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Cultural adaptation to Spanish of the "Patient Satisfaction Survey" to assess satisfaction with electroconvulsive therapy (ECT)

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ABSTRACT

Introduction. The degree of satisfaction of patients and their relatives with electroconvulsive therapy (ECT) is considered an important treatment goal; however there is no scale in Spanish to quantify it. The aim of the study was to translate and adapt into Spanish the "Patient Satisfaction Survey" (PSS) for its use in patients and their relatives.

Methodology. Two translators performed the initial translation and a third translator did the back translation. The research committee obtained a consensus survey; the authors of the original instrument reviewed and accepted this survey. The equivalence between the original instrument with the back translation and the readability of the survey were analyzed. The Spanish version was tested on a sample of patients, relatives and experts in ECT. The same process was carried out for the satisfaction survey of relatives or caregivers.

Results. The Spanish surveys were obtained after completing the translation process and identifying the problematic items that were successfully modified. The

readability of the surveys was very accessible to the Spanish population. The pilot test carried out on patients, relatives and experts allowed detection and changes of confusing items. The final Spanish surveys were obtained after this pilot test.

Conclusions. The adaptation of the PSS for Spanish patients and relatives provide suitable satisfaction scale for its use in Spanish population.

Keywords. Electroconvulsive therapy; satisfaction; patients; relatives; survey; Spanish.

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ADAPTACIÓN CULTURAL AL ESPAÑOL DE LA ENCUESTA "PATIENT SATISFACTION SURVEY" PARA VALORAR LA SATISFACCIÓN CON LA TERAPIA ELECTROCONVULSIVA (TEC)

RESUMEN

Introducción. El grado de satisfacción de pacientes y familiares con la terapia electroconvulsiva (TEC) es un resultado importante del tratamiento, pero no existe ningún instrumento en español que lo cuantifique. El objetivo del estudio es traducir y adaptar culturalmente al español el instrumento "Patient Satisfaction Survey" (PSS)¹ para pacientes y familiares.

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Metodología. La traducción inicial la realizaron dos traductores y la retrotraducción un tercer traductor. Se obtuvo una encuesta de consenso adaptada por el comité investigador y revisada por los autores del instrumento original. Para la adaptación cultural se valoró la equivalencia entre el instrumento original y la retrotraducción, la legibilidad de la encuesta y se ensayó la versión española en una muestra de pacientes, de familiares y de expertos en TEC. Se realizó el mismo proceso para la encuesta de satisfacción de los familiares o cuidadores.

Resultados. Las encuestas finales en español se obtuvieron de forma consensuada tras completarse el proceso de traducción e identificarse ítems problemáticos que se modificaron satisfactoriamente. La legibilidad de las encuestas fue muy accesible a la población española. La prueba piloto realizada en pacientes, familiares y expertos permitió detectar y modificar ítems confusos. Con los comentarios y los cambios realizados en esta prueba piloto se obtuvo la versión final de la traducción adaptada al español.

Conclusiones. La traducción y adaptación realizada de la PSS para pacientes y familiares o cuidadores podría proporcionar unas escalas adecuadas de satisfacción con la TEC para su uso en español.

Palabras clave. Terapia electroconvulsiva (TEC); satisfacción; pacientes; familiares; cuidadores

INTRODUCTION

Medicine in the 21st century is evolving toward evidence-based and patient-centered medicine^{2,3}. Patient-centered medicine highlights the importance of how satisfied people are with treatments performed in the context of health care. Satisfaction with a treatment involves the subjective experience derived from meeting or not meeting the person's prior expectations of the treatment performed. Patient satisfaction with the various care devices involved in care and with the treatments received is difficult to measure without a consensus on how it should be measured and what the most useful scales are^{4,5}. The choice of satisfaction scale depends on the aim of the evaluation, the environment that is evaluated and the time that patients can give to evaluate it. The contents most frequently covered in all scales⁴ refer to "overall satisfaction" and "relationship with staff". The importance of the relationship with staff includes⁶ perceived competence and trust generated as well as the treatment received. For the treatment received, "confidentiality", "feeling respected", "receiving dignified treatment" and "personalized attention" are important. Other

content included to varying extents in satisfaction scales are the subjective perception of clinical improvement, the information received, accessibility to the devices (including the ease of making appointments and hours of operation), aspects of comfort in physical spaces, continuity of care, the opportunity to socialize with other patients and the involvement of relatives⁴.

Electroconvulsive therapy (ECT) is an effective and safe treatment with an important role in psychiatric therapy. Achieving patient-centered ECT would involve knowing the degree of satisfaction of the patients who are indicated and treated with ECT; for this, it is important to collect the opinions, expectations and subjective experiences of the procedure during sessions and after the completion of treatment^{2,3}. Very few studies have examined satisfaction with ECT among relatives, who, in most cases, have an important role in the entire procedure⁷. Relatives are generally more positive about ECT and have higher levels of satisfaction than patients⁷. There is no instrument in Spanish that sufficiently evaluates the degree of satisfaction of patients and their relatives with ECT. In other countries, studies have mostly used the English 'Patient Satisfaction Survey'¹ (PSS) in the field of ECT.

