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What is the Best Term in Spanish to Express the Concept of Cancer-Related Fatigue?

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Abstract

Introduction: Fatigue is one of the most frequent symptoms in patients with cancer. No adequate term in Spanish has been defined to describe the English concept of fatigue.
Aim: To identify the most suitable Spanish words that define the concept of fatigue and to check psychometric characteristics.
Method: Consensus with professional experts on Spanish words that best suit the English concept of fatigue. A prospective study on oncologic patients was also undertaken, which included an evaluation of the intensity of fatigue through visual numeric scales (VNS) where the words had been previously selected. The fatigue subscale of the Functional Assessment of Cancer Therapy-Fatigue (FACT-F) questionnaire was taken as a reference.
Results: The experts highlighted the words *cansancio*, *agotamiento*, and *debilidad* (tiredness, exhaustion, and weakness) as the terms that best defined the concept of fatigue. In the psychometric assessment study, 100 patients were included, of which 61 (61%) presented diagnostic values for cancer-related fatigue in the FACT-F fatigue subscale (score 34/52 or lower). The VNS for the chosen terms obtained a high correlation with the FACT-F fatigue subscale results: *cansancio* (tiredness) $r = -0.71$, *agotamiento* (exhaustion) $r = -0.74$, *debilidad* (weakness) $r = -0.74$, with no statistical differences between them. For the detection of fatigue by means of the VNS, tiredness (cutoff point $\geq 4/10$) gave sensitivity (S) 0.90 and specificity (E) 0.72; exhaustion (cutoff point $\geq 3/10$) S 0.95 and E 0.90 and weakness (cutoff point $\geq 4/10$) S 0.92 and E 0.72. The ROC curve was 0.88 for tiredness, 0.94 for exhaustion, and 0.92 for weakness, with no significant difference between the areas mentioned. The terms *cansancio*, *agotamiento*, and *debilidad* (tiredness, exhaustion, and weakness) are suitable for defining the English concept of fatigue in Spanish, and should be the preferred option for inclusion in evaluation tools.

Introduction

Asthenia is one of the most frequent symptoms in cancer patients. It may be due to multiple causes, including the tumor itself or oncologic treatment.[1] It is probably the one symptom which has an overriding influence on the quality of life for patients with cancer, because it interferes with social and physical activity.[2] In spite of its importance and prevalence, asthenia continues not to be widely recognized, assessed, or treated. This may be because many professionals consider it to be a natural expected feature of advanced cancer.[3] The tools used to evaluate asthenia or fatigue should be adapted to the patient's environment. The working group of the European Association of Palliative Care (EAPC) recommends that systematic assessment of asthenia in a non-specialized setting be carried out using a single question such as, "Do you feel unusually tired or weak?" However, at an oncology or palliative care unit, evaluation of asthenia or other symptoms should be systematic, by means of a general evaluation. For investigative purposes, or when asthenia is a priority symptom, specific multidimensional surveys should be completed.[3]

In scientific language, the terms fatigue or asthenia[4–8] are used to refer to a symptom that the European Organization for Research and Treatment of Cancer (EORTC) defines as a subjective sensation of tiredness, weakness, or lack or energy.[9] In general, the symptom of fatigue is recognized by most authors as a multidimensional concept with at least one physical and one cognitive aspect; emotional state and existential and social aspects also influence the way in which it is perceived. The EAPC points out that culture and language make the accurate evaluation and treatment of asthenia

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difficult in different European countries.[3] Because the term fatigue is relative only to the languages of English and French and its translation is not applicable to other languages, a literal translation may run the risk of not covering the same dimensions. In Spain, other terms may better express the English concept of fatigue.[10] It is worthy to note that the *Real Academy* Dictionary of Spanish offers a number of definitions for *fatiga*, including (1) lasting agitation, tiredness, intense prolonged work, (2) discomfort produced by effort or by other causes and that is expressed in rapid or difficult breathing, and (3) the desire to vomit.[11] This means that the same term may be used to refer to symptoms as diverse as tiredness, dyspnea, and nausea.

