



Kent Academic Repository

Casal, Bruno, Rodriguez-Miguez, Eva, Towers, Ann-Marie and Welch, Elizabeth (2026) *Spanish Translation, Cross-Cultural Validation and Test-Retest Reliability of the Adult Social Care Outcomes Toolkit (ASCOT)*. *Journal of Long Term Care*, 2026 . pp. 224-239. ISSN 2516-9122.

Downloaded from

<https://kar.kent.ac.uk/115894/> The University of Kent's Academic Repository KAR

The version of record is available from

<https://doi.org/10.31389/jltc.481>

This document version

Publisher pdf

DOI for this version

Licence for this version

CC BY-NC-ND (Attribution-NonCommercial-NoDerivatives)

Additional information

Versions of research works

Versions of Record

If this version is the version of record, it is the same as the published version available on the publisher's web site. Cite as the published version.

Author Accepted Manuscripts

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding. Cite as Surname, Initial. (Year) 'Title of article'. To be published in **Title of Journal** , Volume and issue numbers [peer-reviewed accepted version]. Available at: DOI or URL (Accessed: date).

Enquiries

If you have questions about this document contact ResearchSupport@kent.ac.uk. Please include the URL of the record in KAR. If you believe that your, or a third party's rights have been compromised through this document please see our [Take Down policy](https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies) (available from <https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies>).



Spanish Translation, Cross-Cultural Validation and Test-Retest Reliability of the Adult Social Care Outcomes Toolkit (ASCOT)

RESEARCH

BRUNO CASAL

EVA RODRÍGUEZ-MÍGUEZ

ANN-MARIE TOWERS

ELIZABETH WELCH

**Author affiliations can be found in the back matter of this article*



ABSTRACT

Background: The adult social care outcomes toolkit (ASCOT) was developed in England to measure the domains of quality of life most affected by long-term care services. This study aimed to translate and culturally adapt the ASCOT-SCT4 into Spanish, and to investigate its internal consistency, construct validity and test-retest reliability in Spanish care service users.

Methods: The ASCOT-SCT4 was translated and culturally adapted according to international guidelines. To assess the content validity of the pre-final version, cognitive debriefing interviews were conducted with Spanish care recipients. A face-to-face survey of care recipients was conducted to assess internal consistency and construct validity. Construct validity was tested by examining whether the hypothesised associations between ASCOT-SCT4 and other constructs were significant. Finally, a follow-up interview was completed to assess test-retest reliability.

Results: The cognitive debriefing interviews indicated that most of the items were found to be reliable, but significant modifications were required in the *Control over daily life* and *Dignity* domains, to ensure their comprehensibility. Acceptable internal consistency was achieved (Cronbach's alpha is 0.65). Construct validity was supported by the significant relationships found between the ASCOT-SCT4 and other related constructs. Evidence of high test-retest reliability was found (ICC = 0.89).

Conclusions: The Spanish version of ASCOT-SCT4 has been shown to be a valid cross-cultural adaptation for use with users of care services. The analysis also supports its internal consistency, construct validity and test-retest reliability. The next step will be to obtain the ASCOT scores based on Spanish preferences.

CORRESPONDING AUTHOR:

Bruno Casal

University of A Coruña, Spain

bruno.casal@udc.es

KEYWORDS:

ASCOT; Spain; internal consistency; construct validity; test-retest reliability; social care

TO CITE THIS ARTICLE:

Casal, B., Rodríguez-Míguez, E., Towers, A.-M. and Welch, E. 2026. Spanish Translation, Cross-Cultural Validation and Test-Retest Reliability of the Adult Social Care Outcomes Toolkit (ASCOT). *Journal of Long-Term Care*, (2026), pp. 224–239. DOI: <https://doi.org/10.31389/jltc.481>

1. INTRODUCTION

The World Health Organization (2022) defines long-term care as services designed to sustain functional capacity in individuals experiencing a state of dependency. Formal services may be provided at different levels, including home care, community-based care, residential care or hospital care. In Spain, a pivotal step was taken in the framework of long-term care services in 2006. The Spanish government enacted Law 39/2006 on the *Promotion of Personal Autonomy and Care* for people in situations of dependency (SAAD), which established a universal right to long-term care services and support. To improve care quality, EU countries are promoting more person-centred care, using patient-reported outcome measures (PROMs) to assess how effectively the health and care systems meet people's needs, and to enhance service performance (OECD/EU, 2022). In this context in 2022, an official evaluation of the SAAD (Ministerio de Derechos Sociales y Agenda 2030, 2022) revealed two priorities: (1) improvement in the quality of direct care services (residential and home care); and (2) an evaluation of the outcomes of care services based on the following principles: dignity and respect, person-centred care, participation, control and choice, right to health and personal well-being, and proximity and community connections. Measurement of the quality of long-term care, which has traditionally focused on the quality of services in terms of inputs (ratio of social workers to users, quality of facilities, etc.), should be complemented by indicators that consider users' outcomes and preferences.

The *Adult Social Care Outcomes Toolkit four-level Self-Completion questionnaire* (ASCOT-SCT4 or simply ASCOT) is a preference-weighted measure developed by the University of Kent in the UK (Netten et al., 2012) to capture social care-related quality of life (SCRQoL). The ASCOT domains cover the basic aspects of SCRQoL: *Control over daily life, Personal cleanliness and comfort, Food and drink, Accommodation cleanliness and comfort, Personal safety, Social participation and involvement, Occupation, and Dignity* (Netten et al., 2012). Table S1 of the Supplementary Material provides a concise description for each of the eight domains.

