Miguel A. García-Carretero[1]
Laura Moreno-Hierro[2]
María A. Jordán-Quintero[3]
María Robles-Martínez[4]
Ana M. Sainz-Otero[5]
José P. Novalbos-Ruíz[6]

Translation and validation of the "personal evaluation of transitions in treatment (PETIT)" scale for people with schizophrenia

[1] CTS-391 Multidisciplinary Group for the progress of Mental Health, Faculty of Nursing and Physiotherapy, University of Cadiz, Spain
[2] Doctoral Programme, University of Cadiz, Spain
[3] Puerta del Mar University Hospital, Cadiz Emergency Services, Spain
[4] CAS Forum. Institute of Neuropsychiatry and Addictions (INAD). Parc de Salut Mar, Barcelona, Spain
[5] Department of Nursing and Physiotherapy. Faculty of Nursing and Physiotherapy, University of Cadiz, Spain.
[6] Department of Biomedicine, Biotechnology and Public Health, School of Medicine, University of Cadiz, Spain.

TRANSLATION AND VALIDATION OF THE "PERSONAL EVALUATION OF TRANSITIONS IN TREATMENT (PETIT)" SCALE FOR SCHIZOPHRENIC POPULATION

ABSTRACT

Aims. To adapt the 'Personal Evaluation of Transitions in Treatment (PETIT)' scale into Spanish and analyse its psychometric properties on schizophrenic population.

Method. 223 patients in outpatient treatment diagnosed with schizophrenia according to DSM-5 criteria participated in the study. A defined variable 'therapeutic compliance', DAI10 and SMAQ were used as a gold standard and the psychometric properties of the scale were analysed at three time points (baseline, 1 month and 6 months).

Results. The scale has very high face (or logical) validity. Exploratory factor analysis showed it would be necessary to eliminate item 7. The reliability of the scale is high (Cronbach's alpha = 0.91), demonstrating good internal consistency. After eliminating item 7, confirmatory factor analysis obtained 5 components that explained 57,76% of the variance. The content of the scale is valid for discriminating between patients of different treatment adherence, response and quality of life. The cut-off point of the 'PETIT' scale in Spanish is set at 24 points for both sexes, with good sensibility to change and very good concordance force over the three time points evaluated.

Conclusions. After eliminating item 7 and using '24' as cut-off point, the 'PETIT' scale was able to detect changes in both adherence and response to treatment as well as the resulting modifications to the quality of life of patients. Its use as a single instrument to measure all of the above makes it advisable for use in clinical practice, as the evaluation methods it requires are relatively simple and quick to perform.

Keywords. Schizophrenia; adherence; PETIT; Psychometrics/methods*; quality of life.

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TRADUCCIÓN Y VALIDACIÓN DE LA ESCALA "PERSONAL EVALUATION OF TRANSITIONS IN TREATMENT (PETIT)" PARA POBLACIÓN CON ESQUIZOFRENIA

RESUMEN

Objetivo. Adaptar al español la escala Personal Evaluation of Transitions in Treatment (PETIT) y analizar sus propiedades psicométricas en población con esquizofrenia.

Metodología. Participaron 223 pacientes en tratamiento ambulatorio con diagnóstico de esquizofrenia según criterios DSM-5. Se utilizaron como gold estándar la variable cumplimiento terapéutico, DAI10 y SMAQ y se analizaron las propiedades psicométricas de la escala en tres momentos (basal, al mes y 6 meses).

Resultados. La validez de apariencia (lógica) de la escala es muy elevada. En el análisis factorial exploratorio identificamos que sería necesario eliminar el ítem-7. La fiabilidad de la escala es alta con un alfa-Cronbach de 0,91 demostrando buena consistencia interna. El análisis factorial

Correspondence:
Ana María Sainz Otero,
Department of Nursing and Physiotherapy,
Faculty of Nursing and Physiotherapy,
University of Cadiz
Avda Ana de Viya nº 52. 11009, Cadiz
Email: ana.sainz@uca.es

confirmatorio tras eliminar el ítem-7 obtiene 5 componentes que explican el 57,76% de la varianza. El contenido de la escala es válido para discriminar pacientes con diferente adherencia, respuesta al tratamiento y calidad de vida. El punto de corte de la escala PETIT en español se establece en 24 puntos para ambos sexos; presentando una buena sensibilidad al cambio, y una fuerza de concordancia muy buena para los tres momentos evaluados.

Conclusiones. La escala PETIT tras eliminar el ítem-7 y utilizando 24 como punto de corte permite detectar cambios en la adherencia al tratamiento, su respuesta y las modificaciones resultantes en la calidad de vida de los pacientes. Su uso como único instrumento que mide todo lo anterior lo hace recomendable en la práctica clínica ya que esta precisa de métodos de evaluación sencillos que no consuman grandes esfuerzos o tiempo.

Palabras clave. Esquizofrenia; adherencia; PETIT; Psicometría; calidad de vida.

INTRODUCTION

Schizophrenia is a serious mental disorder affecting more than 21 million people in the world, around 1% of the general population[1]. Its treatment should be aimed at eliminating symptoms after they appear, preventing new ones and rehabilitating sufferers[2]. Therefore, pharmacological treatment, adjuvant therapies, psychosocial work and education are essential as part of rehabilitation, with adequate adherence to treatment also being fundamental[2,3].

The beliefs of these patients and attitudes towards their condition and treatment are better predictors of treatment adherence and quality of life than any other sociodemographic or clinical variable[4-6]; therefore, many questionnaires assessing adherence focus on analysing these beliefs and attitudes. There are currently a large number of assessment scales for therapeutic compliance and quality of life, although there is no single reference method; so several have to be used to compensate for the deficiencies that each has[7-9].

PETIT[10] evaluates the subjective responses of individuals to antipsychotic medications, adherence to treatment and changes in quality of life; although the psychometric properties of this scale have not been studied in the Spanish population.

The objective of this study was to adapt the Personal Evaluation of Transitions in Treatment (PETIT) scale into Spanish and analyse its psychometric properties for application in the Spanish population with schizophrenia.

METHODOLOGY

The study was carried out in two phases: Firstly, the PETIT scale was translated, following the translation and reverse translation methodology proposed by Guillermin et al[11]. In the second phase, the PETIT scale was validated in 223 patients diagnosed with schizophrenia who attended the consultation from March 2018 to June 2019, in 5 types of mental health centres: 2 mental health units, 1 district, 1 community, 1 rehabilitation unit and FAISEM supervised flats, all of which were in municipalities in Cádiz province.