The different semantic usage of the term fatigue in diverse languages is crucial when attempting to establish a transcultural adaptation and validation of the tools for detecting or evaluating symptoms—a current issue for research in oncology and palliative care. The use of nonvalidated tools for symptom evaluation can lead to noncomparable results.[12] The authors have designed a study with the aim of identifying appropriate terms in Spanish to explore the complex symptom of asthenia and to test certain psychometric characteristics when these are used in symptom detection.

Method

In order to identify which terms are the most appropriate for describing asthenia, a first study with qualitative methodology based on expert consensus were used. First, palliative care and oncology professionals were approached directly or by e-mail, and asked to propose alternative terms in Spanish for the concept of fatigue. After this first round, a second one was done: these terms were then evaluated by each expert, and rated from 0 to 3 (0, less appropriate term; 3, highly appropriate term). The terms that scored most points were used in a later study on the intensity of asthenia in patients with advanced stage cancer.

In a second study, ambulatory patients and inpatients from the Haematology and Oncology Departments at the Clinica Universidad de Navarra were selected to complete the Fatigue Subscale of the Functional Assessment of Cancer Treatment-Fatigue (FACT-F).[13] The patients were randomly selected, but had to be over 18 years of age, provide informed consent, and possess full cognitive ability. The FACT-F fatigue subscale, widely used in oncology, contains 13 specific items on asthenia, with Likert-type scales from 0 to 4. In the final calculation, 0/52 represents maximum asthenia, 52/52 nil asthenia.[14] A study with a large sample of cancer patients[15] identified a score of 34 on the FACT-F subscale as a proposed cutoff point for the diagnosis of cancer-related fatigue, with a logistic regression model between the cancer-related fatigue criteria diagnosis of the *International Statistical Classification of Diseases, 10th revision* (*ICD-10*) and FACT-F subscale. In that study of the 470 studied patients included the prediction of FACT-F subscale was concordant with the status of the fatigue criteria *ICD-10* for 93%. In our survey we choose also use the cutoff point of 34 (of 52). Our patients also completed a specific symptoms questionnaire made up of visual numerical scales (VNS) of asthenia, containing those terms that received the highest scores in the first phase. To avoid contamination in response trends, the questionnaire included five more VNS for other symptoms (pain, anxiety, dyspnea, anorexia, depression, and sleep disturbances). It also asked patients which term they preferred. The study was approved by the Ethics Committee on Clinical Research at the Clínica Universidad de Navarra.

To analyze the results, a study of the correlation between the FACT-F subscale scores and the VNS for the diverse terms, by means of Spearman's correlation coefficient was undertaken. The differences in the correlations were evaluated by means of Steiger's Z test.[16] The diagnostic potential for detecting patients with severe asthenia was studied by calculating the sensitivity, specificity and receiver operating characteristic (ROC) curve for different cutoff points for each VNS and the differences between the areas were then evaluated.

Results

Of the 10 professionals who took part in the study to propose appropriate Spanish terms for fatigue, 6 were drawn from palliative care and 4 from oncology; 4 were nurses while the remaining 6 were doctors. They came from at least 7 different Spanish provinces. The 3 words considered unanimously to be the most appropriate, with an average score of 2.7–3.0 (maximum, 3.0) were: *cansancio*, *agotamiento,* and *debilidad* (tiredness, exhaustion, and weakness). All the other expressions proposed, such as *falta de fuerza, falta de energía, decaimiento, flojera, astenia, fatiga* (lack of strength, lack of energy, bad form, listlessness, asthenia, fatigue) obtained average scores below 2.0.

The characteristics of the 100 patients included in the study are shown in Table 1. The fatigue and other symptom evaluation with VNS are shown in Table 2. The FACT-F subscale results are presented in Table 3. This group of patients included a large subpopulation of patients with gastrointestinal cancer as is usual in the oncology department of this study. In our sample, anorexia, sleep disturbance, and asthenia were the symptoms with more intensity (mean). Sixty-one patients (61%) presented FACT-F subscale scores lower than 34 and they were therefore considered cases of cancer-related fatigue.

