

Knowledge and practice among dietitians in four Western European countries regarding malnutrition, starvation, cachexia and sarcopenia

Lies ter Beek^{*a}, Erika Vanhauwaert^b, Frode Slinde^c, Ylva Orrevall^d, Christine Henriksen^f, Madelene Johansson^c, Carine Vereecken^b, Elisabet Rothenberg^f, Harriët Jager-Wittenaar^a

a. Research Group Healthy Ageing, Allied Health Care and Nursing, Hanze University of Applied Sciences Groningen, Groningen, Netherlands

b. Department of Healthcare and Technology, Leuven University College, Leuven, Belgium

c. Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden

d. Learning, Informatics, Management and Ethics, Karolinska Institutet, Stockholm, Sweden

e. Institute of Basic Medical Sciences Division of Clinical Nutrition, University of Oslo, Oslo, Norway

f. Kristianstad University, Kristianstad, Sweden

Rationale:

Adequate distinction between malnutrition, starvation, cachexia and sarcopenia is important in clinical care. Despite the overlap in physical characteristics, differences in etiology have therapeutical and prognostic implications.

Aim:

To determine whether dietitians in selected European countries have 'proper knowledge' of malnutrition, starvation, cachexia and sarcopenia, and use terminology accordingly.

Methods:

- Anonymous online survey among dietitians in the Netherlands, Belgium, Sweden and Norway
- 'Proper knowledge' defined as describing 2 or 3 of the common domains of malnutrition plus a correct answer to 3 case studies regarding starvation, cachexia and sarcopenia
- Chi-squared test was used to analyse differences in experience, working place and number of malnourished patients treated between dietitians with 'proper' vs. 'less proper knowledge'

Coverage of definition of malnutrition	Sweden N	(n=91) %	Belgium N	(n=160) %	Norway N	(n=49) %	Netherlands N	(n=69) %	All N	(n=369) %
3 domains	14	15.4	14	8.8	2	4.1	9	13.0	39	10.6
2 domains	29	31.9	54	33.8	16	32.7	14	20.3	113	30.6
1 domain	44	48.4	86	53.8	18	36.7	41	59.4	189	51.2
0 domains	4	4.4	6	3.8	13	26.5	5	7.2	28	7.6
Different domains										
Nutritional balance	57	62.6	98	61.3	19	38.8	37	53.6	211	57.2
Body composition	64	70.3	97	60.6	30	61.2	43	62.3	234	63.4
Functionality & outcome	23	25.3	41	25.6	7	14.3	16	23.2	87	23.6
Case studies										
Starvation case	63	69.2	74	46.3	28	57.1	49	71.0	214	58.0
Cachexia case	49	53.9	47	29.3	22	44.9	41	59.4	159	43.1
Sarcopenia case	75	82.4	112	70.0	35	71.4	51	73.9	273	74.0
Correct answers to all cases	38	41.8	27	16.9	15	30.6	33	47.8	113	30.6
'Proper knowledge' [*]	19	20.9	10	6.3	8	16.3	11	15.9	48	13.0

Figure 1. Results of questions on knowledge

^{*}Defined as mentioning 2 or 3 domains of the definition of malnutrition and correct answers to all cases.

Results:

- 7186 invited in the study, 712 participated, 369 completed all mandatory questions (5%)
- 'Malnutrition' is used as term in clinical practice by 88% of the respondents, starvation 3%, cachexia 30% and sarcopenia 12%
- Case studies on starvation, cachexia and sarcopenia were correctly answered by respectively 58%, 43% and 74%
- 'Proper knowledge' was present in 13% of the respondents.
- The percentage with 'proper knowledge' was higher in respondents working in a hospital or in municipality (16%, $P < 0.041$) than in those working in other settings (7%)

Conclusion:

- Given the low percentage of dietitians qualified with 'proper knowledge' of malnutrition, starvation, cachexia and sarcopenia, origins of muscle wasting are suboptimally recognized in clinical practice.
- Identifying cases is performed better than the theoretical understanding of the concept of malnutrition.



*l.ter.beek@pl.hanze.nl

Healthy Ageing 

hanze.nl/healthyageing