The Carretero-Dios and Pérez criteria[12] were followed for the sample size. It proposed samples of 5-10 individuals per item in the implementation and review of instrument studies; providing a sample of 225 subjects (7.5 x 30 items). These subjects were selected by consecutive non-probabilistic random sampling in order of appointment to the nursing consultation. Initially, 228 patients participated, but 5 questionnaires were invalidated for not completing the re-test, the rest of the questionnaires or for abandoning the study: this left a sample of 223 patients. All participants signed a written consent form and the study was approved by the Cádiz Ethics Committee, in accordance with Good Clinical Practice and the Helsinki Declaration.

Inclusion criteria: (1) Primary diagnosis of schizophrenia according to DSM-5. (2) Initial diagnosis of schizophrenia made at least 1 year before the study start. (3) Patient without mental retardation, acquired brain injury, any other severe mental disorder or severe sensory limitations that prevent testing. (4) Age 18-65 years inclusive.

Exclusion criteria: Patients complying with the inclusion criteria, but whose participation could affect their treatment, in the opinion of the professionals who attended them: either due to being in the acute stage of the condition or for having symptoms suggestive of the onset of psychopathological decompensation.

The most relevant sociodemographic and clinical features for this type of study were noted (Table 1). For the "Therapeutic compliance" variable, the nurse recorded if the patients had attended scheduled appointments during the previous 6 months and if they had taken the medication, using a compliant/non-compliant dichotomous response (as an indirect method based on the clinical interview). Directly observed therapy (DOT) was also used for patients undergoing injection or mixed treatments. Patients were considered compliant if they attended at least 80% of the scheduled consultations and there was evidence of injection treatment administration (DOT) and/or the patient showed strict oral treatment follow-up.

Psychopathology was evaluated using the Positive and Negative Syndrome Scale for Schizophrenia (PANSS)[13], as validated in Spanish[14]. Given its complexity, researchers were trained in its use.

The Personal Evaluation of Transitions in Treatment (PETIT) scale[10] assessed subjective changes perceived during the course of antipsychotic drug therapy for schizophrenia, especially the subjective responses of individuals to medications, adherence to treatment and changes in quality of life. It consists of a self-administered questionnaire of 30 questions (or items) with 3 possible responses (often/sometimes/never). Each item is assigned a rating of 0, 1 or 2; where 0 indicates a negative change in health-related quality of life (HRQL) and 2 indicates a positive change (better HRQL). The total score ranges from 0-60 points, with higher scores reflecting a better HRQL[15].

Table 1 Sociodemographic data

VARIABLES	MEN, n=145	WOMEN, n=78	ALL, N=223	P
Age	47.4 (10)	46.7 (10.5)	47.2 (10.2)	
Marital status			0.000	0.000
Single	89	60.3	78.9	
Married/common-law partner	5.5	19.2	10.3	
Divorced/separated	2.8	16.7	7.6	
Widowed	2.8	3.8	3.1	
Living conditions				0.018
With family	45.5	64.1	52	
Alone	15.9	15.4	15.7	
FAISEM facility	28.6	20.5	32.2	
Education				0.009
No qualifications	25.5	28.2	26.5	
Secondary education (ESO)	60	44.9	54.7	
Higher or Vocational	9	24.4	14.3	
University	5.5	2.6	4.5	
Employment				
Never worked	72.4	74.4	73.1	
Unemployed	17.9	16.7	17.5	
Paid contract	2.1	2.6	2.2	
Occupational workshops	7.6	6.4	7.2	
Age onset of disease	20.1 (4.4)	23 (5.3)	21.1 (4.9)	
Evolution of disease	27.3 (10.1)	23.6 (10.7)	26 (10.4)	
Treatment type				
Oral	14.5	10.3	13	
Injections	27.6	34.6	30	
Mixed (both)	57.9	55.1	57	
Therapeutic compliance				0.002
Adherent	69.7	48.7	62.3	
Not adherent	30.3	51.3	37.7	
Family history of disease				
None	39.3	55.1	44.8	
1st degree relatives	42.1	28.2	37.2	
2nd degree relatives	7.6	6.4	7.2	
1st and 2nd degree relatives	11	10.3	10.8	
Other pathologies				
None	47.6	50	48.4	
Diabetes Mellitus	14.5	21.8	17	
High BP	9	5.1	7.6	
Endocrinological	9.7	14.1	11.2	
Drug use in last 12 months				0.008
Tobacco	82.8	70.5	78.5	
Alcohol	21.4	12.8	18.4	
All recreational drugs	31.7	15.4	26	
Cocaine	20.7	9	16.6	
Hashish	9	6.4	8.1	
Marijuana	2.1	-	1.3	

Standard deviation in brackets

The Simplified Medication Adherence Questionnaire (SMAQ)[16] consists of 6 items. Patients were considered not adherent if they answered one or more of the qualitative questions as follows: (1) yes; (2) no; (3) yes; (4) yes; (5) C, D or E; (6) 'more than 2 days'.

The Drug Attitude Inventory (DAI-10)[17], validated in Spain[18], consists of 10 items. Questions 1, 3, 4, 7, 9 and 10 are scored +1 if the answer is 'true' and -1 if false; questions 2, 5, 6 and 8 are scored inversely. A positive total score means a positive subjective response and good adherence, while a negative total score means a negative subjective response and poor adherence.

As there is no simple, reliable 'gold standard' to measure adherence[19-21] in these patients, the "therapeutic compliance" variable (according to the aforementioned criteria) and the DAI-10 and SMAQ questionnaires were used in combination as a reference standard to compare with the PETIT scale.

A patient was classified as adherent or not adherent according to the following criteria:

(1) Adherent – If patients classified as adherent in both questionnaires (DAI-10 and SMAQ); or if patients classified as adherent in one of these questionnaires as well as being classified as adherent for the "therapeutic compliance" variable.

(2) Not adherent – Any other combination; e.g. classifying as compliant in the "therapeutic compliance" variable was not considered sufficient if the patient was not also adherent in both the DAI-10 and SMAQ questionnaires.

All patients completed the PETIT on two occasions: at the baseline visit (R_0) and after 1 or 1.5 months (R_1), at the next consultation visit. At baseline, sociodemographic information and clinical data were compiled, along with the clinical history, with the PANSS being completed after the interview. The patient then completed the PETIT. At the second visit, the PANSS was completed and the patient completed the PETIT, DAI-10 and SMAQ questionnaires.

At 6 months (R_2), 1 from every 5 patients (total of 45) completed the PETIT and the PANSS to assess their sensitivity to change.

The items were analysed individually for the feasibility evaluation, and the non-response percentages obtained. The ceiling and floor effect and the time taken to complete were also analysed.

Reliability was measured by internal consistency, using Cronbach's alpha coefficient. The test-retest method was also carried out. The intraclass correlation coefficient (ICC) was also calculated, with a value ≥ 0.80 considered as satisfactory.

