REVISTA CORPOCONSCIÊNCIA

WALKING ABILITY IN PATIENTS WITH PERIPHERAL ARTERIAL OCCLUSIVE DISEASE AND ITS ASSOCIATION WITH SOCIODEMOGRAPHIC AND CLINICAL INDICATORS

CAPACIDADE DE LOCOMOÇÃO EM PACIENTES COM DOENÇA ARTERIAL OBSTRUTIVA PERIFÉRICA E SUA ASSOCIAÇÃO COM INDICADORES SOCIODEMOGRÁFICOS E CLÍNICOS

CAPACIDAD DE LOCOMOCIÓN EN PACIENTES CON ENFERMEDAD ARTERIAL OCLUSIVA PERIFÉRICA Y SU ASOCIACIÓN CON INDICADORES CLÍNICOS Y SOCIODEMOGRÁFICOS

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Resumo
The aim of this study was to verify the association between sociodemographic and clinical indicators with the walking ability in patients with peripheral arterial occlusive disease. A cross-sectional study examined a non-probabilistic sample of patients with PAOD. Walking ability was determined using the Walking Impairment Questionnaire. Sociodemographic and clinical indicators were explored. Spearman correlation and crude and adjusted linear regression were used in the analysis. Forty individuals (age 62.8±9.7 years) participated in the study.

Only disease severity showed a strong negative correlation with total walking ability score (r=-0.75) and its items: walking distance (r=-0.73), walking speed (r=-0.69), and climbing stairs (r=-0.69). After adjustment, higher educational level (β=13.0; p=0.047) and disease severity (β=12.7; p=0.001) were associated with walking ability (R^2=0.50; VIF:1.33; p≤0.001). Patients with PAOD have impairments in their walking ability, which is related to low educational level and increased severity of the disease.
Keywords: Peripheral Arterial Disease; Walking; Walking Speed; Cross-Sectional Studies; Socioeconomic Factors.

Resumo
O objetivo deste estudo foi verificar a associação entre indicadores sociodemográficos e clínicos com a capacidade de locomoção em pacientes com doença arterial obstrutiva periférica (DAOP). Um estudo transversal examinou uma amostra não probabilística de pacientes com DAOP. A capacidade de locomoção foi determinada usando o Walking Impairment Questionnaire. Foram explorados indicadores sociodemográficos e clínicos. Correlação de Spearman e regressão linear bruta e ajustada foram utilizadas na análise. Quarenta indivíduos (idade 62,8±9,7 anos) participaram do estudo. Apenas a gravidade da doença apresentou forte correlação negativa com o escore total da capacidade de locomoção (r=-0,75) e seus itens: distância percorrida (r=-0,73), velocidade da caminhada (r=-0,69) e subir escadas (r=-0,69). Após ajuste, maior escolaridade (β=13,0; p=0,047) e gravidade da doença (β=12,7; p=0,001) associaram-se à capacidade de locomoção (R^2=0,50; VIF:1,33; p≤0,001). Pacientes com DAOP apresentam prejuízos na capacidade de locomoção, o que está relacionado com a baixa escolaridade e ao aumento da gravidade da doença.
Palavras-chave: Doença Arterial Periférica; Caminhada; Velocidade de Marcha; Estudos Transversais; Fatores Socioeconômicos.

Resumen
El objetivo de este estudio fue verificar la asociación entre indicadores sociodemográficos y clínicos con la capacidad de caminar en pacientes con enfermedad oclusiva arterial periférica (PAOD). Un estudio transversal examinó una muestra no probabilística de pacientes con PAOD. La capacidad para caminar se determinó utilizando el Walking Impairment Questionnaire. Se exploraron indicadores sociodemográficos y clínicos. En el análisis se utilizaron la correlación de Spearman y la regresión lineal cruda y ajustada. Cuarenta individuos (edad 62,8±9,7 años) participaron del estudio. Solo la gravedad de la enfermedad mostró una fuerte correlación negativa con la puntuación total de la habilidad para caminar (r=-0,75) y sus ítems: distancia recorrida (r=-0,73), velocidad al caminar (r=-0,69) y subir escaleras (r=-0,69). Después del ajuste, la educación superior (β=13,0; p=0,047) y la gravedad de la enfermedad (β=12,7; p=0,001) se asociaron con la capacidad para caminar (R^2=0,50; VIF:1,33; p≤0,001). Los pacientes con PAOD tienen deficiencias en su capacidad para caminar, lo que se relaciona con un bajo nivel educativo y una mayor gravedad de la enfermedad.
Palabras clave: Enfermedad Arterial Periférica; Caminata; Velocidad al Caminar; Estudios Transversales; Factores Socioeconómicos.