Although developed in the UK context, ASCOT has been translated and cross-culturally validated for use in Japan (Nakamura-Thomas et al., 2019) and three European countries, including the Netherlands (van Leeuwen, 2015), Austria (Trukeschitz et al., 2020) and Finland (Nguyen et al., 2021).

The objective of this study was to translate and culturally adapt the ASCOT into Spanish, and to examine its internal consistency, construct validity and test-retest reliability in Spanish care service users.

2. METHODS AND DATA COLLECTION

The translation and cross-cultural validation were conducted in three consecutive stages: (1) harmonised translation, (2) content validation and (3) construct validation and test-retest reliability. An overview of the process, which we will describe below, is shown in Figure 1. Written informed consent was obtained from each participant, and the Committee on Ethics of Clinical Research in Galicia (Spain) approved the study (ref. 2022/084).

2.1. HARMONISED TRANSLATION OF THE ENGLISH-LANGUAGE ASCOT INTO SPANISH

The Spanish translation was carried out in accordance with the principles of good practice recommended by the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) (Wild et al., 2005). The translation was produced through an iterative process of forward and back translation by a team comprising two forward translators, two back translators, two members of the UK ASCOT team and the Spanish team. The translation process was conducted by *RWS Life Sciences*, a professional translation company specialising in linguistic validation of clinical outcomes assessment. A prefinal version of the Spanish translation was agreed to be ready for testing and refinement in stage two.

2.2. CONTENT VALIDITY OF THE SPANISH ASCOT USING COGNITIVE DEBRIEFING INTERVIEWS

Interview and qualitative analysis

Cognitive debriefing was conducted by the Spanish research team. The cognitive debriefing consisted of qualitative interviews aimed at ensuring that the content of the prefinal version of the Spanish ASCOT was equivalent to the concepts intended to be measured in the original English version, checking the level of understanding of the questions and response options, and suggesting alternative wordings if there were problems in understanding the questionnaire. These interviews were carried out following the 'think-aloud' method (Ericsson and Simon, 1980; Willis, 2015). The process comprises four sequential phases: (1) To ask the interviewee about the intention of the question and the meaning of key words and phrases (what he or she understood); (2) to explain the intention of the question, if the interviewee does not understand it, and ask again about how to reformulate the question; (3) To identify alternatives to reformulate the same item and words, or phrases that are difficult to understand and (4) to verify the match between the subject's answer and response options—questions such as 'Why did you select this answer option and not the next one?' are asked. If relevant changes are proposed, a second round of cognitive debriefing is carried out to

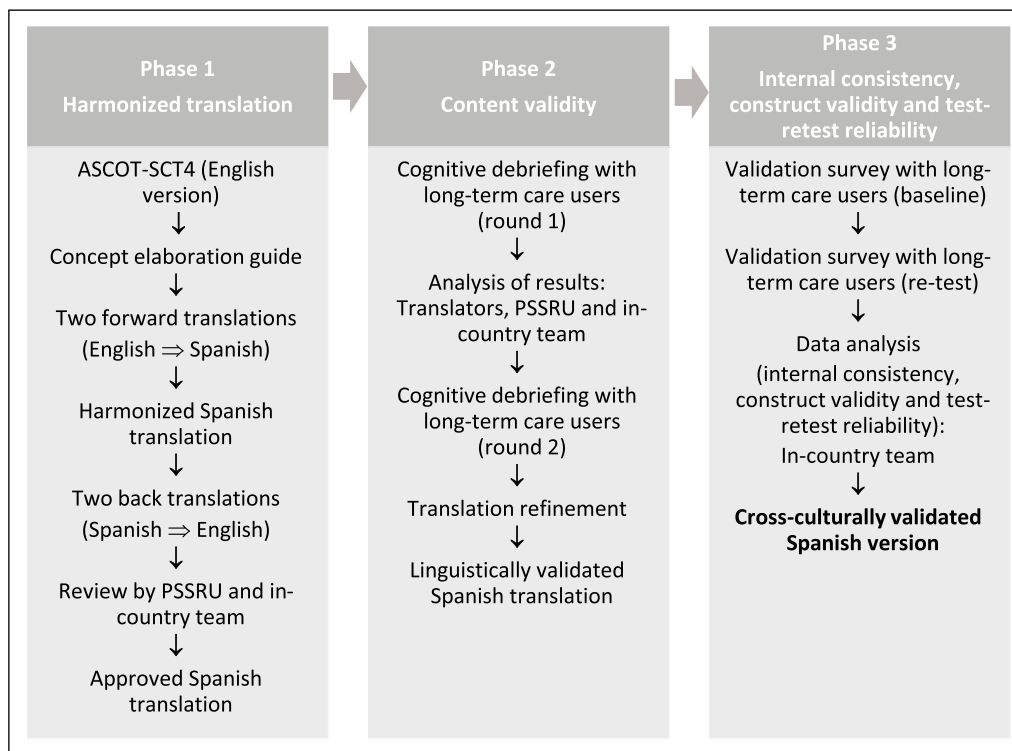


Figure 1 Overview of the translation and cross-cultural validation protocol.

test the new proposals. When all issues were resolved, a final validated translation of the instrument was created.

Sample

According to the ASCOT guidance for translators (Smith, Towers and Razik, 2017), at least five adults receiving formal care should participate in the cognitive debriefing interviews—a second round of five new interviews may be necessary if substantial changes to the wording are proposed. Two members of the in-country team conducted the cognitive debriefing interviews. Participants were selected according to the following inclusion criteria: (a) gave informed consent; (b) had no cognitive impairment that prevented participation in the interview; (c) had an officially recognised level of dependency; (d) required assistance from a social care service to perform activities of daily living (ADLs); (e) at least three subjects with fewer than 12 years of education; (f) no more than three subjects of either sex; and g) no more than two subjects within each 10-year age group. Social workers from two Spanish municipalities recruited potential subjects; the in-country team checked the demographic characteristics of the applicants and selected the convenience samples from among the volunteers.