Spearman's rank correlation coefficient was also performed for content validity, to see how the different items correlated. Construct validity was analysed by confirmatory factor analysis of principal components with varimax rotation.

The criteria and diagnostic validity of the questionnaire were first assessed by comparing the mean scores in two groups of patients with significant PETIT score differences. Subsequently, a comparison of the diagnoses provided by the PETIT scores with the reference standard was carried out.

To determine the test cut-off point, the ROC curve and the Youden index (J) for the different 'reference standard' criteria were obtained. The sensitivity to change of the PETIT scale was analysed. PANSS made it possible to observe changes in the patient's condition and it was analysed whether they corresponded to those obtained in the PETIT at R_0, R_1 and R_2 periods. First, the percentage agreement was analysed, then the kappa agreement was calculated for the periods R_0 - R_1, R_1 - R_2 and R_0 - R_2.

RESULTS

There were 223 patients (65% male) in the study, with a mean age of 47.2 years (SD 10.2) and an age range of 19-65 years.

There were 78.9% single and 10.3% married or with common-law partners. Around half (52%) were living with relatives and 32.2% in FAISEM accommodation. For educational level, 54.7% had reached obligatory secondary school level (ESO), 26.5% had no qualifications and 4.5% had attended university. Most (73.1%) had never worked and 17.5% were unemployed.

The mean age of onset of the condition was 21.1 years (SD 4.9), and was lower in men (20.1 vs 23 years in women). Mean disease evolution was 26 years (SD 10.4), with 27.3 years in men and 23.6 years in women. Mixed treatment was given to 57% and injection treatment to 30%, while therapeutic compliance was 62.3%. The family history of psychiatric pathology showed 44.8% had no such history and 37.2% had first degree relatives affected. Around half (48.4%) had no other pathologies, 17% had diabetes mellitus, 11.2% endocrine disorders and 7.6% high BP.

Drug use over the previous 12 months showed 78.5% had used tobacco, 18.4% alcohol and 26% recreational

drugs, with the most commonly used being cocaine (16.6%) and hashish (8,1%).

The psychopathological status of the sample using the PANSS scale had an initial score of 23.8 (SD 9.9) for the positive scale, 24.8 (SD 9.2) for the negative scale, 48.8 (SD 14.6) for general psychopathology and a total score of 97.3 (SD 30.2).

For feasibility, of the 228 respondents, 5 questionnaires (2.19%) were invalidated, due to abandonment, not completing the retest or the rest of the questionnaires; leaving 223 patients (97.8%). Items were analysed individually, with zero non-response being obtained.

The ceiling and floor effect for the percentage of subjects with the highest and lowest possible PETIT score was analysed: the lowest score was 11 points from 6 respondents (2.7%) and the highest score was 54 from 4 respondents (1.8%). No subject reached the maximum (60 points) or minimum (0 points) scores.

The completion time was adequate according to the recommendations (3-5 minutes) of the authors of the original version. The mean time taken was 3'36'' (SD 35.815''; range 3'36'' – 4'48''); only 2 people (0.45%) were outside this time range.

For reliability with this population of 223 subjects, the different items enquiring about different elements in the two questionnaire domains showed very high internal consistency values (Cronbach's alpha = 0.913). Removing items 7 and 22 from Domain 1 and item 26 from Domain 2 gave even higher internal consistency values (Cronbach's alpha = 0.924).

When performing the test-retest (Table 2), similar central tendency (mean, median and mode) values were observed, as well as some positive skew, with values or responses extending to the right, and negative kurtosis, with lower tails.

There was a strong, statistically significant, direct correlation between the PETIT scale at R_0 and R_1 (r=0.928, p<0.05). After checking the correlation of the responses at the time points R_0 and R_1 for each item, very high correlation is seen, so the test can be said to be very stable before and after (Table 3).

Face validity made it possible to assess the clarity and understanding of the instrument without ambiguity, with understanding assessed at 9.86 and no elements for improvement found. No comprehension difficulties were detected and the translated items were answered affirmatively by all professionals and patients.

Spearman's rank correlation for content validity was performed for the different items. Taking the correlation coefficients for each item with the subdomains, the instrument was divided into 2 domains with 4 subdomains: Domain 1 "Psychosocial functioning" (items 1-24) was divided into the 4 subdomains: "Social functioning" (items 4, 7, 11 and 19), "Activity" (items 3, 5, 12, 14, 16, 21 and 23), "Cognition" (items 1, 2, 6, 9, 13, 15 and 20) and "Dysphoria" (items 8, 10, 17, 18, 22 and 24). Domain 2 was "Adherence and feelings towards the medication" (items 25-30).

Exploratory factor analysis (EFA) showed first that the anti-image correlation of item 7 was 0.286, while it was 0.7-0.8 for the rest of the items. According to the principal components method, it considers 8 factors and explains 67.69% of the variance. Furthermore, the factorial loads of items 3, 14 and 12 had values below 0.5 with item 7 having the lowest (0.167). Thus, it would be advisable to consider removing item 7.

Following the EFA results, and after deciding to remove item 7, confirmatory factor analysis (CFA) of the main components with varimax rotation was performed. It was found that 7 factors explained 65.65% of the variance. The anti-image correlation was good with values of 0.7-0.8 for all items (Table 4).

Table 2 PETIT scale test and retest results

	N	Mean	Standard Deviation	Minimum	Maximum	Skew		Kurtosis	
						Value	Standard error	Value	Standard error
PETIT	223	28.74	11.173	11	51	0.033	0.163	-1.080	0.324
REPETIT	223	28.95	11.448	11	54	0.083	0.163	-1.041	0.324