The correlation with the FACT-F subscale was very high and significant ($p < 0.001$) for the three terms: tiredness

Table 1. Patient Characteristics

Patients	n = *100 (%)*
Age (median, range)	57 (18–87)
Gender	
Female/Male	54/46
Type of tumor	
Gastrointestinal	39
Breast	6
Hematologic	15
Lung	10
Gynecologic	8
Others	22
State	
Localized	20
Advanced local	31
Disseminated	49
Functional state (Karnofsky Index)	
>70	44
≤70	56

Table 2. Intensity of Fatigue (as Evaluated by VNS with Three Different Terms); Intensity of Six More Symptoms also Included in the Specific Symptoms Questionnaire (Sample of 100 Patients with Cancer)

Symptom (explored with VNS, Spanish and English, n = 100)	*Mean*	*SD*	*Range*
Cansancio (tiredness)	4.9	2.9	0–9
Agotamiento (exhaustion)	4.3	3.1	0–10
Debilidad (weakness)	4.9	2.9	0–10
Dolor (pain)	2.7	2.4	0–9
Nerviosismo (anxiety)	3.0	2.8	0–10
Dificultad para respirar (dyspoea)	1.9	2.5	0–10
Falta de apetito (anorexia)	4.3	3.2	0–10
Desánimo (depression)	3.5	2.6	0–9
Dificultades para dormir (sleep disturbances)	3.9	2.9	0–10

VNS, visual numerical scales; SD, standard deviation.

($r = -0.71$; 95% confidence interval [CI]: −0.80 to 0.60) exhaustion ($r = -0.74$; 95% CI: −0.82 to 0.64) and weakness ($r = -0.74$; 95% CI: −0.82 to 0.64). The differences between the three correlations (Steiger's Z test) are not considered to be significant ($p > 0.10$). The VNS for tiredness, with a cutoff point of 4 of 10 or more, obtained sensitivity of 0.90 and specificity of 0.72 to detect cases of cancer-related fatigue (Table 4); for exhaustion, with a cutoff point of 3 of 10 or more, sensitivity of 0.95, and specificity of 0.90; and weakness, with a cutoff point of 4 of 10 or more, sensitivity of 0.92, and specificity of 0.72. The area of the ROC curves (Fig. 1) for tiredness was 0.88; for exhaustion, 0.94; and for weakness, 0.92 without significant differences between them ($p > 0.10$). As far as the patients' preferences, 54% chose tiredness, compared with 29% who indicated weakness and 15% who mentioned exhaustion.

Discussion

In those studies that include personal evaluation or interpretation, it is advisable to include a component of qualitative methodology. This was undertaken in the present work. This methodology allowed us to detect a combination of terms in Spanish with the potential for adaptation to the English term fatigue. For a complex symptom such as asthenia, the professionals' consensus was to choose the terms *cansancio, agotamiento,* and *debilidad* (tiredness, exhaustion, and weakness).

There are studies that examine the diagnostic capacity of a VNS or single-item tool for diverse symptoms such as pain,[17] anxiety or depression,[18] distress, anorexia,etc.[19] In the case of asthenia, the VNS for "level of energy" to use a simple question has proved efficiency for the diagnosis of fatigue in patients with cancer within the scope of the English language.[15,19] Our study, performed with a similar methodology, shows that a population of Spanish-speaking oncology patients, with a similar prevalence of asthenia as that described in the English studies, presented the terms *cansancio, agotamiento,* and *debilidad* as appropriate to examine the symptom of asthenia by means of a VNS in Spanish. In fact, a high correlation was obtained with the asthenia scores in the FACT-F subscale, with high sensitivity and specificity in order to detect patients with relevant asthenia.

Although the comparisons of correlation and diagnostic potential do not display significant differences, the three terms mentioned cannot be considered as completely equivalent

Table 3. Fatigue Subscale of FACT-F (Spanish Version 4.0) in One Hundred Patients with Cancer