The objective of this study is to translate and culturally adapt the 'Patient Satisfaction Survey (PSS)' developed by Goodman et al.¹; doing so would allow the quantification, in our environment, of the degree of satisfaction of patients and relatives of patients treated with ECT. The PSS was the first specific scale described in the literature to assess the satisfaction of patients treated with ECT.

MATERIAL AND METHODS

The translation and cultural adaptation process was performed using the original instrument for patients in English, "Patient Satisfaction Survey" (PSS)¹. The original authors (Lois E. Krahn and Glenn Smith) were contacted by email and gave permission to translate and adapt the PSS to Spanish. Figure 1 shows all the steps performed.

Description of the original instruments

The PSS instrument is an original self-administered satisfaction survey developed in English at the Mayo Clinic in patients who received treatment with ECT.

Patient-centered survey. The Patient Satisfaction Survey (PSS)¹ is a widely accepted instrument in the field of ECT, even without validation. It consists of 44 items with responses on a Likert scale ranging from 1 (definitely false) to 5 points (definitely true) distributed in 5 sections that refer to overall satisfaction regarding ECT (section A,

11 items); satisfaction with the results obtained with ECT (section B, 10 items); satisfaction with staff involved in ECT (section C, 7 items); satisfaction with education (information received during treatment) about ECT (section D, 8 items); and feelings when the patient is filling out the survey (section E, 8 items). The mean of the scores for 5 of the 11 items in section A (the first four and item 8) represents the attitude score. At the end of the 44 items, 2 spaces are provided for respondents to give open-ended comments and suggestions and to make proposals to improve treatment with ECT.

Survey focused on relatives and caregivers. The original PSS survey¹ does not consider the satisfaction of relatives of the patient receiving ECT. However, similar to the previous literature⁷, the same PSS items were used to collect the opinions of relatives or caregivers, with the same items and sections.

Translation of the instrument

Two independent (direct) translations of the original English instrument to Spanish were performed by 2 bilingual and bicultural translators whose mother tongue was Spanish. The 2 translators and the research team, with extensive experience in the field of ECT, compared the 2 Spanish translations with each other and with the original instrument in English, obtaining the first consensus Spanish translation (Figure 1, steps 1 and 2). This first Spanish translation was back-translated into English by an English, bilingual and bicultural translator whose mother tongue was English (translator 3) and who had never seen the original instrument (Figure 1, step 3) (blind back-translation). The authors of the original instrument gave their approval regarding the blind back-translation performed. In a committee formed by the 3 translators and the research team, the original version in English, the first consensus translation in Spanish and the back-translation into English were compared (Figure 1, step 4). In this committee, possible ambiguities, equivalences of concept and semantics, content and relevance of each of the items in Spanish culture, linguistic nuances and the specific difficulties of translating English text into Spanish were analyzed⁸. Likewise, the items were adapted in terms of gender following UNESCO's recommendations for nonsexist use of language⁹. As a result of the comparison of the 3 versions, the committee developed the consensus version of the instrument in Spanish that would be used for cross-cultural adaptation.

CROSS-CULTURAL ADAPTATION

The cross-cultural adaptation (Figure 1) was approved

as a research project by the Ethics Committee of Bellvitge University Hospital, and all subjects who voluntarily participated in it signed an informed consent form before answering the survey. A total of 90 individuals (10 patients, 10 relatives, 10 ECT experts and 60 healthy subjects with fluent English) participated in the cross-cultural adaptation. The sociodemographic characteristics of the sample are detailed in Table 1.

Three basic aspects were studied: the readability of the survey, the equivalence between the original instrument and the back-translation and the use of the Spanish version of the survey in patients, relatives and experts.

