six minute walk test has a high correlation with the obtained results in the CPF scale.

Clinical implications: The six minute walk test seems to be a good predictor of functional capacity in elderly people. However a large population should be tested in order to find a more powerful relationship.

References:

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