Spanish version of the Satisfaction with Epilepsy Care questionnaire: Adaptation and psychometric properties

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ABSTRACT

Objective: The objective of this study was to perform a cross-cultural adaption and psychometric evaluation of the Spanish version of the Satisfaction with Epilepsy Care (SEC) questionnaire and analyze patient satisfaction with epilepsy care.

Methods: Transcultural adaptation and validation of the SEC were carried out using translation and back-translation with pilot testing and an expert panel. The SEC-E (Spanish) was analyzed in 213 patients with epilepsy to examine construct and criterion validity and internal consistency.

Results: The SEC-E achieved conceptual, semantic, and content equivalence with the original version. For content validity, one question was eliminated from the original questionnaire as it has little relevance in our cultural setting. Positive correlations for criterion validity were obtained using the gold standard measure (Satisfaction in Hospitalized Patients scale). Construct validity replicated the three dimensions of the original questionnaire. The scale showed adequate reliability through internal consistency (Cronbach's α of 0.94) and temporal stability on retest (n = 85). Patients scored (0 to 100) 77.5 [standard deviation (SD): 19.9] for satisfaction with communication, 76.9 (SD: 17) for organization, and 67.2 (SD: 22.1) for information.

Significance: The SEC-E is a valid and reliable tool for the assessment of educational interventions aiming to improve the quality of care in patients with epilepsy in Spanish clinical practice. The results showed a good level of patient satisfaction with epilepsy care.

1. Introduction

Epilepsy is a chronic disease with a profound impact on the health and quality of life of patients and their relatives [1]. Seizures are unpredictable and sometimes dangerous, increasing the risk of injury, hospitalization, and mortality. Epilepsy may be associated with psychiatric comorbidity (e.g., anxiety and depression) and cognitive impairment [2,3]. Antiepileptic drugs are often associated with adverse effects that may limit patients' quality of life and, consequently, hinder treatment adherence. As such, successful management of epilepsy requires a holistic approach focusing on personalized care, patients' needs, and communication with health professionals using a multidisciplinary approach [2].

Recent decades have seen growing interest in the measurement, assessment, and improvement of quality in healthcare. Assessment methods are used to evaluate patients' perception of their illness, the influence of health systems, and the quality of specific education and advice received. Patient satisfaction is a useful indicator of the quality of health services [4]. Therefore, valid and reliable tools to measure the degree of patient satisfaction are essential for the development and implementation of specific procedures to improve care quality [4].

The evaluation of care quality in people with epilepsy should also take into account the degree of disease control, the kind of care received, the quality of communication with health professionals, and the type of information received by the patient. Advice to patients should include appropriate information about the disease and also assessment of relevant quality dimensions in holistic care from the user's perspective. Users and their satisfaction are one of the main axes of health services from a patient-centered health perspective [4]. Users increasingly

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demand greater access to information, better communication with health professionals, and more active participation in decision-making about their care [5]. Thus, assessing patient satisfaction allows evaluation of patients' perception of health procedures, administrative aspects, and treatments given and may lead to improve treatment adherence and greater continuity in the use of health services [5].

Empowerment, defined as a complex experience of personal change guided by the principle of self-determination, has been recently used as a model of patient-centered care [6]. Empowerment may be facilitated by healthcare providers when they adopt a patient-centered approach to increase knowledge about biopsychological, functional, experimental, ethical, social, and financial aspects [7,8]. However, to empower patients, professional interventions must be measured from the patient's perspective, which requires specific satisfaction tools to engage patients in their own care.