Frequencies of response (%) and mean of n = 100 patients	*Nada* ***(0)***	*Un poco (1)*	*Algo (2)*	*Mucho (3)*	*Muchí-Sino (4)*	*No response (−)*	*Mean ± SD (range)*
ITEM							
1. Me siento agotado/a	20	21	16	34	8	1	1.9 ± 1.3 (0–4)
2. Siento debilidad en todo el cuerpo	20	22	20	29	9	0	1.9 ± 1.3 (0–4)
3. Me siento decaído/a	23	29	20	21	7	0	1.6 ± 1.2 (0–4)
4. Me siento cansado/a	10	31	17	33	9	0	2.0 ± 1.2 (0–4)
5. Tengo dificultad para comenzar las cosas porque estoy cansado/a	25	16	25	26	8	0	1.8 ± 1.3 (0–4)
6. Tengo dificultad para terminar las cosas porque estoy cansado/a	23	21	26	20	7	3	1.7 ± 1.2 (0–4)
7. Tengo energía[a]	16	33	29	17	4	1	1.6 ± 1.4 (0–4)
8. Soy capaz de hacer mis actividades diarias (trabajar, ir a la escuela, hacer las compras)[a]	33	18	23	13	12	1	1.5 ± 1.4 (0–4)
9. Necesito dormir durante el día[a]	26	41	25	8	0	0	1.2 ± 0.9 (0–3)
10. Estoy demasiado cansado/a para comer	53	21	17	7	2	0	0.8 ± 1.1 (0–4)
11. Necesito ayuda para hacer mis actividades diarias (trabajar, ir al colegio, hacer las compras)	35	18	12	18	14	3	1.6 ± 1.5 (0–4)
12. Estoy frustrado/a porque estoy demasiado cansado/a para hacer las cosas que quiero hacer	34	24	15	17	9	1	1.4 ± 1.4 (0–4)
13. Tengo que limitar mis actividades sociales debido al cansancio	24	17	21	21	16	1	1.9 ± 1.4 (0–4)
Fatigue Subscale Score[b]							**29.5 ± 12.8 (2–52)**

[a]Number 7 and 8 are reverse item. To calculate the FACT-F Fatigue Subscale Score follow the instructions of www.FACIT.org.

[b]FACT-F fatigue subscale score range: 0–52. The higher the score, the better the quality of life; A score of 34 on the FACT-F fatigue subscale was found as cutoff point for the diagnosis of cancer-related fatigue following the proposed criteria for *ICD-10*[15]; There are 61 patients with FACT-F fatigue subscale score ≤34 in the sample of 100 patients.

Table 4. Sensitivity, Specificity, Positive and Negative Predictive Values for Three VNS 0–10 for Asthenia at its Greatest Diagnostic Level for Detecting Tired Patients, According to the Result Obtained in FACT-F Subscale

VNE	*Sensitivity*	*Specificity*	*Positive predictive value*	*Negative predictive value*
Cansancio (tiredness) ≥ 4	0.90	0.72	0.83	0.82
Agotamiento (exhaustion) ≥ 3	0.95	0.90	0.93	0.92
Debilidad (weakness) ≥ 4	0.92	0.72	0.83	0.85

VNS, visual numeric scales.

for examining asthenia. It should be taken into account that the term *agotamiento* (exhaustion) shows similar performance on the VNS but starting from a lower cutoff point. On a VNS from 0 to 10, with expressions based on tiredness or weakness, it is appropriate to consider patients as "possibly tired" if they have scores equal to or above 4, as occurs in the VNS for "fatigue" for English-speaking patients. Nevertheless, when exhaustion is used, it should be taken into account that they all give scores of 3 or more. It would appear that semantic usage of the term exhaustion is associated with a greater basal intensity of the symptom and might also explain why patients prefer the terms tiredness or weakness. Using a VNS with exhaustion, a nonsignificant tendency can be observed of higher values of correlation, sensitivity, and specificity, in order to detect asthenia. We have verified the three most relevant terms to explore fatigue in Spanish according to the findings of the previous qualitative study; however, it is theoretically possible that other terms that were not verified may be also valid.