INTRODUCTION

Peripheral arterial occlusive disease (PAOD) is characterized by the obstruction of the peripheral arteries in the upper limbs and, notably, in the lower limbs, which can in extreme cases lead to mortality from cardiovascular events (FOWKES et al., 2013; FARAH et al., 2014). Through a systematic review, an overall prevalence of PAOD of 5.6% in 2015 has been suggested, with over 236.62 million people being affected (SONG et al., 2019). Additionally, low- and middle-income countries, such as Brazil, account for approximately 73% of cases worldwide (SONG et al., 2019).

In symptomatic patients, a form of pain known as intermittent claudication occurs wherein blood flow in the legs becomes insufficient during body movement to adequately perfuse muscles and other body tissues. It also causes fatigue, tingling, and cramps during

movement or even at rest (GARCIA, 2006). Owing to intermittent claudication, a considerable restriction in the patient's ability to move can be observed, which results in impairments in activities of daily living such as climbing stairs and walking for long distances or at faster speeds (BATISTA et al., 2015). Consequently, these patients lose their autonomy, which negatively affects their quality of life and self-esteem (SPRONK et al., 2007; GRAMS et al., 2009). Thus, Farinatti and Lopes (2004) suggest that gait is a good indicator of the risk of loss of autonomy due to the aging process, which is also true when evaluating patients with PAOD (BAILEY et al., 2014).

It is also noteworthy that sociodemographic and clinical variables seem to influence important issues regarding the ability to walk in patients with PAOD. The results found in the literature suggest that as disease severity increases, distance, walking speed, and muscle strength decrease, while pain recovery time becomes increasingly longer (BAILEY et al., 2014; BEEBE, 2001). It is possible that the time of diagnosis, that is, how many years the individual started the treatment of such disease, is related to changes in the ability to walk as the symptoms of PAOD are usually manifested over months or even years (PEACH et al., 2012). Furthermore, this situation can be aggravated in patients with other concomitant conditions (CONTE and VALE, 2018) such as obesity (GOLLEDGE et al., 2007) or even those who are aware of their diagnosis but decide to maintain the same lifestyle (ZEMAITIS et al., 2017).

It is unclear whether factors associated with PAOD, with and without intermittent claudication can also cause functional limitations, as well as walking difficulties. These data are very limited in low-income and middle-income countries, such as Brazil. Identifying the profile of these individuals based on their sociodemographic and clinical characteristics can facilitate the planning and implementation of intervention strategies to promote an active lifestyle that considers the particularities of each subgroup. Therefore, the present study aimed to verify the association between sociodemographic and clinical indicators with the walking ability in patients with peripheral arterial occlusive disease.

We hypothesize that the walking ability will be impaired in patients with PAOD, especially in terms of the walking distance. Also, there will be an association between walking ability and sex, smoking, diagnostic healthcare center, disease severity, revascularization surgery, self-health perception and presence of other diseases, suggesting that: men, smokers, individuals who were diagnosed in public places, with a higher degree of disease severity, and with revascularization surgery will have worse scores of walking ability. In addition, those with

the presence of other diseases and with a negative self-health perception will have worse walking ability scores.

METHODOLOGICAL PROCEDURES

This was a quantitative cross-sectional study carried out with patients of both sexes with PAOD recruited at the vascular unit of the Professor Polydoro Ernani de São Thiago University Hospital of the Federal University of Santa Catarina (UFSC). The sample was intentional and non-probabilistic. The data were collected from September 2020 to January 2021. The volunteers received information about the methodological procedures necessary to participate in the study as well as the risks and benefits and signed an informed consent form before participating. The present study was approved by the Ethics and Research of Human Beings Committee of the Federal University of Santa Catarina (CEPSH-UFSC) under the embodied opinion 3,971,967. The Resolution of the National Health Council (CNS 466/2012) was also respected.

