Factors Associated with Malnutrition in Long-term care versus Community Dwelling Older Irish Adults.

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Rationale

Older adults are at an increased risk of malnutrition compared to the younger population presenting new challenges for healthcare systems. The prevalence of malnutrition in elderly Europeans is an increasing health issue and furthermore it is difficult to clarify the precise determinants that cause it. The Joint Programme Initiative 'Malnutrition in the Elderly' (MaNuEL) Knowledge hub was created with the objective of determining factors associated with malnutrition to develop effective interventions to prevent malnutrition in the elderly in heterogeneous healthcare settings. The aim of the current research was to investigate the determinants associated with developing malnutrition in older Irish adults using the ELDERMET cohort data.

Methods

Data from the ELDERMET cohort of free living and long-term care older adults was used to determine factors associated with malnutrition, measured at baseline, three and six-month follow-up. These included analyses of demographics, anthropometrics, health, clinical factors, lifestyle and diet. Malnutrition was defined as a body mass index (BMI) of < 20 kg/m² and/or having a Mini-Nutritional Assessment score of < 17. Statistical analysis was conducted using SPSS Version 22.0 (IBM Corporation).

Results

Out of a total of 446 participants, baseline analysis identified 78 (17.5%) participants to be malnourished. Logistic regression analysis found age (adjusted OR = 1.10, 95% CI (1.05, 1.15)) and long-term care (adjusted OR = 6.35, 95% CI (3.24, 12.45)) to be significantly associated with malnutrition. Incidence of malnutrition was examined by considering a weight loss of more than 2.25 kg at the six-month follow-up for those individuals who were not malnourished at baseline and who provided data at six months (n = 190).

Results Cont'd

Unadjusted logistic regression analysis identified age, Functional Independence Measure (FIM), Mini-Mental State Examination (MMSE), Mini-Nutritional Assessment (MNA) and setting (community versus long-term care) as significantly associated with incident malnutrition ($P < 0.05$). Logistic regression analysis found long-term care to be associated with incident weight loss (adjusted OR = 5.35, 95% CI (2.19, 13.04)), controlling for age, sex and BMI at baseline.

Table

Table: Univariate Logistic Regression analysis of association between baseline variables and the incidence of weight loss >2.25kg.

Incidence of weight loss > 2.25kg			
	OR	P-value	95% CI
Sex			
Female	1.328	0.416	0.670, 2.632
Male			
Living			
Long-stay	3.695	<0.001	1.823, 7.488
Community			
Age	1.033	0.145	0.989, 1.078
Charlson co-morbidity	1.108	0.301	0.912, 1.345
Barthel Score	0.923	<0.001	0.884, .963
FIM	0.986	0.001	0.978, .994
MMSE	0.876	<0.001	0.825, .929
MNA	0.925	0.020	0.866, .988
Geriatric depression test	0.991	0.920	0.829, 1.185

Conclusion

There are many potential determinants of malnutrition in older adults. Age and long-term care were significantly associated with malnutrition in the ELDERMET cohort. This study demonstrates the risk of malnutrition in older adults, particularly those in long-term care. Future research is needed to help develop appropriate guidelines for nutrition policy in older adults to improve detection and prevention of malnutrition.