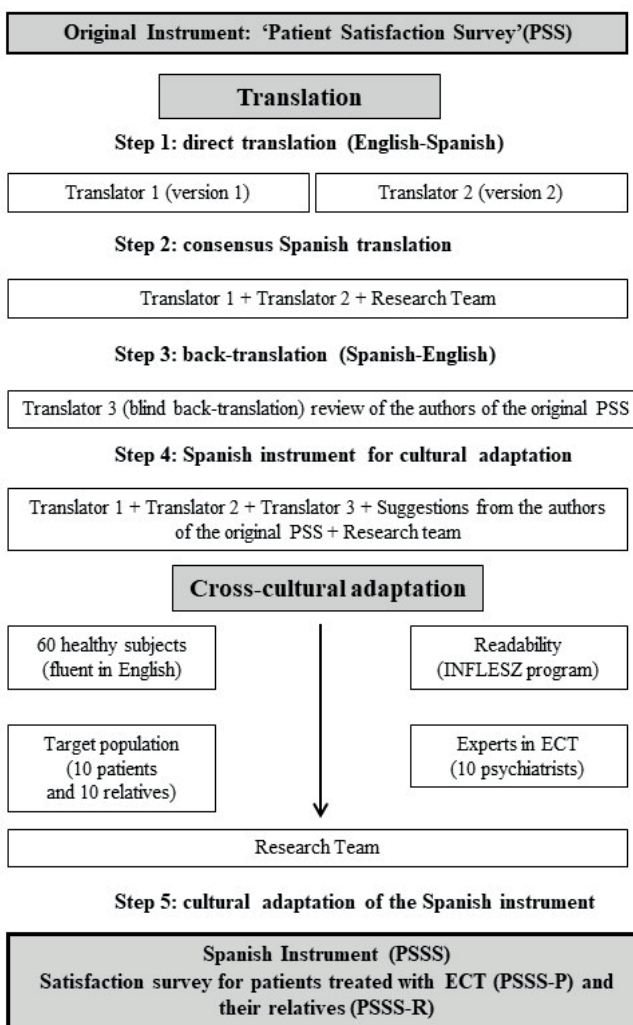


Figure 1

Translation and cultural adaptation into Spanish of the patient satisfaction survey for patients receiving ECT, 'Patient Satisfaction Survey'(PSS).

Table 1

Sociodemographic data of the samples used for the cultural adaptation of the PSSS satisfaction survey.

Variables		Sample groups				
		Patients (n=10)	Relatives (n=10)	Experts in ECT (n=10)	Healthy volunteers fluent in English	
					Grupo A (n=30)	Grupo B (n=30)
Age (years), mean (SD)		59,5 (13,28)	64,9 (14,41)	42,13 (6,33)	31,05 (7,43)	33,27 (8,40)
Gender	Female	70%	40%	60%	55%	80%
	Male	30%	60%	40%	45%	20%
Education	Primary	50%	40%	0%	0%	0%
	Secondary	40%	30%	0%	10%	0%
	University	10%	30%	100%	90%	100%
Origin	Asturias	0%	0%	10%	3,33%	3,33%
	Balearic Islands	0%	0%	10%	3,33%	0%
	Castilla y León	20%	0%	0%	0%	3,33%
	Catalonia	60%	60%	60%	73,33%	83,33%
	Extremadura	10%	20%	0%	0	3,33%
	Galicia	0%	20%	0%	3,33%	0%
	C. of Madrid	0%	0%	0%	3,33%	0%
	R. de Murcia	0%	0%	0%	3,33%	3,33%
	Basque Country	0%	0%	10%	3,33%	0%
	C. Valenciana	10%	0%	10%	6,66%	3,33%

Readability of the survey. The readability of the survey in Spanish was evaluated at the beginning of the cross-cultural adaptation and in the final version of the survey, obtaining a degree of difficulty for reading and comprehension in the Spanish population. For this, the INFLEZ program (available at: <https://legibilidad.blogspot.com.es/>) was used to calculate the Flesch-Szigriszt index. This program analyzes the complete text of surveys and establishes degrees of difficulty based on the score obtained: "very difficult" (index less than 40, equivalent to university and scientific publications in Spanish); "somewhat difficult" (index between 40 and 55, similar to that of scientific publications, specialized press or high school-level texts); "normal" (index between 56 and 65, such as general and sports press or compulsory higher education-level texts); "quite easy" (index between 66 and 80, such as popular novels, tabloids or primary education-level texts) and "very easy" (index higher than 80, such as comic books, cartoons or primary education-level texts)¹⁰.

Assessment of the equivalence between the original instrument and the back-translation. A total of 60 healthy subjects who were fluent in English were selected, independent of the researchers and translators^{11,12}. They were divided into 2 groups of 30 people (group A and group B) with similar characteristics. The members of group A formally compared each item of the original instrument with its equivalent in the back-translation. For each item, the following was assessed: the language comparison and the similarity of interpretation of the item. For the language comparison, the formal similarity of words and sentences was assessed, and for the similarity of interpretation, the degree to which the 2 versions of the item would generate the same response, regardless of the wording of both items, was assessed. The language comparison was evaluated using a scale ranging from 1 (extremely comparable) to 7 (not comparable), and the similarity of interpretation was evaluated using a scale ranging from 1 (extremely similar) to 7 (not at all similar). The items with mean scores greater than 3 in language comparison or 2.5 in the similarity of interpretation allowed the identification of potentially problematic items; these items were reviewed by the research team^{11,12}. For these items in the back-translation, the necessary adjustments were made; the same assessment process was repeated with the 30 subjects in group B.

Pilot trial with the Spanish version of the survey. The trial was performed using a sample of the target population and using a group of experts.

Sample of the target population (patients and relatives). A sample of 10 patients and 10 nearest relatives of patients who attended the ECT unit of the Psychiatry service of Bellvitge University Hospital in 2016, were selected; the participants could not speak English, had the ability to speak Spanish, and could read, write and score or respond to the survey items in Spanish. The survey was self-administered and supervised by a member of the research team who had no therapeutic relationship with the participants. The aim was to evaluate the clarity of the instructions, the response format and the items of the instrument in Spanish. The participants were asked to mark yes/no for each of the phrases of the survey depending on whether they felt the phrases were clear or not. Therefore, those sentences that were not clear for 20% or more of the sample were reevaluated^{13,14}. The time

taken to complete the survey was recorded.