Data collection took place on the days of medical appointments at the vascular unit. A previously trained researcher conducted the structured interview and recorded the responses in a specific form. The questionnaire consisted of the following sociodemographic information: sex (male or female); age (in full years); skin color (white or other); marital status (with or without a partner) and educational level (≤ 8 years; ≥ 9 years of study). Participants also reported the use of medications and their body mass (kg) and height (cm). We calculate the body mass index (BMI = kg/m2). The clinical indicators evaluated in this study were obtained by medical record assessment and questionnaire. The variables analyzed were: disease severity, determined by Rutherford classification (0 = asymptomatic, 1 mild claudication, 2 moderate claudication, 3 severe claudication, 4 rest pain, 5 small trophic lesions, 6 extensive necrosis); revascularization surgery (yes or no); time of diagnosis of DAOP (in years, refers to the date of the first consultation at vascular unit of the hospital); smoking (current smoker, ex-smoker, and non-smoker); diagnostic healthcare center (public or private); presence of another disease (yes or no, if yes which one?) and self-perception of health. This last variable was obtained by the question: "Do you classify your health status as...?". The answer options were: very bad, bad, fair, good and very good. For correlation analyses, this variable was used in an ordinal way. For descriptive and inferential analyses this variable was dichotomized considering the categories "very bad", "bad" and "fair" as bad, and the others ("good" and "very

good") as good. The variable presence of other diseases was presented in the manuscript in three ways: descriptive, indicating which diseases were reported by the participants; continuously, indicating the number of diseases aggregated by each patient and dichotomously, indicating how many participants had one or more diseases aggregated.

Walking ability was determined using the Portuguese version of the Walking Impairment Questionnaire (WIQ) – (RITTI-DIAS et al., 2009). The questionnaire also addresses aspects related to the past month and comprises three domains: distance (the distance the individual can walk), speed (the speed at which the individual can walk), and stairs (the number of stairs that the individual can climb). For each domain, the patient should indicate the degree of difficulty in travelling increasing distances (ranging from indoors to 450 m), at increasing speeds (ranging from slowly to trotting), and climbing different numbers of stairs (ranging from one to three floors). The degree of difficulty was measured using a 5-point scale, where 0 = unable; 1 = very difficult; 2 = reasonable difficulty; 3 = mild difficulty; and 4 = no difficulty. The points assigned by patients for each variable were multiplied by pre-established weights, added, and divided by the maximum possible score for each domain to obtain a final score, which can range from 0 (representing the inability to perform the tasks) to 100 (representing no difficulty in carrying out the task). A total walking ability score was calculated from the mean of the three domains.

Data Analysis

Data analysis was performed using the Stata software, version 13.0. Descriptive statistics included absolute and relative (%) frequencies for categorical variables and mean and standard deviation for continuous variables. The normality of the data distribution was verified using the Kolmogorov–Smirnov test. As the data were not normal, Spearman's correlation was used. The correlation values were classified as weak ($0 \leq r \geq 0.299$), moderate ($0.300 \leq r \geq 0.499$), or strong ($0.500 \leq r \geq 1.000$) (COHEN, 1988).

Linear regression analysis was used to obtain unadjusted and adjusted regression coefficients (ß) and their respective 95% confidence intervals (95% CI), the standardized regression coefficients, and the adjusted determination coefficients (adjusted R^2). In the adjustment, four levels with hierarchical entry in the model were tested: a) sex, age, skin color and marital status; b) educational level; c) smoking and diagnostic healthcare center; d) disease severity and revascularization surgery; and e) self-perception of health. Stepwise selection

strategy and a critical level of p≤0.20 for permanence in the model were used to control confounders.

In addition, the quality of the models was assessed using the multicollinearity diagnostic techniques (VIF). For all analysis, the STATA® software (StataCorp LLC, Texas, USA) version 14.0 was implemented, establishing statistical significance when p≤0.05.

RESULTS

All 40 invited patients agreed to participate in the study. The average age of the participants was 62.8 (±9.7) years and the median time of diagnosis of PAOD was 2 years (p.25=2;p.75=5). The sample was mostly represented by males (67.5%), individuals with white skin color (75%), living with a partner (77.5%), ex-smokers (65%), having the disease diagnosed in a public place (75.5%), and with self-health perception considered as good (90.0%). More than half of the participants reported having hypertension (79.5%) and only 7 reported having no other chronic disease (23.3%). The participants' average BMI was 25.3 (±4.4; min= 16.7 max= 37.1) and all of them used medications such as antihypertensives, antidiabetics, anticoagulants, and antiplatelet drugs. Sociodemographic and clinical characteristics of the sample are listed in Table 1.