2.3. CONSISTENCY, CONSTRUCT VALIDITY AND TEST-RETEST RELIABILITY OF THE SPANISH ASCOT

The internal consistency, construct validity and test-retest reliability of the questionnaire resulting from the harmonised translation were tested in a convenience

sample based on COSMIN (Consensus-based Standards for the selection of health Measurement INstruments) methodology (Mokkink et al., 2010; Mokkink et al., 2018).

Sample and questionnaire

A convenience sample of 190 older adults was recruited from four nursing homes in the Galicia region of Spain to validate the final version of the questionnaire. Contact with the nursing homes was facilitated by the Directorate-General for Older Adults and Social Health Care of the Galician Regional Government. The centres represented different models of care provision, with two being publicly operated and two operating under a mixed-provider model. A subsample of 72 individuals participated in a second interview, conducted one week after the initial interview, to assess the test-retest reliability. The following inclusion criteria were applied: (a) gave informed consent; (b) required assistance with ADLs and (c) had no cognitive impairment that prevented participation in the interview.

In addition to socioeconomic characteristics, the interviews gathered information on the following instruments: the Spanish version of the ASCOT, the EQ-5D (Herdman et al., 2011; Ramos-Goñi et al., 2018), the Barthel Index (Mahoney and Barthel, 1965) and the Lawton & Brody Index (Lawton and Brody, 1969). Subjective health and six well-being items, three of which have been extracted from the CASP-19 (Hyde et al., 2003), were also included in the questionnaire. In the test-retest interview, participants are required to complete the ASCOT instrument again.

Statistical analysis

The *internal consistency* of the translated instrument was evaluated using the Cronbach alpha coefficient. The widely accepted rule of thumb is that a Cronbach's alpha between 0.6 and 0.7 is considered acceptable, although values above 0.7 are desirable (Taber, 2018).

To analyse *construct validity*, a set of association tests was applied. In particular, *convergent validity* and *known-groups discriminant validity* were explored (Malley et al., 2012). *Convergent validity* was assessed using hypothesis testing to evaluate whether the translated

ASCOT instrument measures the intended constructs. For this purpose, we have analysed whether the associations between the ASCOT and other instruments or items are significant and have the expected sign. In the absence of Spanish preference weights, the ASCOT score for each respondent, which ranges between 0 and 24, is calculated by summing the ordinal values obtained in each of the eight domains, which range between 0 ('high-level need') and 3 ('ideal state'). Table 1 provides an overview of the hypotheses used in this study to assess construct validity. These hypotheses

		ASCOT Domains ^a								
		ASCOT score ^a	CONTROL	PERSONAL CLEANLINESS	FOOD AND DRINK	SAFETY PERSONAL	SOCIAL PARTICIPATION	OCCUPATION	ACCOMMODATION	DIGNITY
Barthel ^b	Total score	+	+	+	+	+	+	+	+	+
Items ^f	Feeding		+		+					
	Bathing		+	+						
	Dressing		+	+						
	Grooming		+	+						
	Toileting		+	+		+				
	Mobility		+			+		+	+	
	Stair climbing		+			+		+	+	
	Chair/bed transfer		+			+		+	+	
Lawton & Brody ^c	Total score	+	+	+	+	+	+	+	+	+
Items ^f	Using telephone		+			+	+			
	Shopping		+		+	+				
	Food preparation		+		+					
	Housekeeping		+						+	
	Transport		+			+				
	Medication		+			+				
EQ-5D ^d	Total score	+	+	+	+	+	+	+	+	+
Items ^f	Mobility		+			+		+	+	
	Self-care		+	+						
	Usual activities		+					+		
Subjective health		+	+	+	+	+	+	+	+	+
Lack of control [CASP-19] ^e		-	-							-
Feel left out [CASP-19] ^e		-	-				-			-
Life satisfaction [CASP-19] ^e		+	+	+	+	+	+	+	+	+
Loneliness ^e		-	-				-	-		
Home suitability ^e		+	+			+			+	
Satisfaction with care services ^e		+	+	+	+	+	+	+	+	+

Table 1 Sign of expected associations between ASCOT and other constructs.

Notes: ^(a)The ASCOT domains range from 0 (high-level unmet needs) to 3 (ideal state), and aggregate ASCOT score is obtained by adding these scores in the 8 domains (range 0–24); ^(b)Barthel Index range from 0 (maximum dependence) to 100 (independence); ^(c)Lawton & Brody Index range from 0 (maximum dependence) to 8 (independence); ^(d)EQ-5D is anchored at 0 (death) and 1 (perfect health); ^(e)items ranging from 1 (often) to 4 (never); and ^(f)only items used for testing the hypothesized relationships are shown.

were pre-specified before the analysis, considering the previous empirical evidence on construct validity for the original instrument (Malley et al., 2012; Rand et al., 2017) and its translated versions (van Leeuwen et al., 2015; Trukeschitz et al., 2020; Nguyen et al., 2021). The variables used to test the hypothesised relationships and their expected association with ASCOT scores are presented schematically below, but more detailed commentary is provided in the results and discussion sections.