The multidimensional concept of patient satisfaction includes various domains such as waiting times for appointments, communication with professionals, financial aspects, and global satisfaction. In epilepsy, other aspects such as social support, professional development, and driving capability must be considered [9]. However, there are few tools that assess patient satisfaction in epilepsy, with no questionnaires in Spanish. Some general questionnaires that assess satisfaction are indefinite, or their psychometric properties have not been studied. The Satisfaction with Epilepsy Care (SEC) questionnaire is the only questionnaire currently used to assess satisfaction with care in epilepsy [9]. The SEC includes the following three dimensions: satisfaction with information and advice, satisfaction with the communication with healthcare professionals, and satisfaction with the organization of the institution. The original German version of the SEC questionnaire is valid and reliable. Satisfaction with information and counseling improved significantly after an educational intervention carried out by a specialist epilepsy nurse, compared with a control group, demonstrating that the satisfaction of patients with epilepsy improves according to the health education received [9,10]. Therefore, our objective was to adapt and test the psychometric properties of the Spanish version of the original questionnaire.

2. Material and methods

2.1. Study design

A cross-sectional psychometric study was designed. The principal attributes evaluated were linguistic and cultural adaptation, reliability, and validity.

2.2. Setting and sample

The study population included patients with epilepsy aged ≥18 years attended by the epilepsy unit of a tertiary hospital in Barcelona, Spain who agreed to complete the questionnaire. An exclusion criterion was the inability of patients to answer the questionnaire because of cognitive or psychiatric comorbidities.

2.3. Variables

All participants were provided with the SEC-E questionnaire and a demographic questionnaire to collect data on the following variables: age, sex, disease duration, number of concomitant antiepileptic drugs, seizure frequency, type of epilepsy, educational level, and occupation. The validated Satisfaction in Hospitalized Patients (SHP) scale [11], a quick and easy tool to assess patients' perceived satisfaction, was also administered to demonstrate criterion validity [11].

The acceptance of the SEC at the time of administration and the response rate to the questionnaire were assessed as parameters of usability and functionality.

2.4. Translation and validation processes

The translation, adaptation, and cross-cultural validation of the instrument used a conventional methodology previously used in questionnaire validation processes [12–16] following these recommended steps [13]:

2.4.1. Phase 1: translation processes

Cultural adaptation was carried out using the translation-back-translation method and a review by an expert panel, as follows:

Step 1 – The original scale was translated into Spanish to obtain two versions of the scale [9]. The translated texts were provided by two independent bilingual and bicultural professional translators whose native language was Spanish.

Step 2 – The two Spanish versions of the scale were evaluated by a third independent translator and combined to generate a preliminary version of the SEC in Spanish. Subsequently, a panel consisting of the three translators and the research team reviewed the preliminary versions to resolve ambiguities and disagreements.

Step 3 – The preliminary Spanish version of SEC was back-translated into German by two independent bilingual, bicultural translators whose native language was German and who had experience in health terminology and linguistic and cultural aspects of the German language, producing two independent back-translated versions of the scale in German.

Step 4 – Both back-translated German versions were compared with the original version of the SEC in German by a multidisciplinary committee formed of the research team and all translators involved in the process. The committee resolved any discrepancies between the German and Spanish versions with respect to the similarity of instructions, items, and answers in the writing process, sentence structure, meaning, and relevance of the text. Only items that did not preserve the original meaning were retranslated or back-translated. Discrepancies were also reviewed with the lead author of the original German scale (M.P.) who participated in the final translation.

2.4.2. Phase 2: pilot testing and expert panel

2.4.2.1. Pilot testing. A pilot study was made by providing a prefinalized questionnaire to 34 participants from our epilepsy unit and asking them about the clarity of the instructions and items.

2.4.2.2. Expert panel. An expert panel formed of specialists in epilepsy with different backgrounds and expertise in the disease: a psychiatrist, a neuropsychologist, a psychologist, five neurologists, and two epilepsy nurses, rated all SEC items with respect to the clarity (confusing or clear) of the questions and their relevance using a scale from 1 to 4 (1 = not relevant, 2 = not able to evaluate the relevance, 3 = relevant but needs some changes, 4 = relevant and concise). The panel also evaluated the clarity of each item using a dichotomous rating scale (yes/no). The panel later analyzed the results of the pilot study. Finally, the panel assessed the questions and the differences between the original questionnaire, the independent translations, and the adapted final version.