Sample of ECT experts. A group of 10 experts in ECT, outside the research team, were asked to rate the clarity of the items and rewrite the items that seemed problematic. Those sentences that did not reach a minimum agreement of 80% among the experts were reevaluated^{13,14}. Likewise, the experts rated the relevance of each item on a scale ranging from 1 (not relevant) to 4 (very relevant). Items scored with 1 and 2 were reviewed^{15,16}.

The content validity indices for each item and the mean at the scale level were calculated¹⁷. For the sample of experts used, the minimum value required for content validity was 0.78 or higher for each item¹⁵ and 0.90 or higher for the mean at the survey level¹⁶. Items that did not reach these content validity values were reevaluated. The kappa agreement coefficient was determined to increase confidence in the content validity of the instrument (minimum acceptable value, 0.60)¹⁸.

STATISTICAL ANALYSIS

Descriptive data, i.e., sociodemographic variables, are presented as means and quantitative standard deviations, and qualitative data are presented as frequencies and percentages. Likewise, means were calculated for the language comparison and the similarity of interpretation of each item between the original instrument and the back-translation in English. The percentage of agreement in the clarity of the items was calculated both for patients and relatives and for experts in ECT. Finally, the content validity indices of each item (0.78 for 10 evaluators) and the mean at the survey level were determined. The kappa agreement was calculated.

RESULTS

Translation of the instrument

The translation of the satisfaction survey for patients undergoing treatment with ECT and relatives or caregivers of patients undergoing ECT was obtained following the methodology described in the **Materials and Methods** section (Figure 1, steps 1-4).

Cross-cultural adaptation

The following results were obtained for the 3 basic aspects studied.

Readability of the survey. The Flesch-Szigriszt index was 78.52 for the patient survey and 78.38 for the caregiver survey for the initial version used for cross-cultural

adaptation and 77.15 for patients and 77.89 for caregivers for the final version (Appendix 1). All these indices represent 1 degree on the INFLESZ scale, i.e., "fairly easy". Therefore, the degree of difficulty obtained for reading and understanding the survey in Spanish was "quite easy", with a level of readability similar to Spanish primary education publications.

Assessment of the equivalence between the original instrument and the back-translation.

The sociodemographic data of the 60 subjects who spoke fluent English, divided into 2 groups of 30, are shown in **Table 1**. In the first comparison (first group of 30 subjects) between the original instrument (PSS) and the back-translation in English, average scores were greater than 3 for the language comparison of the title of the instrument, items 14 and 21, headings for sections C, D, and E and the final sentence after comments and suggestions (item 46) in the patient version and the headings for sections B, C and E in the version for relatives or caregivers (**Table 2**). Mean scores greater than 2.5 were obtained for the similarity of interpretation when comparing the title of the instrument, items 14 and 21 and the heading for sections D and E in the patient version and when comparing the heading for section E in the version for relatives and caregivers (**Table 2**). All potentially problematic items were modified (both in the back-translation and in the translation). In the second comparison (second group of 30 subjects) between the 2 original instruments (patients and relatives or caregivers) and the respective modified back-translations after the previous assessment, there were no scores higher than 3 for comparable language and 2.5 for the similarity of interpretation (**Table 2**).

Pilot trial with the Spanish version of the survey. For this, a sample of the target population and experts was used. For the target population, the diagnoses of the 10 patients included were recurrent major depressive disorder (70%), bipolar disorder (20%) or schizoaffective disorder (10%). The 10 relatives were children (40%), parents (30%), spouses (20%) and nonrelated primary caregivers (10%). The sociodemographic data are provided in **Table 1**. The items that were not classified as clear by at least 80% of the sample of the target population when using the Spanish version are shown in **Table 3**. Among the comments and suggestions, the majority opinion indicated the relevance of the questions and the adequate number of them; certain words and longer sentences led to some difficulty for some patients and relatives with a lower education levels. Some participants from the target population preferred simple answers (true/false or yes/no/not sure), while others appreciated the different nuances with the 5 response options.