First, a high level of unmet need is expected among users with severe limitations in ADLs or in poor health. The scales used to measure limitations in ADLs are (a) Barthel Index for basic ADLs, ranging from 0 (maximum dependence) to 100 (independence); and (b) Lawton & Brody Index for instrumental ADLs, ranging from 0 (maximum dependence) to 8 (independence). The scales used to measure general health are (a) self-perceived health, ranging from 1 (very poor) to 4 (very good); and (b) health-related quality of life, measured by EQ-5D (5-level), anchored at 0 for death and 1 for perfect health, using the Spanish weights (Ramos-Goñi et al., 2018). A positive association is therefore expected between the ASCOT scores, aggregated and per domain, with aggregated scores of indicators of ADLs limitations and general health—see shaded area in Table 1. In any case, as care needs are more related to limitations in ADLs than to general health, the correlation with health indicators is expected to be lower.

Second, we expected significant associations between aggregate ASCOT scores and other indicators of well-being (see Table 1). Several wellbeing items, with response options ranging from 1 (often) to 4 (never), were used: (a) three questions from CASP-19 (frequency of feeling excluded from events ('feeling left out'), lack of control over one's life ('lack of control') and satisfaction with the things one does ('life satisfaction')); (b) a question about the frequency of lacking social contact ('loneliness') and (c) a question about the suitability of the home environment ('home suitability'). We expected positive associations with 'life satisfaction', 'home adaptation' and 'satisfaction with care services' and negative associations with 'lack of control', 'feeling left out' and 'loneliness'.

Third, we expected to find associations between domains of the ASCOT and the items that most closely match its construct: (1) *Control over daily life* was compared with all the items used in the other domains because we hypothesised that both indicators of health and well-being would be related to the control a person has over his or her life; (2) *Personal cleanliness* domain was compared with the personal cleanliness items of the Barthel Index and the self-care domain of the EQ-5D; (3) *Food and drink* were compared with the Barthel Index's 'feeding' item and the Lawton & Brody's

'food preparation' and 'shopping' items; (4) *Personal safety* refers to the fear of falling or other physical or psychological harm, and it was therefore compared with mobility items (extracted from the EQ-5D, Bathel and Lawton & Brody scales), and with the ability to use the telephone and control medication taken from Lawton & Brody; (5) *Social participation* was compared with 'feeling left out', 'loneliness' and the ability to use the telephone; (6) *Occupation* was compared with the 'usual activities' domain of the EQ-5D and mobility items (extracted from the EQ-5D, Bathel and Lawton & Brody scales); (7) *Accommodation cleanliness and comfort* was compared with the 'housekeeping' item of the Lawton & Brody scale, the 'home suitability' item and the mobility items; (8) *Dignity* was compared with 'lack of control' and 'feeling left out' and (9) 'life satisfaction' and 'satisfaction with care' were compared with all domains of the ASCOT. 'Satisfaction with care' was also used to analyse *known-groups discriminant validity*. As there is no other valid measure of SCRQoL that can be used as a comparator, we explored whether ASCOT scores discriminated between groups of users who have previously been classified according to their level of satisfaction with care services (Trukeschitz et al., 2020).

The nature of the data dictated the type of analysis used to assess *construct validity*: (a) Spearman's correlation coefficient to analyse the correlation between aggregated ASCOT scores and the aggregated scores of the other instruments (EQ-5D-5L, Barthel and Lawton & Brody); (b) A one-way analysis of variance to analyse the association between the eight ASCOT domains and the aggregated scores of the instruments under consideration and (c) Fisher's exact test to compare ASCOT domains with similar items in other measures.

The *test-retest reliability* of the ASCOT questionnaire was assessed by examining the correlation between initial and one-week follow-up responses (Rand et al., 2017). Consistent with COSMIN recommendations, a one-week interval was considered sufficiently long to minimise recall bias while short enough to reduce the likelihood of genuine changes in the construct being measured. Interclass correlation coefficient (ICC) was employed to compare aggregated scores, using a two-way mixed-effects model. ICC values of less than 0.50 indicate poor reliability, values between 0.50 and 0.75 indicate moderate reliability, values between 0.75 and 0.90 indicate good reliability and values greater than 0.90 indicate excellent reliability (Koo and Li, 2016). Weighted (linear and quadratic) *Cohen's kappa statistic* was used to compare responses on the domains. Kappa values between 0 and 0.4 indicate poor to fair reliability; between 0.4 and 0.6, moderate reliability; between 0.61 and 0.8, substantial reliability and between 0.8 and 1, almost perfect reliability (Landis and Koch, 1977).

3. RESULTS

3.1. TRANSLATION AND CONTENT VALIDITY

Following the steps described above, a prefinal translation was tested through cognitive debriefing interviews in the participants' homes between April and May 2022. Although only minor modifications were required in most domains, a significant change in the wording was required for *Control over daily life* and *Dignity*. A second round of interviews was necessary to reach a final consensus. The same inclusion criteria were used in both rounds. Table 2 shows the main characteristics of the respondents. Table S2 in the Supplementary Material summarises the cognitive debriefing process. Below is a brief description of the revised domains.

Control over daily life. Some of the interviewees understood the question in the sense of physical capability of doing things by themselves more than the capacity of decision-making. The interviewers observed that the word 'control' was problematic. Interviewees suggested using the words 'organise' and 'make decisions' instead, and also including the word 'capacity' in the prompt. The question proposed was the following: *What capacity do you have to make decisions and organise your daily life?* However, using only the terms 'organise' and 'make decisions' could remove reference to actually doing things for oneself, and therefore some people in receipt of care might be mistaken for having unmet needs when actually they are in control of their daily lives (i.e., someone does things for them as they ask). In addition, the word 'capacity' could change the meaning of this question, as it could be understood as mental capacity (e.g., ability) rather than outcome (whether they actually

make these decisions/feel in control). To overcome these problems, the question was reformulated and tested in the second round of interviews. Compared to the harmonised translation, the main changes made were (a) to include the word 'decision' in the question and answer options, and (b) to introduce the phrase 'having the choice to organise things' in the prompt. All respondents in the second round understood the question, paraphrased it according to the intention of the question, and had no doubts about choosing the level that best suited their situation.