The capacity of existing scales to represent cultural and social differences in the definition of fatigue is largely unknown. Further development of research in this area may provide a more informed understanding of the experience of fatigue.[20] The aim of this study was to define alternative terms to explore the symptom fatigue in Spanish that were more suitable than direct translation of the term; the study was undertaken with a Spanish-speaking population from Spain. In other Spanish-speaking populations such as those in South and Central America, the results could be different and other terms could be more suitable among these popula-

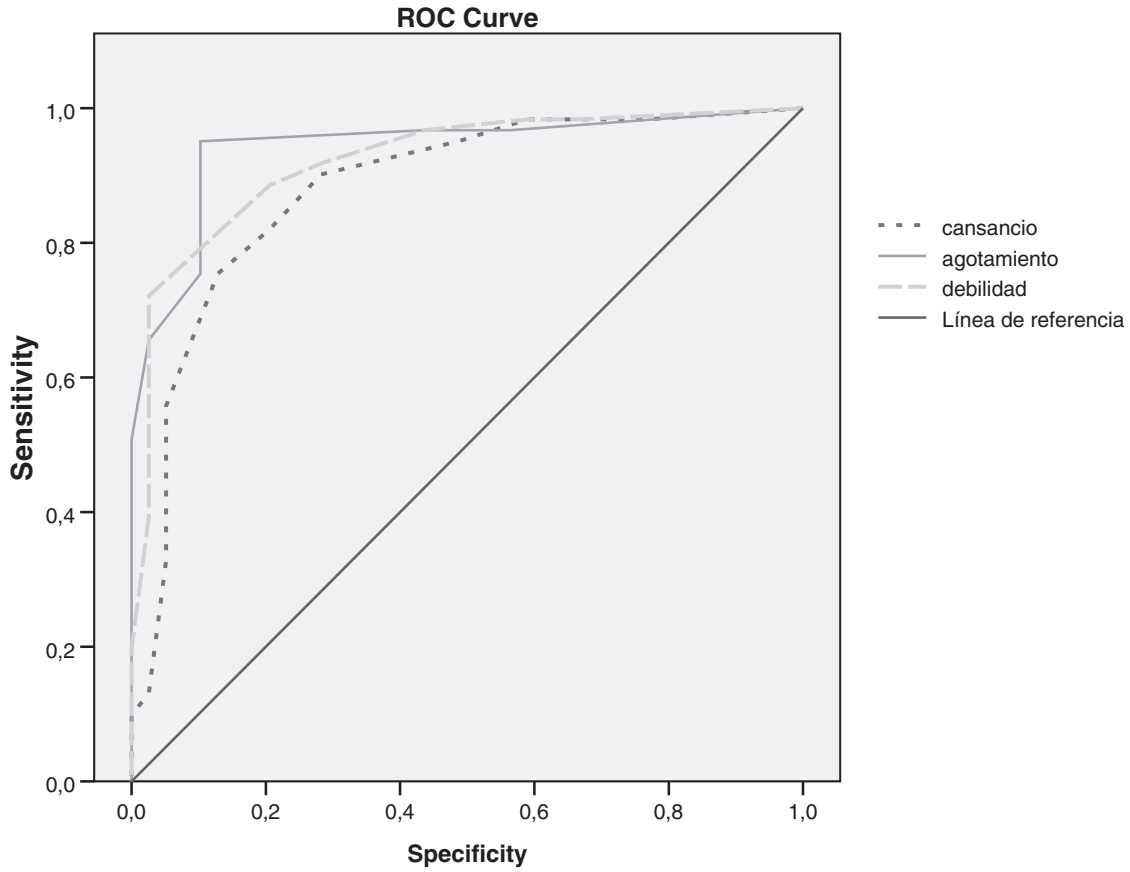

FIG. 1. Diagnostic power of receiver operating characteristic (ROC) curves to explore asthenia with several terms. No significant differences were found between the three curves: tiredness-exhaustion, $p = 0.73$; tiredness-weakness, $p = 0.25$; exhaustion-weakness, $p = 0.38$.

tions. There is a need for future investigation in these other populations but until new results are obtained, *cansancio*, *agotamiento,* or *debilidad* could be better options than *fatiga*.

In conclusion, *cansancio, agotamiento,* and *debilidad* (tiredness, exhaustion, and weakness) are appropriate and valid terms when the symptom of asthenia (or fatigue in English) is explored in patients with cancer in Spanish. These terms should be preferred to other translations when symptom evaluation tools are used their Spanish versions.

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Author Disclosure Statement

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