2.4.3. Phase 3: psychometric testing

The SEC-E was sent to patients by email using the *Lime Survey* computer program [17], an open source application for the administration of surveys/questionnaires online. Participants received an email that included information about the study, informed consent, information to be provided by the patients (demographic and clinical questionnaires), the SEC-E, and the SHP scale [11]. A reminder message was

sent after 7 days to improve the response rate and a further 7 days after the final collection of the questionnaires; a second email containing the SEC-E was sent to all participants for retesting.

2.5. Statistical analysis

Validation of the instrument consisted of study of the content validity, construct validity, criteria validity, and reliability (internal consistency and test–retest stability). An expert panel of ten professionals evaluated the clarity of the items and the extent to which they were representative of epilepsy healthcare providers using the content validity index at the item level (I-CVI). To examine the underlying structure of the satisfaction in epilepsy care factors, explanatory factor analysis (EFA) was performed using principal component analysis (PCA) with varimax rotation. To determine the number of factors in the PCA solution, only factors with an eigenvalue of ≥1 were retained. A minimum factor loading of 0.4 was used as the criterion for each retained item and a difference of ≥0.15 between the primary loading and any secondary loading for an item; items without this difference were assigned to the named factors with the most theoretical sense. For criterion validity, a correlation analysis was made using the Spearman correlation coefficient to study correlations between the SEC-E and the SHP scale [11]. Correlations between the SEC subscales were also studied, assuming that the various subscales gather distinct information (with moderate or low correlation coefficients). The internal consistency of the items was calculated using Cronbach's alpha, which was considered acceptable if the value was >0.8. The time reliability of each item was tested between two similar assessments using the intraclass correlation coefficient ($ICC_{2,1}$) and was performed 1–3 weeks between administrations. There were no missing data as the web form did not allow for blank answers. All analyses were conducted using R v3.5 for Windows statistical software package.

2.6. Ethical considerations

The study was approved by the Hospital Clinic Ethics Committee (reference #HCB/#2017/0008). Participants were informed about the objective of the study and gave written informed consent by completing the questionnaires, with anonymity and confidentiality of the data maintained at all times.

3. Results

3.1. Patient characteristics

The questionnaire was emailed to 320 patients with epilepsy and was returned by 213 participants (69.8% response rate). The mean time to complete the questionnaire was 5.25 min. Patient demographic and clinical characteristics are shown in Table 1. The mean age was 40.4 years [standard deviation (SD): 16.4], and 64.9% were female. Most patients had a disease duration of >20 years (50.2%), and 42% were taking ≥3 antiepileptic drugs. Twenty-three percent of participants had weekly or daily seizures, and 23.9% classified their epilepsy as "uncontrolled".

3.2. Content validity

3.2.1. Pilot testing of prefinal version

Of the 34 patients who participated in the pilot test, all rated the questions about communication as "clear", and 91.2% also qualified questions about the organization as clear. In contrast, 25.6% of the patients did not find the questions about satisfaction with the information clear, and these were later analyzed by the expert panel. The instructions were also considered as clear by 94.1% of participants and the response format by 91.2%.

Table 1
Demographic and clinical characteristics of patients with epilepsy responding to the Spanish version of the SEC (n = 213).