Table 1 – Sociodemographic and clinical characteristics of patients with peripheral arterial occlusive disease (n=40)

Variables	n	%	95% CI
Sex			
Male	27	67.5	51.0; 81.6
Female	13	32.5	19.4; 49.0
Skin color			
White	30	75.0	58.7; 86.4
Others	10	25.0	13.6; 41.3
Marital status			
Without a partner	9	22.5	11.8; 38.7
With a partner	31	77.5	61.3; 88.2
Education level			
≤ 8 years	23	57.5	41.3; 72.2
≥ 9 years	17	42.5	27.7; 58.7
Smoking			
Current smoker	9	22.5	11.7; 38.7
Ex-smoker	26	65.0	48.4;78.5
Non-smoker	5	12.5	5.1;27.5
Presence of other diseases			
Hypertension	31	79.5	63.2;89.7
Diabetes	20	51.2	33.5;67.0
Obesity	7	19.9	8.5;34.0

Dyslipidemia	18	56.2	38.0;72.9
Coronary artery disease	12	30.7	17.9;47.5
Disease severity (Rutherford classification)			
Asymptomatic	1	4.4	1.0; 6.0
Mild claudication	9	39.1	20.6; 61.4
Moderate claudication	9	39.1	20.6; 61.4
Severe claudication	4	17.4	6.10; 40.3
Rest pain	-	-	-
Small trophic lesions	-	-	-
Extensive necrosis	-	-	-
Diagnostic healthcare center			
Public	30	75.5	58.7; 86.4
Private	10	25.5	13.6; 41.3
Revascularization surgery			
Yes	23	57.5	43.6; 74.5
No	17	42.5	25.6; 56.4
Self-heath perception			
Good	36	90.0	75.3; 96.4
Bad	4	10.0	3.6; 24.6

Note: 95% CI: 95% confidence interval; Education level ≤ 8 years corresponds to the basic stage of compulsory education; Education level ≥ 9 years corresponds to elementary school. No participant reported >12 years of study, which is equivalent to high school. The "disease severity" variable had the highest number of non-answers (n=17).
Source: authors' construction.

Table 2 shows the walking ability in terms of total score and its partial items. The scores ranging from zero (representing inability to perform the tasks) to 100 (representing no difficulty in performing the task). The average walking distance was 26.1 (± 23.9), the walking speed was 30.9 (± 15.8), and the ability to climb stairs had an average value of 41.7 (± 28.1).

Table 2 – Walking ability characteristics of patients with peripheral arterial occlusive disease (n=40)

Functional capacity items	Mean	Standard deviation	Maximum	Minimum	95% CI
Total walking ability score	32.9	±20.5	2.2	77.8	26.3; 39.5
Walking distance	26.1	±24.0	1.4	89.3	18.5; 33.8
Walking speed	30.9	±15.8	0	69.5	25.8; 35.9
Climb stairs	41.7	±28.1	0	87.5	32.7; 50.7

Note: 95% CI: 95% confidence interval.
Source: authors' construction.

Table 3 shows the correlation between clinical indicators and walking ability in patients with PAOD. Disease severity, measured by Rutherford's classification, showed strong negative correlations with the overall score of walking ability (r= -0.75; p=0.001), ability to climb stairs (r= -0.57; p=0.001), distance (r= -0.73; p=0.001), and walking speed (r= -0.69;

p=0.001). Other clinical variables did not present statistically significant correlations with the outcome.

Table 3 – Correlation coefficients between clinical variables and walking ability of patients with peripheral arterial occlusive disease (n=40)

Variables	Total walking ability score		Climbing stairs		Walking distance		Walking speed	
	r	p-value	r	p-value	r	p-value	r	p-value
Age	-0.04	0.778	0.06	0.681	-0.05	0.724	-0.05	0.718
Diagnosis time	-0.19	0.227	-0.14	0.371	-0.16	0.297	-0.20	0.223
Disease severity	**-0.75**	**0.001**	**-0.57**	**0.001**	**-0.73**	**0.001**	**-0.69**	**0.001**
Presence of other diseases	-0.20	0.287	-0.27	0.144	-0.09	0.621	-0.23	0.221
Health status perception	-0.39	0.012	-0.39	0.011	-0.30	0.063	-0.36	0.021

Source: authors' construction.

Table 4 shows the association between sociodemographic and clinical indicators and the total walking ability score in patients with PAOD. After adjustments, educational level and disease severity were associated with walking ability (R^2=0.50 and VIF: 1.33; p ≤ 0.001). It was observed that patients with higher educational level had an increase of 13.0 in the walking ability score (p = 0.047). Furthermore, each increase of one unit in the degree of disease severity, determined by the Rutherford classification, resulted in a -15.6 reduction in walking ability (p = 0.001). Sex, age, skin color, marital status, smoking status, diagnostic health center, disease severity, bypass surgery, self-health perception, and presence of other diseases were not associated with the total walking ability score.