Table 2		Assessment of the equivalence between the original instrument and the back-translation: language comparison (CL) and similarity of interpretation (SI).						
Item	Original survey	Back-translation (v1)	Language comparability (v1) mean	Similarity of interpretation (v1) mean	New back-translation after modifications (v2)	Language comparability (v2) mean	Similarity of interpretation (v2) mean	Final version in Spanish
PSSE-P	Patient Satisfaction Survey	Satisfaction Questionnaire of patients under treatment with electroconvulsive therapy	4,24	3,39	Satisfaction Questionnaire of ECT patients	2,80	2,40	<i>Satisfaction Survey of patients undergoing treatment with electroconvulsive therapy</i>
PSSE-P Ítem 14	I am more discouraged since my ECT treatment.	Since my treatment with ECT I have been very disheartened	3,53	3,03	Since my treatment with ECT I have been more disheartened	2,83	2,16	<i>Since my treatment with ECT, I am more discouraged</i>
PSSE-P Ítem 21	I get along with others better since my ECT treatment	Since my treatment with ECT I can relate better to others	3,03	2,50	Since my ECT treatment I get along with others better	2,06	1,53	<i>Since my treatment with ECT, I get along better with others</i>
PSSE-P Título sección C	Your satisfaction with staff	Satisfaction with the hospital staff who treated you with ECT	3,33	2,30	Satisfaction with the hospital staff	2,43	2,06	<i>Satisfaction with staff</i>
PSSE-P Título sección D	Your satisfaction with education	Satisfaction with the information received during ECT treatment	3,87	3,23	Satisfaction with the information provided	2,90	2,43	<i>Satisfaction with the information provided during treatment with ECT</i>
PSSE-P Título sección E	Your feelings	How do you feel at present?	3,66	3,03	How do you feel?	2,67	1,76	<i>How does it feel?</i>
PSSE-P Ítem 46	Finally, please identify a way in which you would like to see the treatment you received improved	To finish, write down how you would like to improve ECT treatment	3,11	2,17	To finish, write down how you would like to see ECT treatment improved	2,93	2,40	<i>To conclude, indicate how you would like the ECT treatment to improve</i>
PSSE-F Título sección B	Your satisfaction with results	Satisfaction with the ECT results obtained from my relative	3,07	2,16	Satisfaction with my relative results	2,36	2,06	<i>Satisfaction with the results obtained with ECT in your relative</i>
PSSE-F Título sección C	Your satisfaction with staff	Satisfaction with the hospital staff who treated your relative with ECT	3,17	2,24	Satisfaction with the hospital staff	2,10	1,76	<i>Satisfaction with staff</i>
PSSE-F Título sección E	Feelings	How do you think your relative feels at present?	3,84	3,14	Your relative's feelings	2,90	2,34	<i>How do you think your relative feels?</i>

PSSE-P: Encuesta de Satisfacción de los pacientes en tratamiento con terapia electroconvulsiva

PSSE-F: Encuesta de Satisfacción de los familiares de pacientes en tratamiento con terapia electroconvulsiva

Table 3

Pilot trial with the Spanish version of the survey in a sample of the target population (patients and relatives) and of experts.

Item	Original survey	% patients who feel the item is clear	% experts who feel the item is clear	Modification Spanish PSS for patients (PSSS-P)
PSSS-P Item 1	Many people are helped by ECT	80%	80%	ECT benefits many people
PSSS-P Item 6	I had to wait too long to be treated on days I received ECT	70%	50%	On the days I received the ECT sessions, I had to wait too long to be treated.
PSSS-P Item 28	The ECT treatment area did not provide me enough privacy	80%	70%	The ECT treatment area did not provide me with enough privacy or intimacy
Item	Original survey	% relatives who feel the item is clear	% experts who feel the item is clear	Modification Spanish PSS for relatives (PSSS-R)
PSSS-R Item 6	My relative had to wait too long to be treated on days he received ECT	60%	70%	On the days that my relative received the ECT sessions, he had to wait too long to be treated.
PSSS-R Item 24	The treatment area provided privacy to my relative	50%	70%	The ECT treatment area respected the privacy or intimacy of my relative
PSSS-R Item 28	The ECT treatment area did not provide enough privacy to my relative	70%	80%	The ECT treatment area did not provide enough privacy or intimacy to my relative
Item 6	The treatment area provided privacy to my relative	50%	70%	<i>The ECT treatment area did not provide enough privacy or intimacy to my relative</i>

PSS: Patient Satisfaction Survey

PSSS-P: Encuesta de Satisfacción de los pacientes en tratamiento con terapia electroconvulsiva

PSSS-R: Encuesta de Satisfacción de los familiares de pacientes en tratamiento con terapia electroconvulsiva

For the sample of ECT experts, the items that were not classified as clear by at least 80% of the experts are shown in Table 3. All survey items were scored appropriately in terms of relevance (with a score greater than 2). Some experts pointed out that the survey was too long and suggested deleting some items that were repeated in different sections. The items whose minimum content validity did not exceed the cutoff point (0.78 for 10 evaluators) were reviewed and modified at the discretion of the research team. The mean validity at the survey level was adequate (0.947 for patients and 0.941 for relatives). The kappa agreement was 61%.

The time taken to complete the survey was between 10 and 20 min for patients (mean=13.62, SD=4.75) and between 8 and 15 min for relatives (mean=13.12 SD=3.87).

With these results, pertinent changes were made to obtain the culturally adapted Spanish version of the PSS instru-

ment (Figure 1, step 5) for both patients and relatives or caregivers.

Description of the Spanish version of the "Patient Satisfaction Survey" (PSSS)

The satisfaction survey for patients (PSSS-P) and relatives of patients (PSSS-R) in treatment with ECT together with the method of administering them and the instructions for scoring them are compiled in the annexes (Appendix).

