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**Comparing Prevalence of Sarcopenia
Using EWGSOP2 and SDCO Definitions
in Community-Dwelling Older Adults in
Primary Care: a Cross-sectional Study**

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Orientador: Felipe de Souza Stigger
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LUCAS FARINA SALVI

**COMPARING PREVALENCE OF SARCOPENIA USING EWGSOP2
AND SDCO DEFINITIONS IN COMMUNITY-DWELLING OLDER
ADULTS IN PRIMARY CARE: A CROSS-SECTIONAL STUDY**

Trabalho final, apresentado a Universidade Federal de Ciências da Saúde de Porto Alegre, como parte das exigências para a obtenção do título de Bacharel em Fisioterapia.

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RESUMO

Introdução: A sarcopenia é uma síndrome caracterizada pela perda progressiva de massa muscular, força e desempenho físico, sendo associada a maior risco de incapacidade funcional, quedas e mortalidade em idosos. Diferentes consensos diagnósticos, como o EWGSOP2 e o SDOC, apresentam critérios distintos, o que resulta em variações na prevalência e aplicabilidade prática. A identificação precoce da sarcopenia é fundamental para prevenir complicações e promover estratégias de intervenção eficazes, mas ainda há lacunas na comparação entre essas abordagens diagnósticas. **Objetivos:** Avaliar e comparar a prevalência de sarcopenia segundo os critérios do EWGSOP2 e do SDOC em idosos da comunidade, além de investigar a associação entre a sarcopenia e variáveis funcionais, incluindo força muscular, mobilidade e independência nas atividades diárias. **Métodos:** Estudo transversal com 61 idosos (≥ 60 anos), residentes na comunidade de Porto Alegre, Brasil. Os participantes foram avaliados em casa, com coleta de dados sociodemográficos, antropométricos e funcionais. A sarcopenia foi diagnosticada pelos critérios do EWGSOP2 e do SDOC, que consideram medidas de força de preensão manual, velocidade de marcha, circunferência da panturrilha e massa muscular. As análises incluíram testes funcionais, como Timed Up and Go, teste de caminhada de três metros, teste de sentar e levantar e índice de Katz. Testes estatísticos foram realizados para identificar correlações e diferenças entre sarcopênicos e não sarcopênicos, com significância estatística em $p < 0,05$. **Resultados:** O perfil funcional dos idosos mostrou limitações significativas associadas à sarcopenia ($p < 0,001$), incluindo pior força de preensão manual, menor velocidade de marcha e desempenho inferior nos testes de mobilidade, como Timed Up and Go, teste de sentar e levantar e velocidade de marcha. Idosos sarcopênicos também apresentaram menor pontuação no índice de Katz ($p < 0,001$), indicando maior dependência nas atividades diárias. Foi observada uma forte correlação entre a sarcopenia, diagnosticada pelo SDOC, e variáveis funcionais. Indivíduos sarcopênicos apresentaram pior desempenho nos testes funcionais, enquanto medidas antropométricas, como altura, peso e massa muscular relativa, não mostraram diferenças significativas entre sarcopênicos e não sarcopênicos, sugerindo um menor impacto dessas variáveis na avaliação funcional. A prevalência de sarcopenia foi significativamente maior com o critério do SDOC (78,6%) em comparação ao EWGSOP2 (7,1%) ($p < 0,001$),

refletindo os enfoques distintos dos consensos. O SDOC foi mais sensível para identificar limitações ($p < 0,001$), apresentando maior associação com variáveis funcionais, incluindo pior força de preensão manual, menor velocidade de marcha e desempenho inferior nos testes de mobilidade. Comparando idosos diagnosticados com sarcopenia pelo SDOC, foi observado que esses indivíduos apresentaram desempenho inferior em todos os testes funcionais avaliados, reforçando a superioridade do critério para rastreamento de limitações funcionais em idosos.

Conclusões: O SDOC demonstrou maior sensibilidade para identificar casos de sarcopenia e maior correlação com desfechos funcionais em comparação ao EWGSOP2, sugerindo ser uma ferramenta mais adequada para rastreamento na atenção primária. A forte associação entre sarcopenia e redução da funcionalidade destaca a importância de diagnósticos precoces e intervenções direcionadas para mitigar o impacto dessa condição. Esses achados reforçam a necessidade de padronizar critérios diagnósticos mais específicos, capazes de atender às demandas clínicas e promover um envelhecimento saudável na população idosa.

Palavras-chave: Sarcopenia; Idosos; Perfil de saúde; Resultados funcionais

ABSTRACT

Background: Sarcopenia is a syndrome characterized by the progressive loss of muscle mass, strength, and physical performance, associated with a higher risk of functional disability, falls, and mortality in older adults. Different diagnostic consensuses, such as EWGSOP2 and SDOC, present distinct criteria, leading to variations in prevalence and practical applicability. Early identification of sarcopenia is essential to prevent complications and promote effective intervention strategies, but gaps remain in the comparison between these diagnostic approaches. **Objectives:** To evaluate and compare the prevalence of sarcopenia according to the EWGSOP2 and SDOC criteria in community-dwelling older adults, as well as to investigate the association between sarcopenia and functional variables, including muscle strength, mobility, and independence in daily activities. **Methods:** A cross-sectional study was conducted with 61 older adults (≥ 60 years) living in the community of Porto Alegre, Brazil. Participants were assessed at home, collecting sociodemographic, anthropometric, and functional data. Sarcopenia was diagnosed based on the EWGSOP2 and SDOC criteria, which include measurements of handgrip strength, gait speed, calf circumference, and muscle mass. Functional tests included Timed Up and Go, the three-meter walking test, the sit-to-stand test, and the Katz index. Statistical tests were performed to identify correlations and differences between sarcopenic and non-sarcopenic individuals, with statistical significance set at $p < 0.05$. **Results:** The functional profile of older adults revealed significant limitations associated with sarcopenia ($p < 0.001$), including lower handgrip strength, reduced gait speed, and poorer performance in mobility tests, such as Timed Up and Go, the sit-to-stand test, and gait speed. Sarcopenic older adults also scored lower on the Katz index ($p < 0.001$), indicating greater dependence in daily activities. A strong correlation was observed between sarcopenia, as diagnosed by the SDOC, and functional variables. Sarcopenic individuals showed worse performance in functional tests, while anthropometric measures such as height, weight, and relative muscle mass did not show significant differences between sarcopenic and non-sarcopenic groups, suggesting a lower impact of these variables on functional evaluation. The prevalence of sarcopenia was significantly higher using the SDOC criteria (78.6%) compared to EWGSOP2 (7.1%) ($p < 0.001$), reflecting the different focuses of these consensuses. SDOC was more sensitive in identifying limitations ($p < 0.001$), showing a stronger

association with functional variables, including reduced handgrip strength, slower gait speed, and poorer performance in mobility tests. Comparing older adults diagnosed with sarcopenia by SDOC, it was observed that these individuals performed worse in all functional tests evaluated, reinforcing the superiority of this criterion for detecting functional limitations in older adults. **Conclusions:** SDOC demonstrated greater sensitivity in identifying sarcopenia cases and stronger correlations with functional outcomes compared to EWGSOP2, suggesting it is a more appropriate tool for screening in primary care. The strong association between sarcopenia and reduced functionality highlights the importance of early diagnoses and targeted interventions to mitigate the impact of this condition. These findings emphasize the need to standardize more specific diagnostic criteria to meet clinical demands and promote healthy aging in the older population.

Keywords: Sarcopenia; Older adults; Health profile; Functional outcomes

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