Variable	
Age (years)	40.4 ± 16.4
Age group, n (%)	
21–34	65 (30.5)
35–49	92 (43.2)
50–59	31 (14.6)
>60	25 (11.7)
Gender (female), n (%)	138 (64.8)
Disease duration (years)	22.0 ± 14.3
0–4	20 (9.4)
5–9	23 (10.8)
10–19	55 (25.8)
20–29	51 (23.9)
30–39	31 (14.6)
40–49	25 (11.7)
>50	8 (3.8)
Level of education, n (%)	
No formal education	25 (11.7)
Primary education	34 (16)
Secondary education	30 (14.1)
Professional training	48 (22.5)
University education	76 (35.7)
Occupation	
Active	104 (48.8)
Disabled	65 (30.5)
Homemaker	11 (5.2)
Unemployed	19 (8.9)
Student	14 (6.6)
Number of antiepileptic drugs, n (%)	
None	7 (3.3)
1	50 (23.5)
2	66 (31)
3	51 (23.9)
4	17 (8)
≥5	22 (10.3)
Seizure frequency, n (%)	
<1/year	78 (36.6)
1/year	14 (6.6)
2/year	16 (7.5)
1/three months	18 (8.5)
1/month	38 (17.8)
1/week	39 (18.3)
≥1/day	10 (4.7)
Epilepsy control, n (%)	
Controlled	162 (76.1)
Uncontrolled	51 (23.9)

Values are expressed as mean ± SD.

3.2.2. Expert panel

After analyzing the results of the pilot test, the response format was rewritten to clarify the "no need" option, which was changed to "I don't need it"; moreover, both options of answering "not received despite need" and "I don't need it" were highlighted to clarify the options when there was no answer for the level of satisfaction.

The second section of the SEC-E, satisfaction with organization, showed a similar degree of validity, except for questions 2.5 and 2.6 regarding the atmosphere in the hospital/clinic and satisfaction with blood drawing techniques as they were considered irrelevant by 60% of experts. Consequently, the expert panel discussed whether those questions were appropriate and decided to maintain the item "satisfaction with the environment in the epilepsy clinic" in the final version as it was relevant from the patient perspective. However, the item "satisfaction with blood drawing techniques" was considered irrelevant and removed from the questionnaire.

All items were rated >80% for clarity except the item "Self-support group", which was rewritten as "Self-support group and associations".

3.3. Item category frequencies

Table 2 shows the results of the item category frequencies. More than 50% of patients responded that they were very satisfied or satisfied with items corresponding to communication and organization dimensions, with percentages varying between 56.8% and 83.6%. Two patterns were observed with respect to the information and assessment dimension. The first group of items, from *3.1. Epilepsy* to *3.5. Own contribution to improving health condition*, had a similar distribution to previous dimensions. However, items from *3.6. Self-support groups* to *3.12. Driver's license* had a lower percentage of very satisfied or satisfied answers because of a high percentage of "I don't need it" answers, indicating that these were specific items that patients perceived as not needing advice on.

The questionnaire scores (0 to 100) were 77.5 (SD: 19.9) for satisfaction with communication, 76.9 (SD: 17) for organization, and 67.2 (SD: 22.1) for information.

3.4. Construct validity

A good adjustment of the items to the original structure of the scale was observed, confirming the three dimensions of the scale. As shown in Table 3, only items 3.2 and 3.3 appeared to correlate better with the communication dimension rather than with the information domain. However, we decided to leave these items within the information domain to maintain coherence with the original SEC questionnaire.

3.5. Criterion validity

The three domains of the SEC correlated directly with the items of the SHP scale (Table 4), suggesting the SEC-E questionnaire is accurate in evaluating satisfaction with communication, organization, and information.

Comparisons between the SHP and SEC-E items showed a moderate–high Spearman correlation (0.47–0.61, p < 0.01), supporting similar concepts underlying questions in both measurements and indicating that the SEC-E measures what it was intended to measure.

Table 3
Principal component analysis followed by varimax rotation (construct validity).