DISCUSSION

The PSSS is the first Spanish-language satisfaction scale that is easy to read and understand and can be used both in patients (PSSS-P) and in relatives or caregivers of patients (PSSS-R) undergoing ECT treatment. This satisfaction with ECT scale is the result of the translation and cultural adap-

tation of the English PSS scale. The PSS was the first specific scale described in the literature to assess the satisfaction of patients treated with ECT¹. Freeman and Kendell¹⁹ used a survey, also in English, focused on the experiences and attitudes of patients treated with ECT without introducing the concept of satisfaction. The Freeman and Kendell survey¹⁹ has been adapted to other languages^{20,21} in a minimum of 2 studies. The majority of studies that evaluate the satisfaction of patients treated with ECT use their own surveys designed for this purpose²²⁻²⁴. The PSS has been used in more than 2 studies^{7,25,26}. This requirement of using the same scale in at least 2 studies was applied by Miglietta et al.⁴ in their systematic review. They analyzed 28 scales used in at least 2 studies that evaluated patient satisfaction with psychiatric care. In the review by Miglietta et al.⁴ satisfaction scales for specific aspects of psychiatric care were excluded. Thus, satisfaction scales focused on a specific treatment, such as ECT, were not analyzed.

The 5 sections of the PSSS address all the content considered relevant in the analysis of these 28 satisfaction scales (overall satisfaction, satisfaction with results, satisfaction with staff, satisfaction with information received and feelings)⁴. The self-assessment of symptoms and some items in the section that evaluates satisfaction with the results obtained by ECT could warn of the persistence of symptoms that would interfere with the degree of satisfaction^{27,28}. On the other hand, the presence of sections or subscales allows investigating more specific aspects of satisfaction with ECT. However, the existence of these sections represents a limitation to the scale because the specific evaluation of satisfaction is addressed exclusively by some items and the others evaluate attitudes, experiences during treatment and self-evaluation of feelings.

The PSS and PSSS assign an overall satisfaction score, with higher scores indicating greater satisfaction, which facilitates its application as a course of treatment measure for ECT. Together with this quantitative approach, the presence of open-ended questions at the end of the scale provides information that may be relevant to modify and improve aspects involved in treatment with ECT⁵. From a pragmatic perspective, the time required to complete the PSSS is reasonable. A possible limitation of these Spanish versions of the survey is that they may not be culturally generalizable to other Spanish-speaking countries.

Having this ECT-focused satisfaction scale and its inclusion in the specific guidelines of ECT units would contribute to gauging the degree of satisfaction of patients and their families with ECT. Furthermore, the information collected could contribute to improving patient and relative/caregiver satisfaction as consumers of this public health service²⁹.

The wide use of the scale would allow for the validation of the scale in Spanish and the possibility of using shorter and more specific versions of the PSSS to detect the degree of satisfaction of patients and relatives undergoing treatment with ECT. Siennaert et al.²⁶ proposed, in their study, an ultrashort version of the PSS of 3 items to specifically measure the degree of satisfaction of patients treated with ECT ("I am glad that I received ECT", "if my doctor recommended ECT in the future, I would choose to have ECT treatment again", and "I am very satisfied with the results of my ECT treatment"), finding an internal consistency of 0.88 (measured using Cronbach's coefficient)²⁶.

In conclusion, the PSSS is an instrument that can quantify the satisfaction of patients undergoing treatment with ECT and that of their relatives or caregivers. This scale would contribute to deepening the knowledge of the opinions and concerns of patients and their families as well as to identifying areas of improvement in the ECT procedure and in the design of interventions and appropriate educational programs. Scientific societies are fundamental in defending the universal access of patients to ECT and ensuring compliance with minimum standards when indicating and/or applying ECT^{3,30}. From these societies, the use of ECT satisfaction scales should be encouraged, such as the one we present, because it is, in our opinion, an effective resource to fight stigma and thus contribute to improving dignity in therapy.

ETHICAL RESPONSIBILITIES

The authors declare that no experiments were performed on humans or animals for this research.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest in relation to this work.

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APPENDIX

A.1 SATISFACTION SURVEYS

Table A.1.1 QUESTIONNAIRE FOR SATISFACTION OF PATIENTS UNDERGOING TREATMENT WITH ECT (PSSS-P).					
SATISFACTION SURVEY OF PATIENTS UNDERGOING TREATMENT WITH ECT (PSSS-P) (URRETAVIZCAYA M ET AL. 2020)					
IINSTRUCTIONS: Please read each statement below and circle one answer for each statement. Answer each question. If you are unsure about how to answer a question, give the best answer you can	Definitely false	Mostly false	Not sure	Mostly true	Definitely true
A. OVERALL SATISFACTION					
1. ECT helps people.	1	2	3	4	5
2. People should not be afraid of ECT.	1	2	3	4	5
3. ECT is dangerous.	1	2	3	4	5
4. Many people are helped by ECT.	1	2	3	4	5
5. I am glad that I received ECT.	1	2	3	4	5
6. I had to wait too long to be treated on day I received the ECT.	1	2	3	4	5
7. I felt safe receiving ECT.	1	2	3	4	5
8. If my doctor recommended ECT in the future, I would choose to have ECT treatment.	1	2	3	4	5
9. I was afraid to receive ECT.	1	2	3	4	5
10. ECT was painful.	1	2	3	4	5
11. I can remember having a seizure during ECT.	1	2	3	4	5
B. SATISFACTION WITH RESULTS					
12. ECT improved the quality of my life.	1	2	3	4	5
13. I am very satisfied with the results of my ECT treatment.	1	2	3	4	5
14. I am more discouraged since my ECT treatment.	1	2	3	4	5
15. I have been sleeping worse since my ECT treatment.	1	2	3	4	5
16. My appetite is not as good since my ECT treatment.	1	2	3	4	5
17. I have more energy since my ECT treatment.	1	2	3	4	5
18. I am more confused since my ECT treatment.	1	2	3	4	5
19. I am more optimistic since my ECT treatment.	1	2	3	4	5
20. I have less physical pain since my ECT treatment.	1	2	3	4	5
21. I get along with others better since my ECT treatment.	1	2	3	4	5