Food and drink. Some interviewees had doubts about choosing the ideal state because their diet does not permit them to eat and drink what they like. This reaction led the in-country team to think that the translation was not in line with the English version—the verb 'like' in Spanish ('gustar') has the interpretation of 'personal taste' for certain food and drink. The verb 'like' was therefore eliminated in the final version. The word 'adequate' was introduced in the levels 'no (unmet) needs', 'some (unmet) needs' and 'high-level (unmet) needs', to introduce the idea of having enough food, in terms of both quantity and quality.

Social participation and involvement. The in-country team had to clarify the term 'socially isolated' with some respondents in the prefinal translation. Interviewees stated that the expression 'to feel alone' was better and this was accepted by the developers, meaning the final version includes the concept 'to feel alone' in the final (high unmet needs) response option.

Occupation. The term 'formal employment' has been modified to reflect a more concise and accurate understanding of its original intended meaning. In Spanish, the term 'employment' is inherently associated with the concept of paid work. Consequently, the adjective 'formal' is not necessary. Furthermore, the in-country team proposed modifying the expression 'I am able to spend my time' to 'I spend my time' in the response options, to better reflect whether care recipients are spending their time doing things they value or enjoy rather than their ability to do them.

Dignity filter question. All five interviewees struggled to understand the meaning of the question and response options due to the expression 'think and feel about yourself'. Once the intention of the question was explained, the interviewees suggested more colloquial terms, which were considered easier to understand, such as being upset, feeling uncomfortable, feeling less valued, affects my feelings or affects my self-esteem. As such, the term 'self-esteem' was introduced and tested in a second debriefing session. The in-country team was concerned that the term 'self-esteem' might cause some comprehension problems for older and less educated respondents, and this was confirmed in the second round of interviews. However, all interviewees understood the word 'feelings', which was asked also as an alternative to 'self-esteem'. Although they did not paraphrase it in

ROUND 1		
AGE	GENDER	YEARS OF EDUCATION
72	woman	13
87	woman	6
65	man	20
61	man	6
89	woman	10
ROUND 2		
AGE	GENDER	YEARS OF EDUCATION
72	woman	4
82	woman	6
75	man	4
55	man	10
94	man	8

Table 2 Sociodemographic characteristics of participants in cognitive debriefing interviews.

the same way ('being upset' or 'being ashamed'), the in-country team concluded it achieved the intention of the original English question, enabling people to express how they feel about getting help (Smith, Towers and Razik, 2017).

Dignity question: As with the previous question, respondents in the first round did not understand the translated question or paraphrased it incorrectly. In particular, they did not understand the expression 'think and feel about myself' as a result of the support received. When the intention of the question was explained, they paraphrased expressions such as 'feel respected', 'feel valued' or 'feel comfortable'. The in-country team proposed to include the expressions 'feel respected' and 'feel valued'. The developers suggested that the same words as in the *Dignity* filter question should be tested ('feelings' and 'self-esteem') in the second cognitive debriefing. As mentioned above, the term 'self-esteem' was not understood. Regarding the word 'feelings', the in-country team noted that although this question achieved its aim in question 8, it was not valid for question 9 because (a) its interpretation is different across respondents ('feeling good', 'feeling comfortable' or 'feeling ashamed') affecting the validity of the instrument; (b) some interviewees did not perceive any difference with the filter question, i.e., the difference between how they feel about having to be helped and how the way they are helped affects their feelings and (c) the word 'feeling' could also incorporate intrinsic aspects of the person (not related with the care he/she is receiving). Since different interviewees of the first cognitive debriefing had paraphrased the words 'respected' and 'valued', we assumed that these words capture perfectly the influence of care on the person's dignity. To emphasise the difference between questions 8 and 9, the in-country team suggested to introduce a short sentence ('Now think of the way you are helped and cared for') before the question. This notably improved the comprehension of the question and has been incorporated into the final version.

3.2. INTERNAL CONSISTENCY, CONSTRUCT VALIDITY AND TEST-RETEST RELIABILITY

Table 3 shows the characteristics of the sample used in the validation phase. The sample had a high average age (85.3 years), and two-thirds of the sample were women. The majority had low socioeconomic status. Half had not completed primary education, and 30% had a monthly income of less than €750. Participants were in poor health—63% were severely dependent on others for instrumental ADLs (IADLs), 28% for basic ADLs and 21% perceived their health to be poor or very poor. Based on responses to the ASCOT instrument, the domains of SCRQoL with the highest number of people with high levels of unmet need are *Control over daily life*, *Occupation* and *Social participation*. The mean ASCOT

score was 17.33 on a scale from 0 (worst situation) to 24 (best situation).

In terms of *internal consistency*, a *Cronbach's alpha* of 0.65 was obtained, indicating an acceptable level of internal consistency. Tables 4 and 5 present the results of the correlation analyses conducted to assess the *construct validity* of the data. A total of 114 correlation tests were conducted, as shown in Table 1. Of these, 88% showed statistically significant correlations in the expected direction, while the remaining tests did not reach statistical significance. Table 4 shows significant positive associations between the aggregate ordinal ASCOT and the aggregate scores of the other related instruments (EQ-5D, Barthel Index and Lawton & Brody Index), indicating that as the level of health or level of autonomy increases, the SCRQoL also rises. All correlation coefficients are between 0.3 and 0.5, indicating moderate correlation (Cohen, 1992), with the EQ-5D having the lowest correlation. Table 4 also shows that the ASCOT score increases as subjective health increases and declines in conjunction with an increase in the frequency with which the respondent: (a) perceives their circumstances to be beyond their control, (b) experiences a sense of exclusion from the events and interactions occurring in their immediate environment and (c) feels a lack of social support. Conversely, the ASCOT score improves when the home is suited to the person's needs, and respondents are more satisfied with the activities they do and with the care services than they receive.