Item number	Satisfaction with epilepsy care domains		
	RC1	RC2	RC3
	Information	Organization	Communication
Satisfaction with communication			
1.1. Time to address questions			0.76
1.2. Consideration of individual needs			0.77
1.3. Incorporation your ideas in the treatment process			0.73
1.4. Understanding and empathy			0.67
Satisfaction with organization			
2.1. Appointment		0.74	
2.2. Time waiting in the clinic		0.76	
2.3. Staff friendliness and willingness		0.74	
2.4. Familiarity of staff		0.48	
2.5. Atmosphere in the clinic		0.72	
2.7. Management of diagnostic processes		0.84	
Satisfaction with information and counseling/advice			
3.1. Epilepsy	0.76		
3.2. Treatment			**0.58**
3.3. Effects and adverse effects of AED	*0.46*		**0.60**
3.4. Seizure management	0.73		
3.5. Own contribution to improving health condition	0.75		
3.6. Self-support groups	0.84		
3.7. Career opportunities	0.87		
3.8. Provision of aid	0.90		
3.9. Problems at school or work	0.76		
3.10. Social support	0.67		
3.11. Dealing with impact of epilepsy on family and on oneself	0.82		
3.12. Driver's license	0.76		

In italics, items assigned to the named factors with the most theoretical sense. In bold, items corresponding to a different domain with respect to the original version of the Satisfaction with Epilepsy Care questionnaire.

Table 2
Item category frequencies (%).

Item number	5 = very satisfied	4 = satisfied	3 = somewhat satisfied	2 = somewhat dissatisfied	1 = dissatisfied	0 = very dissatisfied	Not applicable	Not received despite need	No need
Satisfaction with communication									
1.1. Time to address questions	30	38.5	18.3	6.6	1.9	1.9	2.8		
1.2. Consideration of individual needs	30.5	33.3	19.2	8.5	3.3	2.3	2.8		
1.3. Including your ideas in the treatment process	25.8	37.1	17.8	7.5	1.4	1.9	8.5		
1.4. Understanding and empathy	47.4	30.5	9.9	6.1	1.4	1.9	2.8		
Satisfaction with organization									
2.1. Appointment	27.7	38.5	16.9	6.6	5.6	3.3	1.4		
2.2. Time waiting in the clinic	16.0	40.8	22.1	11.7	5.2	1.9	2.3		
2.3. Staff's friendliness and willingness	46.5	37.1	9.9	3.3	1.9	0	1.4		
2.4. Familiarity of staff	35.7	37.1	14.6	4.7	2.8	2.3	2.8		
2.5. Atmosphere in the clinic	34.3	47.9	11.7	3.3	0	0	2.8		
2.7. Management of diagnostic processes	25.8	38.5	17.8	10.3	2.8	3.3	1.4		
Satisfaction with information and counseling/advice									
3.1. Epilepsy	29.1	37.6	13.1	10.3	5.2	2.3		1.9	0.5
3.2. Treatment	28.6	40.4	12.7	9.9	2.8	2.8		1.9	0.9
3.3. AED effects and adverse effects	22.1	36.2	15.5	11.7	8.5	2.8		2.3	0.9
3.4. Seizure management	23.0	35.7	15.5	9.9	2.8	2.3		5.2	5.6
3.5. Own contribution to improving health condition	23.5	33.8	16.4	12.7	5.2	2.3		3.3	2.8
3.6. Self-support groups	5.2	15.5	4.2	8.5	4.2	3.3		18.3	40.8
3.7. Career opportunities	12.2	19.2	8.5	7.5	8.9	4.2		8.0	31.5
3.8. Provision of aid	11.7	17.4	12.2	7.5	3.8	2.3		6.6	38.5
3.9. Problems at school or work	12.2	18.3	8.0	7.0	5.2	8.9		9.4	31.0
3.10. Social support	8.0	17.8	8.9	10.3	7.5	5.6		16.9	24.9
3.11. Dealing with impact of epilepsy on family and on oneself	11.3	15.5	16.0	13.6	6.6	7.5		16.4	13.1
3.12. Driver's license	13.6	16.4	8.5	6.1	4.7	5.6		8.5	36.6

Table 4
Criterion validity.