Table 3 PETIT scale item correlation with domains and subdomains

ITEM	Domain 1				Domain 2
	Subdomain 1.1	Subdomain 1.2	Subdomain 1.3	Subdomain 1.4	
1	0.267** 0.000	0.257** 0.000	**0.511** 0.000**	0.212** 0.001	0.215** 0.001
2	0.070 0.300	0.192** 0.004	**0.408** 0.000**	0.094 0.160	0.066 0.327
3	0.417** 0.000	**0.622** 0.000**	0.377** 0.000	0.462** 0.000	0.387** 0.000
4	**0.611** 0.000**	0.298** 0.000	0.308** 0.000	0.260** 0.000	0.242** 0.000
5	0.419** 0.000	**0.561** 0.000**	0.417** 0.000	0.467** 0.000	0.386** 0.000
6	0.483** 0.000	0.474** 0.000	**0.559** 0.000**	0.372** 0.000	0.241** 0.000
7	**0.322** 0.000**	0.014 0.836	0.025 0.705	-0.067 0.320	-0.048 0.477
9	0.543** 0.000	0.476** 0.000	**0.740** 0.000**	0.459** 0.000	0.471** 0.000
10	0.419** 0.000	0.559** 0.000	0.561** 0.000	**0.793** 0.000**	0.549** 0.000
11	**0.697** 0.000**	0.468** 0.000	0.488** 0.000	0.486** 0.000	0.567** 0.000
12	0.328** 0.000	**0.634** 0.000**	0.360** 0.000	0.420** 0.000	0.458** 0.000
13	0.471** 0.000	0.514** 0.000	**0.679** 0.000**	0.451** 0.000	0.339** 0.000
14	0.371** 0.000	**0.718** 0.000**	0.459** 0.000	0.537** 0.000	0.511** 0.000
15	0.391** 0.000	0.495** 0.000	**0.718** 0.000**	0.388** 0.000	0.540** 0.000
16	0.537** 0.000	**0.714** 0.000**	0.564** 0.000	0.475** 0.000	0.392** 0.000
17	0.450** 0.000	0.505** 0.000	0.500** 0.000	**0.758** 0.000**	0.421** 0.000
18	0.361** 0.000	0.396** 0.000	0.321** 0.000	**0.704** 0.000**	0.367** 0.000
19	**0.796** 0.000**	0.629** 0.000	0.628** 0.000	0.507** 0.000	0.440 0.000
20	0.539** 0.000	0.560** 0.000	**0.753** 0.000**	0.547** 0.000	0.451** 0.000
21	0.433** 0.000	**0.631** 0.000**	0.439** 0.000	0.312** 0.000	0.323** 0.000
22	-0.082 0.222	0.140* 0.037	0.071 0.292	**0.409** 0.000**	0.195** 0.003
23	0.152* 0.023	**0.469** 0.000**	0.282** 0.000	0.394** 0.000	0.384** 0.000
24	0.458** 0.000	0.452** 0.000	0.437** 0.000	**0.545** 0.000**	0.208** 0.002
25	0.456** 0.000	0.578** 0.000	0.484** 0.000	0.522** 0.000	**0.775** 0.000**
26	0.057 0.394	0.191** 0.004	0.040 0.550	0.312** 0.000	**0.494** 0.000**
27	0.326** 0.000	0.419** 0.000	0.218** 0.001	0.409** 0.000	**0.753** 0.000**
28	0.591** 0.000	0.560** 0.000	0.558** 0.000	0.504** 0.000	**0.692** 0.000**
29	0.494** 0.000	0.573** 0.000	0.509** 0.000	0.504** 0.000	**0.840** 0.000**
30	0.401** 0.000	0.550** 0.000	0.441** 0.000	0.514** 0.000	**0.762** 0.000**

** Correlation is significant at the 0.01 level (2 tails).
* Correlation is significant at the 0.05 level (2 tails).

Table 4 Confirmatory factor analysis, main PETIT scale factors

Ítems	Components						
	1	2	3	4	5	6	7
29	**.773**	.071	.181	.320	.005	.100	.156
30	**.739**	.230	.104	.018	.245	-.091	-.015
28	**.713**	.215	.252	-.178	.219	.129	.248
8	**.653**	.196	.129	.055	.311	.166	-.051
25	**.619**	.158	.227	.389	.062	.038	.022
11	**.618**	.121	.252	-.261	.319	-.039	.259
27	**.564**	.062	-.121	.468	.068	-.330	.175
24	.088	**.748**	.141	-.099	.162	.157	.177
21	.279	**.726**	.165	-.147	.006	-.002	.070
16	.173	**.709**	.309	.132	.143	-.038	.047
6	.119	**.565**	.083	.046	.113	.281	.336
14	.431	**.432**	-.021	.348	.183	.244	-.102
12	.149	**.419**	.255	.365	.156	-.150	-.056
13	.016	.187	**.683**	.309	.276	.102	.049
9	.455	.216	**.633**	.054	-.078	.106	.200
20	.201	.192	**.579**	.260	.368	.126	.045
15	.544	.251	**.560**	-.017	-.093	.105	-.119
1	.154	.124	**.546**	-.260	.201	-.128	.037
19	.223	.356	**.478**	.119	.324	.143	.252
22	-.094	-.142	-.019	**.766**	.142	.055	.052
23	.163	.099	.173	**.756**	-.019	.073	-.034
26	.208	-.064	-.018	**.519**	.130	-.447	-.139
17	.213	.116	.343	.083	**.697**	-.046	.077
18	.076	.033	.056	.431	**.685**	.066	.309
10	.482	.175	.310	.081	**.612**	.033	-.234
3	.219	.431	.069	-.063	**.588**	-.110	-.004
2	.112	.084	.090	.037	-.031	**.823**	-.061
5	.316	.188	-.022	.131	.324	**.443**	.402
4	.110	.228	.128	-.036	.051	-.055	**.827**

Items 5, 12, 14 and 19 had values less than 0.5, with the rest of the items having higher values. Thus, it would be advisable to remove them. The following table shows how the 7 factors are distributed.

The mean scores in 3 groups of patients with significant differences in the PETIT scores were compared for criteria and diagnostic validity. Significantly higher or lower scores were found on the PETIT, according to the reference standard classification of adherent or not adherent, respectively. Thus, the PETIT content is valid for discriminating groups of individuals in different situations (Table 5).

The best balance between sensitivity and specificity for the PETIT was found for a score of 24 points for both sexes (Sensibility S)=97% Specificity (SP)=88% for males vs S=95% SP=90% in females).

Finally, Cohen's kappa coefficient, which adjusts for the effects of chance when considering concordance, was greater than 0.8 for the periods R_0-R_1, R_1-R_2 and R_0-R_2 which is indicative of very good agreement for the three periods evaluated (Table 6).

Table 5 Mean total PETIT scores and prevalence with Reference standard in 3 groups with different scores by gender.

		PETIT		GOLD ADHERENCE		DAI 10	
		Mean	SD**	Yes	No	Yes	No
GROUP 1 11 a 21 points	Total	15.34	3.117	4.2	95.8	-	100
	Hombre	15.05	3.220	2.6	97.4	-	100
	Mujer	15.69	2.999	6.3	93.8	-	100
GROUP 2 22 a 34 points	Total	29.23	3.772	82.5	17.5	80.8	19.2
	Hombre	29.79	3.524	89.5	10.5	84.3	15.7
	Mujer	27.83	4.075	65.2	34.8	72.7	27.3
GROUP 3 35 a 51 points	Total	41.43*	4.663	95.8	4.2	94.8	5.2
	Hombre	41.78*	4.602	98	2	96.3	3.7
	Mujer	40.70*	4.809	91.3	8.7	91.3	8.7

NOTE.
Group 1: N Total =71; Men (n=39); Women (n=32).
Group 2: N Total =80; Men (n=57); Women (n=23).
Group 3: N Total =72; Men (n=49); Women (n=23).