Table 5 shows significant associations between the ASCOT domains and other related measures. The shaded rows illustrate the mean values of the EQ-5D, Barthel and Lawton & Brody scales for each ASCOT outcome state. Overall, the results align with the expected associations: as health status declines or limitations increase, perceived SCRQoL in each domain tends to decline. However, the EQ-5D shows the lowest association, with no significant association found in two domains of the ASCOT (*Personal cleanliness* and *Accommodation*) and only significant at the 10% level for *Social participation*. It also confirms that all ASCOT domains showed statistically significant associations with satisfaction with care. Similarly, life satisfaction was significantly correlated with all domains except *Dignity*, for which the expected relationship was not statistically significant.

Table 5 also shows the associations between ASCOT domains and similar domains from other instruments. Overall, the results largely support the construct validity of the ASCOT domains. *Control over daily life* was positively associated with independence in basic and instrumental ADLs and with better CASP-19 outcomes. *Personal cleanliness* related to self-care independence, *Food and drink* to shopping and meal preparation ability, and *Personal safety* to mobility limitations, transfers, toileting, shopping/transport, home adaptations,

Socioeconomic characteristics				
Gender (% woman)	66.67			
Age, mean (SD)	85.31 (8.82)			
Education, %				
Incomplete primary education (<5 years of school)	55.85			
Complete primary education	28.72			
Secondary and higher education	15.43			
Monthly income, %				
Less than 750 euros	29.67			
From 751 to 1200 euros	46.15			
More than 1200 euros	24.18			
Health and limitations				
Subjective health, %				
Very good or good	31.58			
Fair	47.37			
Bad or very bad	21.06			
EQ-5D-5L, mean (DS)	0.54 (0.30)			
Barthel Index, %				
Total or severe dependence (0–60 points)	27.89			
Moderate dependence (61–90 points)	36.32			
Slight dependence (91–100 points)	35.79			
Lawton & Brody Index, %				
Total or severe dependence (0–3 points)	63.16			
Moderate dependence (4–5 points)	16.84			
Slight dependence (6–8 points)	20.00			
ASCOT				
ASCOT ordinal overall score, mean (SD)	17.33 (3.49)			
¹ ASCOT values distribution, %	L1	L2	L3	L4
Control over daily life	33.16	32.63	23.68	10.53
Personal cleanliness and comfort	62.11	34.74	2.63	0.53
Food and drink	21.05	47.89	24.21	6.84
Personal safety	57.89	30.00	0.05	1.05
Social participation and involvement	24.21	38.95	21.58	15.26
Occupation	23.68	28.95	33.16	14.21
Accommodation cleanliness and comfort	65.79	27.37	6.84	0.00
Dignity	75.79	14.21	10.00	0.00
Understanding and length of the interview				
Level of understanding, %				
Excellent	38.71			
Good	39.78			
Fair	18.82			
Bad	2.69			
Length of ASCOT questionnaire in minutes, mean (DS)/median	10.84 (5.20)			
Length of the complete questionnaire in minutes, mean (DS)/median	28.57 (13.71)			

Table 3 Characteristics of the validation sample.

Notes: ¹L1: ideal state; L2 = no (unmet) needs; L3 = some (unmet) needs; L4 = high-level (unmet) needs.

	ASCOT (aggregate score)		
	N	SPEARMAN'S Rho	SIGNIFICANCE
EQ-5D-5L (total score)	190	0.36	***
Barthel (total score)	190	0.44	***
Lawton & Brody (total score)	190	0.48	***
	N ¹	MEAN (SD)	F-stat SIGNIFICANCE
Subjective health: How would you describe the state of your health in general?			***
Very good	8	19.25 (3.20)	
Good	52	18.17 (3.34)	
Fair	90	17.38 (3.36)	
Poor or very poor	40	15.78 (3.56)	
I feel that what happens to me is out of my control [CASP-19]			***
Often	26	15.15 (3.84)	
Sometimes	51	16.71 (3.06)	
Not often	49	17.08 (3.44)	
Never	64	18.92 (3.05)	
I feel left out of things [CASP-19, item 4]			***
Often	17	14.24 (4.22)	
Sometimes	51	15.71 (2.77)	
Not often	45	17.51 (3.27)	
Never	77	19.00 (2.92)	
How often do you feel that you have no one to talk to?			***
Often	24	14.79 (3.59)	
Sometimes	57	16.26 (3.11)	
Not often	48	17.33 (3.44)	
Never	61	19.34 (2.72)	
Do you feel that the place where you live meets your needs?			***
Often	126	18.12 (3.30)	
Sometimes	51	15.80 (3.37)	
Not often or never	13	16.38 (4.00)	
I feel that I can please myself what I do [CASP-19]			***
Often	90	18.84 (3.16)	
Sometimes	76	16.47 (2.92)	
Not often or never	23	14.04 (3.24)	
How often are you satisfied with the services and care you receive?			***
Often	146	18.03 (3.23)	
Sometimes, not often or never	43	14.84 (3.15)	

Table 4 Associations between the ordinal aggregate ASCOT and other related constructs.