Table 4 – Association between the total walking ability score with sociodemographic and clinical characteristics of patients with peripheral arterial occlusive disease (n=40).

Variables	Crude Analysis				Adjusted Analysis			
	β	Standard error	Adjusted β	p-value	β	Standard error	Adjusted β	p-value
Sex	-4.5	7.0	-0.1	0.524	-5.3	7.0	-0.1	0.451
Age	-0.1	0.3	-0.1	0.939	0.1	0.4	0.1	0.862
Skin color	-0.8	3.7	-0.1	0.826	-0.6	3.8	-0.1	0.882
Marital status	7.5	7.8	0.2	0.342	8.2	7.9	0.2	0.305
Educational level	13.0	6.3	0.3	**0.047**	13.0	6.3	0.3	**0.047**
Smoking	0.4	5.6	0.1	0.938	-0.1	5.4	-0.1	0.977

Diagnostic healthcare center	9.6	7.4	0.2	0.204	6.9	7.4	0.1	0.358
Disease severity	-17.1	3.7	-0.7	**<0.001**	-15.6	4.6	-0.7	**0.001**
Revascularization surgery	5.8	6.5	0.1	0.380	3.9	6.3	0.1	0.536
Self-heath perception	-23.5	10.2	-0.3	**0.002**	-13.8	10.0	-0.2	0.184
Presence of other diseases	-8.3	8.8	-0.1	0.356	-3.1	7.9	-0,1	0.697

Source: authors' construction.

DISCUSSION

The present study aimed to investigate the walking ability in patients with PAOD, recruited from a University Hospital in Southern Brazil, and its association with sociodemographic and clinical indicators. The main findings of the study were as follows: a) patients with PAOD have impaired walking ability; b) only disease severity showed a strong negative correlation with the total walking ability score and its items, and c) walking ability was directly associated with educational level, and inversely associated with disease severity.

The sociodemographic characteristics of the participants found in the present study indicate a higher prevalence of the disease in older males, in keeping with previous studies carried out with these patients (GRAMS et al., 2009; BARSBOSA et al., 2011; BATISTA et al., 2015; GERAGE et al., 2019). Another characteristic of the sample that draws attention is smoking. Even though only 9 participants reported currently smoking, about 90% of the sample reported having smoked before. This fact corroborates the evidence that indicates that smoking is an important risk factor for PAOD (PLANAS et al., 2002). In addition, hypertension and diabetes mellitus were the most reported comorbidities by participants, which has already been reported in another study (LI et al., 2003). Although no statistically significant differences were detected, participants had lower absolute scores in the distance and walking speed domains compared to the stair climbing domain. These findings corroborate those of other studies in patients with PAOD (NICOLAÏ et al., 2009; BATISTA et al., 2015).

Our findings showed that the time of diagnosis seems to have little influence on walking ability, unlike the severity of the disease. This finding could be partially explained considering that, regardless of whether the diagnosis of the disease was recent or not, what is decisive for functional independence is the course of the disease, or its evolution, which may

be accelerated in some patients. This is related to the frequency and intensity of intermittent claudication episodes, as well as to functional decline (NARDI et al., 2015).

Self-perceived health also had weak correlation with the walking ability variables, especially in relation to the distance walked. Participants generally had low health perception and low walking scores. There are few studies that related this variable with aspects of functional capacity in PAOD patients. Kim et al., (2023) indicated that the patients' illness perception directly influences the self-management of the treatment and that it may be related to the perception of competence. However, those that tried could indicate low quality of life values, especially in the social and emotional domains. According to Hamburg et al., (2017) individuals with PAOD have a decline in quality of life and a higher prevalence of depression. This is due to the existing impairment in the lower limbs that leads to a decrease in the performance of daily life and functional activities. The study by Horváth et al., (2023) also drew attention to the reduction in quality of life in patients with PAOD, especially physical functioning and psychosocial well-being. This fact must have its importance recognized, especially so that the diagnosis and management can be carried out early, aiming for less harmful effects on the physical and mental health of individuals.