* Kruskal-Wallis test for independent samples (Sig. 0,000).
**SD: Standard deviation

Table 6 Cohen's Kappa coefficient analysis of PETIT scale, periods R_0, R_1 and R_2

Kappa	Valid cases	PETIT	k	Asymptotic standard errora[a]	Approx S[b]	Approx Sig.
Measure of	223	R_0 y R_1	0.903	0.030	13.478	0.000
	45	R_0 y R_1	0.955	0.045	6.411	0.000
	45	R_1 y R_2	0.908	0.064	6.115	0.000
	45	R_0 y R_2	0.863	0.076	5.844	0.000

Note.
a. Null hypothesis is not assumed.
b. Use of asymptotic standard error, assuming null hypothesis.
N= 223 (Men=145, Women=78).
N= 45 (Men=26, Women=19).

DISCUSSION

The sociodemographic features are very similar to other studies carried out in patients with schizophrenia, regarding mean age, gender distribution, marital status, domestic co-habitants, educational level and occupation[19-26].

The mean PETIT score was 28.7 (SD 11.2) at baseline and 28.9 (SD 11.4) at the second visit. These values are similar to those indicated in 3 studies carried out in the United States[27-29], but significantly lower than those found in other studies[15,19,30]. For the latter studies, the difference in mean score may be due to the fact that the effectiveness of antipsychotic drugs was evaluated by analysing the PETIT scale results after a 6-month follow-up; thus, these patients were adherent and gave higher scores; while the intention with this scale is to find out if their adherence and quality of life improve after taking one drug or another. Comparing these mean scores with those from our study for the adherents group, they are similar: being 35.7 (SD 7.3) and 36.3 (SD 7.3) for the R_0 and R_1 periods, respectively.

The completion time was found to be adequate, according to the original version of the Voruganti et al recommendations[10]. According to these, the PETIT can be completed in about 3-5 minutes, and the average completion time was 3'36'', with only 2 people who did not meet this time interval.

The reliability results showed the PETIT has good internal consistency (Cronbach's alpha=0.91), which means it is a useful and reliable tool to detect possible adherence problems in the treatment of patients with schizophrenia. Removing items 7 and 22 in Domain 1 and item 26 from Domain 2 gave higher internal consistency values (Cronbach's alpha=0.92). These data coincide with those in the original version of Voruganti et al[10] in its original version, without there being other subsequent studies with which to make a comparison.

There was also a strong, significant and direct correlation between the PETIT scale at R_0 and R_1 ($r=0.928$, $p<0.05$), indicating it is very stable both before and after.

For the content validity of the PETIT, taking into account the correlation coefficients of each of the items with the subdomains, it was observed that the instrument is divided into 2 domains with 4 subdomains. This division coincides with that of the original instrument design author[10] and with that indicated in a 2014 study by Awad et al[15]. There is a "Psychosocial functioning" domain (items 1-21) divided into 4 subdomains ("Social functioning" items 4, 7, 11 and 19; "Activity" items 3, 5, 12, 14, 16, 21 and 23; "Cognition", items 1, 2, 6, 9, 13, 15 and 20; and "Dysphoria" items 8, 10, 17, 18, 22 and 24) and an "Adherence and feelings towards medication" domain (items 25-30).

EFA found that item 7 ("I am unable to trust people") needed to be removed; and that 8 main components were determined that explain 67.69% of the variance. However, the same component structure was not reflected in the original[10], although the values used to decide this are unknown.

After eliminating item 7, CFA showed 5 components were determined that explain 57.76% of the variance. Although this coincides with the original 5-component division indicated by Voruganti et al[10], it did not have the same component structure. Also, items 5, 12, 14 and 19 gave values below 0.5, with the rest of the items having higher values. In view of all the aforementioned results, their elimination would be advisable.

Regarding criteria and diagnostic validity, following the sensitivity and specificity PETIT results (S=96% and E=88%), as well as those according to gender, and after analysing the ROC curves, it was found not to be necessary to establish different cut-off points for men and women, with a single cut-off point of 24 points being sufficient. According to Voruganti et al[10], the original authors of the instrument, the total PETIT scores were significantly related to the pattern of treatment adherence (odds ratio 5.9, chi-square 47.5, $p<0.0001$). For example, subjects whose total scores were below the median were almost 6 times more likely not to comply with their treatment, compared to those who obtained high scores with the PETIT; hence the importance of a cut-off point. However, neither in their validation publication[10], nor in a subsequent 2014 publication by Awad et al[15], do they indicate cut-off points or data above the median; although it does indicate that higher scores reflect better HRQL.

Finally, the PETIT scale was shown to be sensitive to change for the R0, R1 and R2 periods when compared with the PANSS questionnaire. Thus, when the PANSS score increases (when the symptomatology increases are positive, negative or general) the score on the PETIT decreases (indicating a negative change, or worse HRQL) and vice versa; as well as, when there is no change in the score in one instrument, none was observed in the other.

Caqueo-Urizar et al[31] indicate that disorder severity has a significant association in medication adherence. For example, if adequate adherence is maintained, relapses are reduced, a better symptomatic course is obtained and social interaction improves[32-33]. According to Morken et al[34], patients with inadequate adherence have around 10 times the risk of relapse and 4 times the risk of hospitalisation. Numerous studies provide evidence of the negative impact

of a lack of pharmacological adherence on the severity of the disease, leading to relapses and readmissions[32,35-37]. This makes our results of even more interest, as the PETIT was sensitive to the change for 91.9% (R_0 - R_1) and 91.1% (entre R_1 - R_2) of the sample.

Although causality cannot be shown, it seems that patients with worse symptoms have less adherence; however, this in itself may result in temporary or permanent discontinuation of treatment and lead, therefore, to patient relapse (greater severity).

Most of these studies have described significant associations between clinical symptoms, mainly the severity of negative symptoms and the quality of life[23,38-40]. Therefore, symptoms would also be a relevant factor in the quality of life.

However, some patients with schizophrenia do not respond completely to treatment and continue to have positive or negative symptoms. According to Starling and Feijo[41], among the causes of this incomplete recovery are poor adherence to treatment, perhaps due to a lack of knowledge of the disease and concerns about side effects, weight gain or extrapyramidal symptoms.

Various studies have used the PETIT together with the PANSS to detect improvements in treatment, therapy or changes in their quality of life[8,10,15,27-30,42-43]. Other studies use PANSS to assess a therapy, risk of hospitalisation or changes in quality of life[44-47].

A limitation of the study is that the data were collected from stable patients who were not in the acute stage of the disease, which may imply some selection bias and the possibility of including patients with better adherence. This potential bias would affect patients with oral treatment more, as adherence was determined by indirect methods (which have more scope for error). Another possible limitation is for the adherence reported by the patient to be influenced by different factors such as potential cognitive deficits or memory bias.