Notes: ¹Categories with less than 7 observations were grouped together for analysis. ***Statistically significant at 1%. Aggregate ASCOT range 0 (all domains with high level of unmet needs) to 24 (all domains with ideal state). EQ-5D is anchored at 0 (death) and 1 (perfect health). Barthel Index ranges from 0 (maximum dependence) to 100 (independence). Lawton & Brody Index range from 0 (maximum dependence) to 8 (independence). Self-perceived health ranges from 1 (very poor) to 4 (very good).

	ASCOT-DOMAIN 1 CONTROL OVER DAILY LIFE					ASCOT-DOMAIN 2 PERSONAL CLEANLINESS			ASCOT-DOMAIN 3 FOOD AND DRINK				ASCOT-DOMAIN 4 PERSONAL SAFETY						
	ASCOT LEVELS		L1	L2	L3	L4	Sign.	L1	L2-4	Sign.	L1	L2	L3	L4	Sign.	L1	L2	L3-4	Sign.
	OBSERVATIONS		63	62	45	20		118	72		40	91	46	13		110	57	23	
Barthel	mean		82.78	76.77	65.11	59.50	***	78.77	66.67	***	85.38	74.12	67.17	65.00	***	77.23	75.61	56.09	***
	mean		4.27	2.97	2.51	0.95	***	3.76	1.96	***	4.15	2.76	2.41	4.38	***	3.54	2.61	2.04	***
	mean		0.59	0.59	0.45	0.45	**	0.56	0.52	ns	0.65	0.57	0.45	0.38	***	0.56	0.59	0.33	***
% fair or worse			20.63	16.13	22.22	35.00	ns	21.19	20.83	ns	15.27 ^b		33.90 ^b		***	19.09	14.04	47.83	***
% Levels 3-5			52.38	67.74	68.89	60.00	ns									56.36	70.00 ^b	**	
% needs help			36.51	51.61	60.00	55.00	*									40.00	59.65	65.22	**
% needs help			46.03	66.13	73.33	75.00	**									56.36	70.18	69.57	ns
% needs help			20.63	25.81	46.67	45.00	**									27.27	28.07	56.52	**
% needs help			31.75	50.00	48.89	60.00	*	22.03	38.89	**						23.64	24.56	60.87	***
% Levels 3-5			28.57	43.55	62.22	55.00	***	40.68	50.00	ns									
% needs help			34.92	53.23	64.44	75.00	***	45.76	62.50	**									
% needs help			30.16	43.55	64.44	70.00	***	41.53	55.56	**									
% needs help			15.87	14.52	33.33	60.00	***	22.03	27.78	ns									
% needs help			4.80		28.89	45.00	***								c				
% Levels 3-5			41.27	54.84	64.62 ^b		**												
% max. help/unable			19.05	32.26	50.77 ^b		***									25.45	42.11	56.52	***
% max. help/unable			38.10	64.52	69.23 ^b		***				45.00	56.04	67.80 ^b		*	47.27	71.93	69.57	***
% max. help/unable			58.73	79.03	83.08 ^b		***				50.00	73.63	89.83 ^b		***				
% max. help/unable			68.25	79.03	87.69 ^b		**												
% max. help/unable			46.03	54.84	69.23 ^b		**									45.45	73.68	69.57	***
% max. help/unable			11.11	14.52	33.33	55.00	***									14.55	26.32	47.83	***
% Not often			17.46	37.10	42.22	55.00	***									27.27	38.60	52.17	**
% often/sometimes			22.22	35.48	68.89	50.00	***												
% often/sometimes			17.46	24.19	64.44	65.00	***												
% Not often			35.48	51.61	66.67	75.00	***	40.17	72.22	***	30.77	59.34	55.93		**	43.12	63.16	69.57	***
% often/sometimes			41.27	33.87	51.11	55.00	ns												
% Not often			16.13	12.90	33.33	50.00	***	16.24	33.33	***	18.46 ^b		32.20 ^b		*	18.35	22.81	43.48	**

(Contd.)

	ASCOT-DOMAIN 1 CONTROL OVER DAILY LIFE				ASCOT-DOMAIN 2 PERSONAL CLEANLINESS				ASCOT-DOMAIN 3 FOOD AND DRINK				ASCOT-DOMAIN 4 PERSONAL SAFETY						
	L1	L2	L3	L4	Sign.	L1	L2-4	Sign.	L1	L2	L3	L4	Sign.	L1	L2	L3-4	Sign.		
ASCOT LEVELS	63	62	45	20		118	72		40	91	46	13		110	57	23			
OBSERVATIONS																			
	ASCOT-DOMAIN 5 SOCIAL PARTICIPATION				Sign.	ASCOT-DOMAIN 6 OCCUPATION				Sign.	ASCOT-DOMAIN 7 ACCOMMODATION				Sign.	ASCOT-DOMAIN 8 DIGNITY			
	L1	L2	L3	L4		L1	L2	L3	L4		L1	L2	L3 ^d	L3		L1	L2	L3 ^d	Sign.
ASCOT LEVELS	46	74	41	29		45	55	63	27		125	52	13		144	27	19		
OBSERVATIONS																			
Barthel	mean	80.98	76.55	65.73	69.31	**	90.78	71.73	72.46	55.56	***	78.20	64.42	74.6	***	77.01	75.19	51.32	***
Lawton & Brody	mean	3.80	3.09	2.73	2.38	**	4.62	2.96	2.57	1.93	***	3.54	1.94	3.23	***	3.06	3.74	2.26	*
EQ-5D	mean	0.55	0.60	0.48	0.47	*	0.71	0.58	0.49	0.32	***	0.56	0.49	0.55	ns	0.55	0.64	0.32	***
Subjective health	% fair or worse	17.39	17.57	24.39	31.03	ns	12.00		28.57	37.04	***	20.00	23.08		ns	42.11		42.11	**
Mobility (EQ-5D)	% levels 3-5						37.78	67.27	71.43	70.37	***	58.40	69.23 ^b		ns				
Mobility (Barthel)	% needs help						20.00	63.64	47.62	70.37	**	40.00	66.15 ^b		***				
Stair climbing (Barthel)	% needs help						28.89	74.55	66.67	81.48	***	53.60	78.46 ^b		***				
Chair/bed transfer (Barthel)	% needs help						13.33	30.91	33.33	55.56	***	21.60	49.23 ^b		***				
Usual activities (EQ-5D)	% levels 3-5						37.78	47.27	61.90	74.07	***								
Telephone (Law&Brod)	% max. help/unable	19.57	40.54	26.83	51.72	**						74.40	86.15 ^b		*				
Housekeeping (Law&Brod)	% max. help/unable											26.40	47.69 ^b		***				
Home suitability	% Not often																		
Lack of control (CASP19)	% often/sometimes														38.89	33.33	63.16		ns

