

Abstract

Objectives: The aim of this cross-sectional study was to assess the nutritional status and physical performance of the individuals over 65 years living in home for the elderly and as the main research question to assess whether there is a correlation between impaired nutritional status and worsened physical performance in older adults. Also tests whether the unwanted weight loss for the last 3 month affects impaired results in a standardized SPPB test and handgrip test. And finally, verify whether the optimal BMI valided for the elderly predisposes a good physical performance and considered as a protective factor in case of frailty - on functional status.

Methods: The research was executed by a quantitative method with the investigation of respondents as a data collection technique. To elaborate the practical part and answer the research questions were used outputs from nutritional status testing (BMI, nutritional status according to MNA-FF, SMI) and functional evaluation (dynamometry, SPPB battery). The results of these variables diagnosed seniors in the norm, at risk and with pathology.

Results: The resulting research sample consisted of 40 seniors, of whom 29 were women (72,5 %) and 11 were men (27,5 %). The normal nutritional status was found in the majority of participants - 67,5 %, the risk of malnutrition in 22,5 % and malnutrition in 10 %, while only 10 % of individuals had a good physical performance. Another 32,5 % were pre-frail and most, thus 57.5% of seniors were diagnosed as fragile. The results of this study revealed an inverse correlation and no statistically significant relationship between nutritional status and physical performance was found ($p = 0.103$). Severe sarcopenia was present in 47, 5 %, moderate sarcopenia in 20 % of individuals, and 32,5 % of seniors were without sarcopenia. Despite some relationship trend, the SMI and SPPB correlation was not statistically significant due to high sample heterogeneity ($p = 0.496$). Weight loss > 3 kg in the last 3 months was recorded in 15 % of probands and significantly correlated with results in SPPB and handgrip ($p = 0.012$). Optimal BMI had a minimum - 20 % of seniors, of whom 50 % were evaluated as pre-frail and 50 % as fragile. The protective character of optimal BMI for age fragility was not statistically proven in this group ($p = 0.431$).

Conclusion: It has been shown that the nutritional status of seniors living in a social facility is not threatened in terms of reduced nutritional status, but in particular by the specific type of malnutrition - the sarcopenic obesity behind reduced physical performance and the development of geriatric fragility. Nutrition and movement intervention are important.

Keywords: nutritional status, functional status, geriatric frailty, retirement home