Finally, Starling et al[41] indicated the importance of performing active follow-up after recovery from any episode, to reduce the risk of relapse, including preparing a monitoring plan to catch early warning signs and to be aware of the actual status of antipsychotic medication adherence. Taking this into account, and in view of the study results obtained, it means that the PETIT is a good instrument to detect such changes in patients and to evaluate their adherence to treatment or any modifications in it. Therefore, better adherence can lead to greater treatment efficacy, reducing symptoms and the implications that these entail, such as relapse and hospitalisation[48-52].

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CONFLICTS OF INTEREST

The authors declare they have no conflicts of interest related to the article.

BIBLIOGRAPHY

1. World Health Organisation (2019), Schizophrenia [Internet], Geneva: WHO; 2019. Descriptive note; 397 [updated October 4, 2019; cited June 11, 2020]. Available at http://www.who.int/mediacentre/factsheets/fs397/es/

2. Medina Dávalos M, Medina Borja MD, Landeta Maritza C. Abordaje de la esquizofrenia desde la atención primaria de la salud (*Approach to schizophrenia in primary health care*). In: Medina Dávalos M, Medina Borja D, publisher. Manejo de la esquizofrenia en la atención primaria de salud (*Management of schizophrenia in primary health care*). Quito, Ecuador: EDIMEC Ediciones Médicas; 2017. p. 1-9.

3. Guía basada en la evidencia de la Asociación Psiquiátrica de América Latina y de la Asociación Psiquiátrica Mexicana para el tratamiento del paciente con esquizofrenia (*Guidance based on evidence from the Latin American Psychiatric Association and the Mexican Psychiatric Association for the treatment of patients with schizophrenia*). Salud Ment. 2014;37(1):1-101.

4. Chakraborty K, Avasthi A, Kumar S, Grover S. Attitudes and beliefs of patients of first episode depression towards antidepressants and their adherence to treatment. Soc Psychiatry Psychiatr Epidemiol. 2009;44(6):482-88. doi: 10.1007/s00127-008-0468-0.

5. Jónsdóttir H, Fríis S, Horne R, Pettersen KI, Reikvam A, Andreassen OA. Beliefs about medications: Measurement and relationship to adherence in patients with severe mental disorders. Acta Psychiatr Scand. 2009;119(1):78-84. doi: 10.1111/j.1600-0447.2008.01279.x

6. Russell J, Kazantzis N. Medication beliefs and adherence to antidepressants in primary care. N Z Med J. 2008;121(1286):14-20.

7. De las Cuevas C, Sanz EJ. Métodos de valoración de la adherencia al tratamiento psiquiátrico en la práctica clínica (*Methods for assessing adherence to psychiatric treatment in clinical practice*). Rev Iberoam Psicol Salud. 2016;7(1):25-30. doi 10.1016/j.rips.2015.10.001

8. López Romero LA, Romero Guevara SL, Parra DI, Rojas Sánchez LZ. Adherencia al tratamiento: concepto y medición (*Adherence to treatment: concept and measurement*). Hacia Promoc Salud. 2016;21(1):117-37. doi: 10.17151/hpsal.2016.21.1.10

9. Pagés Pugdemont N, Valverde Merino MI. Métodos para medir la adherencia terapéutica (*Methods to measure therapeutic adherence*). Ars Pharmaceutica. 2018;59(3):163-72. doi: 10.30827/ars.v59i3.7387

10. Voruganti LN, Awad AG. Personal evaluation of transitions in treatment (PETIT): A scale to measure treatment-related quality of life in schizophrenia. Schizophr Res. 2002;56(1-2):37-46. doi 10.1016/s0920-9964(01)00161-x

11. Guillemin F, Bombardier C, Beaton D. Cross-cultural adaptation of health-related quality of life measures: literature review and proposed guidelines. J Clin Epidemiol. 1993;46(12):1417-32. doi: 10.1016/0895-4356(93)90142-n

12. Carretero-Dios H, Pérez C. Normas para el desarrollo y revisión de estudios instrumentales (*Standards for the development and review of instrumental studies*). Int J Clin Health Psychol. 2005;5(3):521-51.

13. Kay SR, Fiszbein A, Opler LA. The positive and negative syndrome scale (PANSS) for schizophrenia. Schizophr Bull. 1987;13(2):261-76. doi: 10.1093/schbul/13.2.261

14. Peralta Martín V, Cuesta Zorita MJ. Validación de la Escala de los Síndromes Positivo y Negativo (PANNS) en una muestra de esquizofrénicos españoles (*Validation of the Positive and Negative Syndrome Scale (PANNS) in a sample of Spanish schizophrenics*). Actas Luso-Esp Neurol Psiquiatr. 1994;22(4):171-77.

15. Awad AG, Hassan M, Loebel A, Hsu J, Pikalov A, Rajagopalan K. Health-related quality of life among patients treated with lurasidone: results from a switch trial in patients with schizophrenia. BMC Psychiatry. 2014;14:53. doi: 10.1186/1471-244X-14-53

16. Knobel H, Alonso J, Casado J, Collado J, González J, Ruiz I. Validation of a Simplified Medication Adherence Questionnaire in a Large Cohort of HIV-Infected Patients: The GEEMA Study. AIDS. 2002;16(4):605-13. doi: 10.1097/00002030-200203080-00012

17. Hogan TP, Awad AG, Eastwood R. A self-report scale predictive of drug compliance in schizophrenics: Reliability and discriminative validity. Psychol Med. 1983;13(1):177-83. doi: 10.1017/S0033291700050182

18. Robles García R, Salazar Alvarado V, Páez Agraz F, Ramírez Barreto F. Assessment of drug attitudes in patients with schizophrenia: Psychometric properties of the DAI Spanish version. Actas Esp Psiquiatr. 2004;32(3):138-42.

19. Awad AG, Ng-Mak D, Rajagopalan K, Hsu J, Pikalov A, Loebel A. Long-term health-related quality of life improvements among patients treated with lurasidone: results from the open-label extension of switch trial in schizophrenia. BMC Psychiatry. 2016;16:176. doi: 10.1186/s12888-016-0879-5

20. Bernardo M, Cañas F, Herrera B, García Dorado M. La adherencia predice la remisión sintomática y psicosocial en esquizofrénia: estudio naturalístico de la integración de los pacientes en la comunidad (*Adherence predicts symptomatic and psychosocial remission in schizophrenia: a naturalistic study of the integration of patients in the community*). Rev Psiquiatr Salud Ment. 2017;10(3):149-59. doi: 10.1016/j.rpsm.2016.04.001

21. Chien WT, Mui J, Gray R, Cheung E. Adherence therapy versus routine psychiatric care for people with schizophrenia spectrum disorders: a randomised controlled trial. BMC Psychiatry. 2016;16:42. doi: 10.1186/s12888-016-0744-6

22. Martín JC, Acuña MJ, Labrador J, Blanco M, Casas C. Factores de disfunción sexual en pacientes con esquizofrenia tratados con antipsicóticos de segunda generación: no solo prolactina (*Factors of sexual dysfunction in patients with schizophrenia treated with second-generation antipsychotics: not only prolactin*). Actas Esp Psiquiatr, 2018;46(6):217-25.

