

# The Nutritional knowledge, Protein knowledge and Protein Intake of Middle aged and Older adults in Connacht: a cross-sectional study

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## Introduction:

Changes that occur as the body ages can put older adults at a higher risk of geriatric diseases. (1) Sarcopenia is a geriatric condition defined as the age related, involuntary loss of skeletal muscle mass and strength (2)



Figure 1. Projected increase in Irish older adult population.

Protein is required for maintaining and supporting growth of muscle and may help prevent sarcopenia. (3)



Figure 2. Sarcopenia and its associated conditions (2).

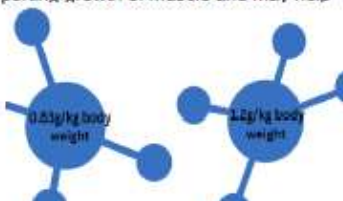


Figure 3. Protein Requirements for adults versus Older adults (4)

Despite higher protein recommendations, several studies have highlighted older adults with inadequate intake, which may be caused by poor nutritional and protein knowledge (PK) (5). Very few studies on nutritional knowledge (NK) in older adults have been carried out in Ireland.

## Objectives:

- Analyse overall nutritional and protein knowledge of a sample of middle aged and older adults in Connacht.
- Assess the association between knowledge and intake.
- Assess the demographic and lifestyle factors associated with knowledge and intake.

## Materials and methods:

**Study design:** cross sectional with approval from ATU ethics board.  
**Participants:** gave informed consent before completion of study.



Figure 3. Different recruitment methods used.



Figure 4. Eligibility criteria for study.

**Questionnaire:** The questionnaire participants received contained 7 sections.

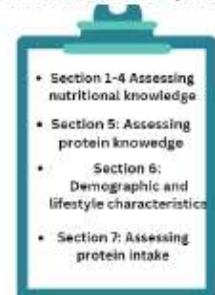


Figure 5. Breakdown of questionnaire sections

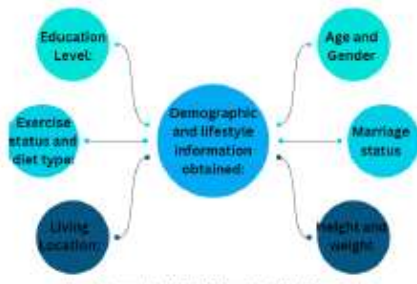


Figure 6. Demographic and lifestyle information obtained from participants.

**Nutritional Knowledge:** was assessed by the validated and reliable General Nutritional Knowledge Questionnaire-revised (GNKQ) (6)

**Protein Knowledge (PK):** was assessed by questions regarding protein sources, functions, requirements, distribution and sarcopenia knowledge. (6,7)

**Protein intake:** was assessed with a validated rapid protein FFQ. (8)

**Statistical Analysis:** was conducted on SPSS (version 28).



Figure 7. NK classification

## Results:

- 108 participants completed this study. Mean NK score was 58.4 out of 88.
- 55 participants had Moderate NK and 53 had high NK



Figure 8. Three identified areas of poor NK.

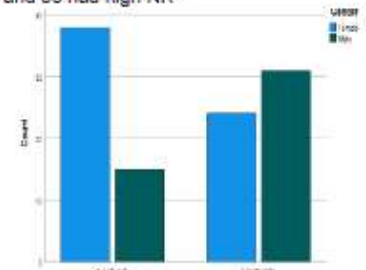


Figure 9. Breakdown of NK classification between males and females.

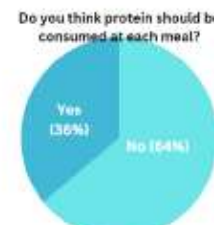


Figure 10. Breakdown of answers in protein knowledge section.

Mean protein intake for older adults was 1.12g/kg/day and 1.22g/kg/day for middle aged adults. 64.8% of participants met their protein requirements based on their age. There was no significant association between nutritional knowledge and protein intake ( $p=0.272$ ).

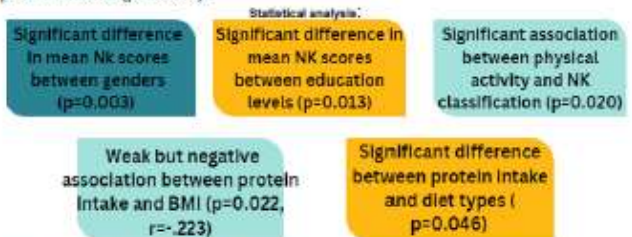


Figure 11. Statistical Analysis and statistically significant results.

## Conclusion:

- The overall level of NK is adequate however areas where knowledge is low include types and sources of fats, BMI classifications and portion recommendations.
- NK appears to be higher in those with higher education levels and females.
- Knowledge regarding plant sources of protein, sarcopenia and the importance of distributing protein throughout the day is low.
- Protein intake was inadequate in older adults. Protein intake was significantly associated with BMI but not with nutritional knowledge.

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