




Abstract

Photovoicing versus Protein Food Frequency Questionnaire: Differences and Similarities in Measuring the Protein Intake of Community-Dwelling Older Adults [†]

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Abstract: Research has shown that approximately 50% of Dutch older adults have a protein intake < 1.0 g/kg bw/day, and new strategies to improve protein intake have been suggested. Information on protein consumption can be collected via FFQs such as the Protein Screener 55+, but recent outcomes have shown that older adults may be incapable of estimating their own dietary intake. The aim of this study was to compare the reported intake in the Pro55+ with an estimate of protein intake based on photos taken over a period of 7 days to identify how accurate elderly people are in estimating their habitual protein intake over a period of 4 weeks. Protein intake was assessed in interviews using the food frequency questionnaire Pro55+, calculating the risk of a low protein intake (<1.0 gr/kg bw/day). The participants (n = 9) were asked to take photos of everything they consumed for a period of seven consecutive days and were asked whether they modified their consumption behaviour due to photographing. The reported frequency of consumption of products as categorized in the Pro55+ was compared with the frequency of foods visible in the photos as an indication for actual consumption. A Pro55+ score > 30% indicates a high risk of low protein intake (<1.0 gr/kg bw/day). The average Pro55+ score from the interviews was 44.9%, while the average photovoicing-based Pro55+ score based on the observed data was 54.9%. In eight out of nine cases the participants overestimated the frequency of nuts/peanuts consumption as well as dairy products like yoghurt (six out of nine). On the contrary, consumption of eggs was underestimated by six out of nine participants. The Pro55+ is a validated screening tool for the risk of a low protein intake based on the consumption of specific groups of food items that have shown to have the highest predictive value. However, this easy-to-use tool depends on the self-reported intake of these items by older adults. The comparison of the reported intakes with the photos of meals and food products showed that it appeared to be difficult for older adults to give accurate estimates, which may suggest that older adults are also insufficiently aware of necessary modifications to their current behaviour to adhere to dietary guidelines, such as an increased protein intake.

Keywords: older adults; protein intake; dietary assessment methods



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Institutional Review Board Statement: Ethical and legal advice was obtained from the HAS University of Applied Sciences, Den Bosch, The Netherlands (protocol code P2021 17, 16 December 2021). It was judged not to fall within the remit of the Medical Research Involving Human Subjects Act (WMO) and ethical clearance was provided by the review board. The study was conducted in accordance with the Declaration of Helsinki. All participants were informed to consult their general practitioner and/or a dietician in case of a high chance of a low protein intake and received a flyer from the Dutch Malnutrition Steering Group with additional information.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Anonymized data can be made available upon request from the corresponding author. Due to privacy and ethical restrictions, data are not publicly available.

Conflicts of Interest: The authors declare no conflict of interest.

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