C. SATISFACTION WITH STAFF					
22. I can remember being in the ECT treatment area.	1	2	3	4	5
23. I can remember the people who work in the ECT treatment area.	1	2	3	4	5
24. The ECT treatment area provided privacy for me.	1	2	3	4	5
25. I was treated with respect by the person who started my IV.	1	2	3	4	5
26. I was treated with respect by the person who was with me when I woke up after ECT.	1	2	3	4	5
27. I was treated with respect by the people in the room where I received ECT.	1	2	3	4	5
28. The ECT treatment area did not provide enough privacy for me.	1	2	3	4	5
D. SATISFACTION WITH INFORMATION RECEIVED					
29. Staff spent enough time with me describing ECT.	1	2	3	4	5
30. I received the right amount of information about ECT.	1	2	3	4	5
31. I received too much information about ECT.	1	2	3	4	5
32. I did not receive enough information about ECT.	1	2	3	4	5
33. TALKING ABOUT ECT WITH MY NURSES AND DOCTORS MADE ME LESS AFRAID OF ECT.	1	2	3	4	5
34. I talked with another patient who had ECT, which made me less afraid to have ECT.	1	2	3	4	5
35. I did not know enough about ECT to decide if it was the right treatment.	1	2	3	4	5
36. All of my questions about ECT were answered to my satisfaction.	1	2	3	4	5
E. YOUR FEELINGS					
37. I feel full of pep and energy most of the time.	1	2	3	4	5
38. I feel full of life.	1	2	3	4	5
39. I am a very nervous person.	1	2	3	4	5
40. I feel so down in the dumps that nothing can cheer me up.	1	2	3	4	5
41. I feel calm and peaceful.	1	2	3	4	5
42. I feel downhearted and low.	1	2	3	4	5
43. I feel comfortable in groups.	1	2	3	4	5
44. I feel tired and worn out most of the time.	1	2	3	4	5
45. COMMENTS AND SUGGESTIONS:					
46. FINALLY, PLEASE IDENTIFY A WAY IN WHICH YOU WOULD LIKE TO SEE THE TREATMENT YOU RECEIVED IMPROVED.					

Table A.1.2 Satisfaction survey for relatives of patients undergoing ECT treatment (PSSS-R).

SATISFACTION SURVEY OF RELATIVES OF PATIENTS UNDERGOING ECT TREATMENT (PSSS-R)					
IINSTRUCTIONS: Please read each statement below and circle one answer for each statement. Answer each question. If you are unsure about how to answer a question, give the best answer you can.	Definitely false	Mostly false	Not sure	Mostly true	Definitely true
	A. OVERALL SATISFACTION				
1. ECT helps people.	1	2	3	4	5
2. People should not be afraid of ECT.	1	2	3	4	5
3. ECT is dangerous.	1	2	3	4	5
4. Many people are helped by ECT.	1	2	3	4	5
5. I am glad that my relative received ECT.	1	2	3	4	5
6. My relative had to wait too long to be treated on the days receiving ECT.	1	2	3	4	5
7. It seemed my relative felt safe receiving ECT.	1	2	3	4	5
8. If the doctor recommended ECT for my relative in the future, we would choose it.	1	2	3	4	5
9. My relative was afraid to receive ECT.	1	2	3	4	5
10. ECT was painful for my relative.	1	2	3	4	5
11. My relative can remember having a seizure during ECT.	1	2	3	4	5
B. SATISFACTION WITH RESULTS					
12. ECT improved the quality of my relative's life.	1	2	3	4	5
13. I am very satisfied with the results of ECT treatment for my relative.	1	2	3	4	5
14. My relative is more discouraged since ECT treatment.	1	2	3	4	5
15. My relative has been sleeping worse since ECT treatment.	1	2	3	4	5
16. My relative's appetite is not as good since ECT treatment.	1	2	3	4	5
17. My relative has more energy since ECT treatment.	1	2	3	4	5
18. My relative is more confused since ECT treatment.	1	2	3	4	5
19. My relative is more optimistic since ECT treatment.	1	2	3	4	5
20. My relative is has less physical pain since ECT treatment.	1	2	3	4	5
21. My relative is gets along with others better since ECT treatment.	1	2	3	4	5