Satisfaction Hospitalized Patients scale: items	1.1. Time to address questions	1.4. Understanding and empathy	2.3. Staff's friendliness and willingness	3.1. Epilepsy	3.2. Treatment	3.3. Effects and side effects of AED
1. Time your doctor gives you	0.473*					
2. Solutions your doctor gives you				0.593**	0.610	
3. Interest of your doctor in hearing your explanation of your illness		0.528	0.468	0.601		
4. Information about treatment					0.560	0.565
5. The treatment you received		0.493	0.512			
6. Staff willingness to help		0.490	0.517			

All Spearman Correlation Coefficients were statistically significant with a p-value lower than 0.05.
 * Statistically significant Spearman Correlation Coefficients at 0.05 significance level

3.6. Reliability

3.6.1. Internal consistency

With respect to the degree of internal consistency, Cronbach's α value was >0.8 for all three SEC dimensions analyzed (total value: 0.94), indicating good global internal consistency for the questionnaire and for each dimension. The three dimensions correlated with each other (Spearman correlation coefficients: 0.621, 0.687, and 0.563; p < 0.05).

3.6.2. Retest

The response rate to the SEC-E retest was 39.9% (85 patients). The temporal stability test showed no relevant changes between the first and the second questionnaires, with a significant $ICC_{2,1}$ being obtained in all items evaluated (p < 0.001), indicating good temporal stability.

4. Discussion

This study translated and validated the SEC questionnaire into Spanish (SEC-E), providing a useful tool to evaluate satisfaction with the organization, communication, and information received by patients with epilepsy and providing a basis for future changes or interventions that can improve patient care in specific areas.

This is the first study to evaluate satisfaction among patients with epilepsy in Spain and the Mediterranean. The results showed moderate–high patient satisfaction with most items, and the global findings were comparable with the results obtained for the original German scale [9], except for slightly lower values for satisfaction with organization (76.9 ± 17 in SEC-E vs. 81.1 in SEC), which might be explained by differences in the organization of outpatient healthcare. Some discrepancies between the two questionnaires could be due to the methodology followed in the SEC-E validation, which was based on online anonymous surveys, allowing higher confidentiality than a handheld survey.

Most scales currently used in epilepsy focus on the disease and its physical characteristics (e.g., the Liverpool Seizure Severity scale [18]), on psychiatric aspects of the disease (e.g., the Neurological Disorder Depression Inventory for Epilepsy (NDDI-E)) [19], or on adverse events [20]. These questionnaires are currently used in clinical trials for drug research, educational interventions, and assessment of the effect of interventions (e.g., epilepsy surgery). Moreover, most questionnaires used to evaluate general satisfaction focus on the hospitalization period. However, patients with epilepsy usually need continuous outpatient follow-up, requiring tools to assess perceptions of patients regarding healthcare interventions, especially with respect to communication, satisfaction with the professional relationship, and outpatient organization. In this regard, validation of the Quality of Life scale in Epilepsy and its subsequent adaptations [21–23] was a turning point in the holistic assessment of epilepsy care, showing that evaluation of the degree of satisfaction perceived by patients may be crucial in improving care systems.

The SEC questionnaire is the only scale currently able to assess satisfaction with care in epilepsy [9] and is a valid approach to measure patient satisfaction regarding specific aspects such as outpatient follow-up. The original SEC version was culturally adapted to the Spanish context, showing an adequate reliability and validity. The validation process used a translation-back-translation and validation of contents by expert panels to adapt the original questionnaire to a Mediterranean/Spanish cultural scenario. Thus, in order to adapt the original German version to Spanish, we modified aspects related to language expressions and cultural settings, which were reviewed by the author of the original version to ensure consistency between both questionnaires. Only one item of the original questionnaire (e.g., "technique of blood taking") had to be eliminated from the SEC-E to be adapted to our healthcare system. This was probably due to the fact that in our hospital, blood is usually drawn in an outpatient lab and is not considered related to the epilepsy clinic. The internal consistency and stability tests showed adequate reliability.