23. Martín MC, Secades R, López-Goñ, JJ, Tirapu J. Empatía, cognición social y calidad de vida subjetiva en esquizofrenia (*Empathy, social cognition and subjective quality of life in schizophrenia*). An Sist Sanit Navar. 2017;40(2):211-9. doi: 10.23938/assn.0025.

24. Osorio-Martínez ML. (2017). Esquizofrenia y funcionamiento: medición con la escala breve de evaluación del funcionamiento y correlación con los años de enfermedad (*Schizophrenia and functioning: measurement with the brief scale of evaluation of the*

functioning and correlation with the years of illness). An Fac Med. 2017;78(1):17-22. doi: 10.15381/anales.v78i1.13016.

25. Pinho LG, Pereira A, Chaves C. Influencia de las características sociodemográficas y clínicas en la calidad de vida de los individuos con esquizofrenia (*Influence of sociodemographic and clinical characteristics on the quality of life of individuals with schizophrenia*). Rev Esc Enferm USP. 2017;51:e03244. doi: 10.1590/S1980-220X2016031903244.

26. Tareke M, Tesfaye S, Amare D, Belete T, Abate A. (2018). Antipsychotic medication non-adherence among schizophrenia patients in Central Ethiopia. S Afr J Psychiatr. 2018;24(0):1124. doi: 10.4102/sajpsychiatry.v24i0.1124

27. Kawata AK, Revicki DA. Psychometric properties of the Personal and Social Performance scale (PSP) among individuals with schizophrenia living in the community. Qual Life Res. 2009;17(10)1247-56. doi: 10.1007/s11136-008-9400-z

28. Kawata AK, Revicki DA. Reliability and validity of the social integration survey (SIS) in patients with schizophrenia. Qual Life Res. 2008;17(1):123-35. doi: 10.1007/s11136-007-9288-z

29. Laties LM, Flach AJ, Baldycheva I, Rak I, Earley W, Pathak S. Cataractogenic potential of quetiapine versus risperidone in the long-term treatment of patients with schizophrenia or schizoaffective disorder: A randomized, open-label, ophthalmologist-masked, flexible-dose, non-inferiority trial. J Psychopharmacol. 2015;29(1):69-79. doi: 10.1177/0269881114553253

30. Anderson KH, Ford S, Robson D, Cassis J, Rodrigues C, Gray R. An exploratory, randomized controlled trial of adherence therapy for people with schizophrenia. Int J Ment Health Nurs. 2010;19:340-49. doi: 10.1111/j.1447-0349.2010.00681.x

31. Caqueo-Urízar A, Urzúa A, Miranda-Castillo C, Irarrázaval M. Adherencia a la medicación antipsicótica en pacientes indígenas con esquizofrenia (*Adherence to antipsychotic medication in indigenous patients with schizophrenia*). Salud Ment. 2016;39(6)303-10. doi: 10.17711/SM.0185-3325.2016.035

32. Yang J., Ko YH, Paik JW, Lee MS, Han C, Joe SH et al. Symptom severity and attitudes toward medication: Impacts on adherence in outpatients with schizophrenia. Schizophr Res. 2012;134(2-3):226-231. doi: 10.1016/j.schres.2011.11.008

33. Tsai JK, Lin WK, Lung FW. Social interaction and drug attitude effectiveness in patients with schizophrenia. Psychiatr Q. 2011;82(4):343-51. doi: 10.1007/s11126-011-9177-z

34. Morken G, Widen JH, Grawe RW. Non-adherence to antipsychotic medication, relapse and rehospitalisation in recent-onset schizophrenia. BMC Psychiatry. 2008;8:32-34. doi: 10.1186/1471-244X.8.32

35. Barak Y., Aizenberg D. Clinical and psychosocial remission in schizophrenia: Correlations with antipsychotic treatment. BMC Psychiatry. 2012;12:108. doi: 10.1186/1471-244X-12-108

36. Fe Bravo-Ortiz M, Gutiérrez-Casares JR, Rodríguez-Morales A, García MA, Hidalgo-Borrajo R. Influence of type of treatment on the well-being of Spanish patients with schizophrenia and their caregivers. Int J Psychiatry Clin Pract. 2011;15(4):286-95. doi: 10.3109/13651501.2011.608469

37. San L, Bernardo M, Gómez A, Peña M. Factors associated with relapse in patients with schizophrenia. Int J Psychiatry Clin Pract. 2013;17(1):2-9. doi: 10.3109/13651501.2012.687452

38. Alessandrini M, Lançon C, Fond G, Faget-Agius C, Richieri R, Faugere M, et al. A structural equation modelling approach to explore the determinants of quality of life in schizophrenia. Schizophr Res. 2016;171(1-3):27-34. doi: 10.1016/j.schres.2016.01.012

39. Gómez-de-Regil L. Curso de la enfermedad y calidad de vida en pacientes mexicanos con psicosis (*Course of the disease and quality of life in Mexican patients with psychosis*). Rev Psiquiatr Salud Ment. 2015;8(4):218-23. doi: 10.1016/j.rpsmen.2013.12.002

40. Gorna K, Jaracz K, Jaracz J, Kiejda J, Grabowska-Fudala B, Rybakowski J. Social functioning and quality of life in schizophrenia patients-relationship with symptomatic remission and duration of illness. Psychiatr Pol. 2014;48(2):277-88.

41. Starling J, Feijo I. (2018). Esquizofrenia y otros trastornos psicóticos de inicio temprano (Schizophrenia and other early-onset psychotic disorders). In: Rey JM, editor. IACAPAP e-Texbook of Child and Adolescent Mental Health. Ginebra: Asociación Internacional de Psiquiatría y Profesiones Aliadas de Niños y Adolescentes; 2018. p. 1-24.