All the study participants reported some intermittent claudication symptoms, based on disease severity, measured by Rutherford classification. SUDBRACK and SARMENTO-LEITE (2007) verified the effectiveness of supervised physical exercise in the treatment of lame patients and observed clinical improvement through an increase in pain threshold, increase in total walking time, as well as improvement in the functional capacity and quality of life of individuals. Barbosa et al., (2015) identified that elderly patients with intermittent claudication, with low walking ability have poorer levels of physical activity. Notably, intermittent claudication has a negative impact on the mobility of patients in the present study, as the pain triggered by physical exertion prevents them from continuously reaching greater distances. Thus, patients with PAOD generally perform less intense physical activities to avoid pain and discomfort. Studies have shown that patients with PAOD spend a large amount of time in sedentary behaviors, perform less physical activities to avoid the manifestation of intermittent claudication, and are less physically active than individuals without the disease (MCDERMOTT et al., 2006; GARDNER et al., 2008; GERAGE et al., 2019).

When considering the associated factors with the total walking ability score, it was found in the present study that educational level was positively associated with the outcome

of interest. Similar results were observed in other middle-income countries, such as the study conducted by Wang et al., (2019) who identified an association between education and PAOD in a nationally representative population in China. It is known that educational level and other social measures, such as socioeconomic status, have been associated with some indicators of the disease, such as the ankle-brachial index (ABI) (FOWKES et al., 2017). Thus, an ABI seems to be more common in disadvantaged individuals both in terms of educational performance and socioeconomic status. Moreover, it is highlighted that education is also associated with better quality of life in these patients (ARAGÃO et al., 2018). Thus, it is possible to assume that higher education is greatly significant to the understanding and impact of the information on the disease, which may lead to superior health care.

Regarding clinical variables, the only variable associated with walking ability in the present study was the disease severity. It was observed that patients who had a higher degree of disease severity had less walking ability. The degree of correlation between these two variables was even greater than that previously identified, adopting the ABI as an indicator of disease severity (IZQUIERDO-PORRERA et al., 2005). We believe that this result could be explained, at least in part, by the fact that the presence of symptoms, especially intermittent claudication, which affect functional capacity and, consequently, the performance of activities of daily living, including the ability to walk, are more recurrent with the worsening of the disease (COLLINS, PETERSEN, AND SUAREZ-ALMAZOR, 2005; WIDENER, 2011). Additionally, disease severity is more pronounced in the presence of other coupled diseases (i.e. hypertension, diabetes mellitus, cerebrovascular, coronary, and pulmonary disease), which also influence the walking ability of patients with PAOD (FARAH et al., 2014).

The study has the following limitation: low generalizability of results due to the size of the sample, since the visits in the vascular unit of the Hospital University of UFSC were reduced due to the current pandemic period as social distancing prevails to contain the contagion of COVID-19; absence of knowledge of the real pattern of physical activity of these patients, since the study data collection took place during the COVID-19 pandemic, which affected several areas of social behavior, including physical activity levels of the general population (COSTA et al., 2020). Considering this pandemic scenario, if data regarding the level of physical activity of the participants had been collected, it would likely have been underestimated; and lack of individual measures of economic factors such as family income or salary. Given the almost inseparable connection between sociodemographic factors such as

education and economic factors such as household income, economic factors can be a potential confounder for certain sociodemographic parameters included in the manuscript.

Additionally, the absence of ABI values in the medical records should be considered and lack of direct measurement of the ability to locomotion, performed by the treadmill and track tests. The walking ability was collected subjectively and, although the questionnaire used to measure that was validated, it is still related to the patients' perception. Possibly strengths of the study include the consultation of medical records to complement the information reported by patients and the use of different clinical indicators to determine which one has the greatest correlation with the different locomotion indicators. The practical implications of the present study concern recommendations for future studies to be conducted proposing interventions aimed at treating patients with PAOD, especially those with factors that have been shown to be associated with reduced walking ability.

FINAL CONSIDERATIONS

Patients with PAOD present impairments in the domains of walking ability, which are directly associated with educational level, and inversely associated with disease severity. These findings confirm the important implications of the disease on displacements and, consequently, on the performance of activities of daily living. Therefore, it is important to implement strategies to maintain and improve the walking ability of patients with PAOD, especially those with lower educational levels and greater disease severity, since low walking capacity has been associated with increased risk of all-cause and cardiovascular mortality in these patients (MCDERMOTT et al., 2008). In this context, the role of physical activity should the emphasized as a non-pharmacological treatment of PAOD due to the various benefits that its practice provides not only to physical and psychological aspects, but also to mental, emotional, and social functions.

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