C. SATISFACTION WITH STAFF					
22. I can remember being in the ECT treatment area.	1	2	3	4	5
23. I can remember the people who work in the ECT treatment area.	1	2	3	4	5
24. The ECT treatment area provided privacy for my relative.	1	2	3	4	5
25. My relative was treated with respect by the person who started my IV.	1	2	3	4	5
26. My relative was treated with respect by the person who was with them when they woke up after ECT.	1	2	3	4	5
27. My relative was treated with respect by the people in the room where they received ECT.	1	2	3	4	5
28. The ECT treatment area did not provide enough privacy for my relative.	1	2	3	4	5
D. SATISFACTION WITH INFORMATION RECEIVED					
29. Staff spent enough time with my relative and myself describing ECT.	1	2	3	4	5
30. We received the right amount of information about ECT.	1	2	3	4	5
31. We received too much information about ECT.	1	2	3	4	5
32. We did not receive enough information about ECT.	1	2	3	4	5
33. Talking about ECT with the nurses and doctors made my relative less afraid of ECT.	1	2	3	4	5
34. We talked with another patient who had ECT, which made my relative less afraid to have ECT.	1	2	3	4	5
35. We did not know enough about ECT to decide if it was the right treatment.	1	2	3	4	5
36. All of my relative's questions about ECT were answered satisfactorily.	1	2	3	4	5
E. HOW YOU THINK YOUR RELATIVE FEELS					
37. They feel full of pep and energy most of the time.	1	2	3	4	5
38. They feel full of life.	1	2	3	4	5
39. They are a very nervous person.	1	2	3	4	5
40. They feel so down in the dumps that nothing can cheer them up.	1	2	3	4	5
41. They feel calm and peaceful.	1	2	3	4	5
42. They feel downhearted and low.	1	2	3	4	5
43. They feel comfortable in groups.	1	2	3	4	5
44. They feel tired and worn out most of the time.	1	2	3	4	5
45. COMMENTS AND SUGGESTIONS:					
46. FINALLY, PLEASE IDENTIFY A WAY IN WHICH YOU WOULD LIKE TO SEE ECT TREATMENT IMPROVED.					

A.2 INSTRUCTIONS FOR SCORING THE PSSS QUESTIONNAIRE

The PSSS has two versions: a patient-centered version (PSSS-P) and a relative or caregiver version (PSSS-R). The questionnaires are self-administered.

A.2.1 Patient-centered questionnaire (PSSS-P).

The patient satisfaction questionnaire is an instrument that collects the opinions of patients treated with ECT regarding different aspects of their treatment and the quality of care received. It consists of 46 items: 44 distributed in 5 sections and scored using a Likert scale and 2 open-ended sections for comments and suggestions from the patient (items 45 and 46). The sections of the questionnaire are as follows: A. Overall satisfaction (items 1 to 11); B. Satisfaction with results (items 12 to 21); C. Satisfaction with staff (items 22 to 28); D. Satisfaction with information received (items 29 to 36); and E. Feelings (items 37 to 44). Each item is evaluated on a scale ranging from 1 (definitely false) to 5 points (definitely true). Twenty-seven items are written so that the agreement reflects satisfaction with ECT, and 17 items are written so that the agreement reflects dissatisfaction. Satisfaction is directly related to the number of points.

The following can be calculated:

- a) The unweighted sum of the corrected values of the responses taking into account the 17 items with inverse scores; the sum of all the items gives rise to a semiquantitative variable with a value between 44 and 220. All items must be scored, and high scores reflect satisfaction with ECT (Appendix B, Table 1).
- b) Measures of central tendency (such as the mean, standard deviation, median and mode) of the total score, the score for the sections and the score for individual items. Blank items (not available) can be ignored when the scores for the sections are calculated as the average of the items that were answered (Appendix B, Table 2.). The mean of the scores for 5 of the items in section A (the first four and item 8) provides the attitude score.

A.2.2 The questionnaire focused on relatives and caregivers (PSSS-R).

This instrument collects the opinions of the caregivers or relatives of the patient and uses the same items, sections and scores as the patient-centered questionnaire.

Items	Score answered in the survey	Scored value
<i>Direct items (27):</i> 1, 2, 4, 5, 7, 8, 12, 13, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 33, 34, 36, 37, 38, 41, 43	1	1
	2	2
	3	3
	4	4
	5	5
<i>Inverse items (17):</i> 3, 6, 9, 10, 11, 14, 15, 16, 18, 28, 31, 32, 35, 39, 40, 42, 44	1	5
	2	4
	3	3
	4	2
	5	1

Section	Score values (items) *
A. Overall satisfaction	1-11
A.1. Attitude	1-4 and 8
B. Satisfaction with results	12- 21
C. Satisfaction with staff	22-28
D. Satisfaction with information received	29-36
E. Feelings	37- 44

* The values in each of the sections are averaged after obtaining the score, as shown in Appendix B, Table 1.