42. Awad AG, Voruganti LN. The impact of newer atypical antipsychotics on patient-reported outcomes in

schizophrenia. CNS Drugs. 2013;27(8):625-36. doi: 10.1007/s40263-013-0070-1

43. Citrome L, Weiden PJ, McEvoy JP, Correll CU, Cucchiaro J, Hsu J, et al. Effectiveness of lurasidone in schizophrenia or schizoaffective patients switched from other antipsychotics: a 6-month, open-label, extensión study. CNS Spectrums. 2014;19(4):330-9. doi: 10.1017/S109285291300093X

44. Chien WT, Mui JHC, Cheung EFC, Gray R. Effects of motivational interviewingbased adherence therapy for schizophrenia spectrum disorders: a randomized controlled trial. Trials. 2015;16:270. doi: 10.1186/s13063-015-0785-z

45. Glick HA, Li P, Harvey PD. The relationship between Positive and Negative Syndrome Scale (PANSS) schizophrenia severity scores and risk for hospitalization: An analysis of the CATIE Schizophrenia Trial. Schizophr Res. 2015;166:110-4. doi: 10.1016/j.schres.2015.05.021

46. McEvoy JP, Citrome L, Hernández D, Cucchiaro J, Hsu J, PIkalov A, et al. Effectiveness of lurasidone in patients with schizophrenia or schizoaffective disorder switched from other antipsychotics: A randomized, 6-week, open-label study. J Clin Psychiatry. 2013;74(2):170-9. doi: 10.4088/JCP.12m07992

47. Medeiros-Ferreira L, Obiols JE, Navarro-Pastor JB, Zuñiga-Lagares A. Síndrome metabólico y calidad de vida relacionada con la salud en pacientes con esquizofrenia (*Metabolic syndrome and health-related quality of life in patients with schizophrenia*). Actas Esp Psiquiatr. 2013;41(1):17-26.

48. Boyer L, Miller A, Perthame E, Aballea S, Auquier P, Toumi M. Quality of life is predictive of relapse in schizophrenia. BMC Psychiatry. 2013;13:15. doi: 10.1186/1471-244X-13-15

49. Sarlon E, Heider D, Millier A, Azorin JM, Konig HH, Hansen K., et al. A prospective study of health care resource utilisation and selected costs of schizophrenia in France. BMC Health Serv Res. 2012;12:269. doi: 10.1186/1472-6963-12-269

50. Newcomer JW, Weiden PJ, Buchanan R. Switching antipsychotic medications to reduce adverse event burden in schizophrenia: establishing evidence-based practice. J Clin Psychiatry. 2013;74(11):1108-20. doi: 10.4088/JCP.12028ah1

51. Hayhurst KP, Drake RJ, Massie JA, Dunn G, Barnes TR, Jones PB, et al. Improved quality, of life over one year is associated with improved adherence in patients with schizophrenia. Eur Psychiatry. 2014;29(3):191-6. doi: 10.1016/j.eurpsy.2013.03.002

52. Sam L, Bernardo M, Gómez A, Martínez P, González B, Pena M. Socio-demographic, Clinical and treatment characteristics of relapsing schizophrenic patients. Nord J Psychiatry. 2013;67(1):22-9. doi: 10.3109/08039488.2012.667150

Anex 1 | Personal Evaluation of Transitions in Treatment (PETIT), Spanish version

1. Mi mente está ágil y clara.	◯ A Menudo ◯ A veces ◯ Nunca
2. Estoy preocupado con lo que le está pasando a mi salud.	◯ A Menudo ◯ A veces ◯ Nunca
3. Me siento apagado y lento.	◯ A Menudo ◯ A veces ◯ Nunca
4. Creo que la gente se siente cómoda a mi alrededor.	◯ A Menudo ◯ A veces ◯ Nunca
5. Me siento muy cansado para hacer las cosas que debería.	◯ A Menudo ◯ A veces ◯ Nunca
6. Me resulta difícil tener nuevas ideas.	◯ A Menudo ◯ A veces ◯ Nunca
7. Estoy satisfecho con mi vida.	◯ A Menudo ◯ A veces ◯ Nunca
8. Soy capaz de concentrarme leyendo o viendo la televisión.	◯ A Menudo ◯ A veces ◯ Nunca
9. Soy infeliz.	◯ A Menudo ◯ A veces ◯ Nunca
10. Tengo familia o amigos que me entienden de verdad.	◯ A Menudo ◯ A veces ◯ Nunca
11. Mi libido sexual es baja.	◯ A Menudo ◯ A veces ◯ Nunca
12. Soy capaz de comunicarme mejor con la gente.	◯ A Menudo ◯ A veces ◯ Nunca
13. Las labores como limpiar, lavar o hacer la compra son demasiado para mí.	◯ A Menudo ◯ A veces ◯ Nunca
14. Soy capaz de recordar cosas fácilmente.	◯ A Menudo ◯ A veces ◯ Nunca
15. Me siento preparado para trabajar bien como voluntario o por un salario.	◯ A Menudo ◯ A veces ◯ Nunca
16. Me siento bien conmigo mismo.	◯ A Menudo ◯ A veces ◯ Nunca
17. Mi futuro es pesimista.	◯ A Menudo ◯ A veces ◯ Nunca
18. Evito conocer gente nueva.	◯ A Menudo ◯ A veces ◯ Nunca
19. Me siento raro y extraño.	◯ A Menudo ◯ A veces ◯ Nunca
20. Puedo manejar los problemas de la vida cotidiana.	◯ A Menudo ◯ A veces ◯ Nunca
21. Me disgusta mi aspecto.	◯ A Menudo ◯ A veces ◯ Nunca
22. No duermo bien.	◯ A Menudo ◯ A veces ◯ Nunca
23. Soy capaz de hacer cosas tan bien como el resto de la gente.	◯ A Menudo ◯ A veces ◯ Nunca
24. Olvido tomar mi medicación.	◯ A Menudo ◯ A veces ◯ Nunca
25. Mi medicación me ayuda.	◯ A Menudo ◯ A veces ◯ Nunca
26. Me disgusta mi medicación actual.	◯ A Menudo ◯ A veces ◯ Nunca
27. Amigos y familia creen que mi medicación actual es buena para mí.	◯ A Menudo ◯ A veces ◯ Nunca
28. Tomar medicación es desagradable.	◯ A Menudo ◯ A veces ◯ Nunca
29. Creo que las cosas buenas sobre tomar medicación compensan las cosas malas.	◯ A Menudo ◯ A veces ◯ Nunca

The PETIT Scale, developed by Voruganti and Awad (2002), assesses subjective changes perceived during the course of antipsychotic drug therapy for schizophrenia, specifically assessing individuals' subjective answers to medication, adherence to treatment, and changes in quality of life.

It is a self-administered questionnaire, with 3 possible answers ("often", "sometimes" or "never"). Each item is assigned a score of 0, 1 or 2, where 0 indicates a negative change (i.e., worse health-related quality of life [HRQoL]) and 2 indicates a positive change (i.e., better HRQoL). The total score ranges from 0 to 58 points.

In the Spanish version, which consists of 29 items, a cut-off point of 24 points is established for both sexes (García-Carretero et al., 2022).