The SEC-E also showed high internal consistency, with a Cronbach's α of 0.85, 0.89, and 0.93 for satisfaction with organization, communication, and assessment, respectively, values comparable to the internal consistency obtained in the original SEC version (0.85, 0.92, and 0.95, respectively) [9]. Moreover, the results of the reproducibility test showed stability in the implementation of the tool over time, obtaining a significant $ICC_{2,1}$ in all the items evaluated.

In the original SEC [9], the German scale was correlated with other scales assessing relevant aspects in epilepsy such as the Quality of Life in Epilepsy (QUOLIE) and Hospital Anxiety and Depression scale (HADs), showing adequate validity criteria [9]. Comparison of the SEC-E with the SHP showed the three SEC-E domains directly correlated with the SHP items with similar content.

We found a poor response to some satisfaction items regarding counseling, which were related to differing patient needs, with some participants reporting that counseling was not needed.

Quality of healthcare should be focused on individual needs. In this regard, satisfaction and information provided to patients have to be properly measured with adequate tools. Control of seizures, number of antiepileptic drugs, in addition to stigma and perception of disease, may have influenced the responses to the dimension of "satisfaction with information and counseling/advise". Moreover, in more independent and less affected patients, there is no need to evaluate some aspects included in the questionnaire, such as assessment of "*career opportunities*", "*problems at work or at school*", or "*social support/aid*". However, these differences did not affect the final score because the answers "no need" were not counted in the final result. Some other questions could be helpful for most patients at any time of the disease such as "*provision of aids*" or "*social support*", and others like "*dealing with the impact of epilepsy on family and yourself*" may be related to stigma, which is a particularly useful component to incorporate when developing interventions aimed at promoting social well-being in diverse people with epilepsy [24].

The importance of less frequently answered questions about the information and advice dimension is justified by their relevance to the introduction of programs and actions that aim to provide patients and their families with greater knowledge on epilepsy, promote communication between health professionals and patients, and encourage the participation of patients and their families during treatment [25]. "Driving and driver's license" is an important goal in epilepsy advice [26]. However, a high percentage of patients believe that they do not need this information because they have never driven because of their seizures or they drive legally normally because of correct epilepsy control. Nevertheless, advice is appropriate in this regard. Patients need to be aware of the implications of unexpected seizures with loss of consciousness. However, if freedom from seizures allows them to drive, this ability may minimize the stigma often perceived. In both cases, this item of the information seems very important to guarantee both patients' rights and ensure safe driving [26].

5. Study strengths and limitations

The participation of the questionnaire's original authors ensured adequate study reliability as well as facilitating understanding of the results and comparisons.

However, measuring patient satisfaction with care may be not feasible, especially when different seizure etiologies, therapies, and differing degrees of seizure control are considered. This limitation is reflected in the results of the third part of the questionnaire (satisfaction with information and assessment), in which a high percentage of patients responded that they did not need any information. Consequently, prospective studies are required to assess sensitivity to change.

6. Conclusions

Our study confirms the validity and reliability of the SEC-E in measuring satisfaction with care in patients with epilepsy, providing an appropriate version of the scale for Spanish-speaking countries. The SEC-E is a useful tool in clinical practice, supporting previous studies with the original German SEC questionnaire. The SEC-E is indicated for the assessment of specific aspects of educational interventions related to epilepsy in our sociocultural context, such as satisfaction with communication and organization, information and counseling, and the relationship with health professionals. Specific tools such as the SEC-E that evaluate patient aspects beyond their care are useful in empowering patients by assessing the quality of evidence-based care within the health system. Further studies will be needed in order to evaluate the usefulness of the SEC-E for the assessment of interventional procedures in epilepsy.

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Declaration of competing interest

No author declares any conflict of interest.

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