Table 5 Associations between the ASCOT domains and other related constructs.

Notes:

***, **, *, ns: statistically significant at 1, 5% and 10%; not significant.

^aL1: ideal state, L2 = no (unmet) needs, L3 = some (unmet) needs, L4 = high-level (unmet) needs. The levels of the ASCOT domains must have at least 7 observations to be analysed independently.^bLevels collapsed due to having less than 7 observations.^cIt is not analysed because almost all people who need help with eating are at ASCOT level 2.^dNo observations in L4.

ASCOT DOMAIN	n	LINEAR-WEIGHTED KAPPA	QUADRATIC-WEIGHTED KAPPA	RELIABILITY LEVEL
Control over daily life	72	0.78	0.85	Substantial/almost perfect
Personal cleanliness and comfort	72	0.93	0.93	Almost perfect
Food and drink	72	0.67	0.77	Substantial
Personal safety	72	0.87	0.92	Almost perfect
Social participation and involvement	72	0.62	0.76	Substantial
Occupation	72	0.78	0.86	Substantial/almost perfect
Accommodation cleanliness and comfort	72	0.78	0.81	Substantial/almost perfect
Dignity	72	0.90	0.91	Almost perfect

Table 6 Spanish ASCOT test-retest reliability.

medication management and telephone use. *Social participation* was associated with lower levels of loneliness and feeling left out, whereas *Occupation* was linked to usual activities and better social well-being. *Accommodation cleanliness and comfort* were associated with household task performance and home adaptations. *Dignity* showed a significant association with feeling left out. Several EQ-5D comparisons were in the expected direction but did not always reach statistical significance. For a detailed discussion of the specific associations in [Table 5](#), see Supplementary Material (Comments S1).

To analyse *known-groups discriminative validity*, we examined whether the scores on the ASCOT discriminated between groups of users according to their level of satisfaction with the care services. As can be seen in [Table 4](#), 77% of respondents are satisfied with the services they receive, and the values of the ASCOT instrument make it possible to discriminate between these users and the rest.

Finally, we found evidence of high *test-retest reliability* ([Table 6](#)) using the aggregated score (ICC = 0.89; 95% CI: 0.84–0.93). Using the *linear-weighted Kappa statistic*, substantial reliability (between 0.61 and 0.8) was obtained for five domains and almost perfect reliability (between 0.8 and 1) for three domains. Using the *quadratic-weighted Kappa statistic*, six domains had almost perfect reliability.

4. DISCUSSION

This study reports on the harmonised translation and cross-cultural validation of the Spanish ASCOT-SCT4. Through an iterative process of forward and back translation, and cognitive debriefing interviews, the final harmonised translation of the instrument adequately captures the concepts intended in the original English version. The Spanish ASCOT is easy to understand and culturally appropriate for Spanish people receiving long-term care. We found evidence of internal consistency, construct validity and test-retest reliability of the final measure.

Round one of cognitive debriefing found that most questions and response options were understood as intended by the English language version. Nevertheless, some deviations were identified. The domains *Control over daily life* and *Dignity* were poorly understood and were the attributes that presented major revisions. Both domains also showed important discrepancies from the original intended meaning in the German ([Trukeschitz et al., 2020](#)) and the Japanese ([Nakamura-Thomas et al., 2019](#)) translations, and the *Dignity* domain also in the Dutch translation ([van Leeuwen et al., 2015](#)). Regarding *Control over daily life*, the word ‘decision’ in the question and response options were the main changes made to improve understanding. For *Dignity*, the expressions ‘feel respected’ and ‘feel valued’ were chosen to capture the original meaning of this domain. As in Japan ([Nakamura-Thomas et al., 2019](#)), the term ‘self-esteem’ was also suggested and rejected due to comprehension problems. The issue of the *Dignity* filter question was discussed between the in-country team and the developers, as the in-country team felt that this question was not necessary in the Spanish version to focus and improve respondents’ understanding of the *Dignity* question (question 9). Nevertheless, interviewers pointed out that the filter question can help to create a ‘friendly environment’, making respondents more comfortable in answering a very intimate question such as that contained in question number 9, and giving them the opportunity to say how they feel about needing/receiving care.

Following the COSMIN methodology, we also tested the internal consistency, construct validity and test-retest reliability of the final harmonised translation. The analysis carried out shows an acceptable level of internal consistency, although the Cronbach’s alpha value (0.65) is slightly lower than that found in the Finnish version ([Nguyen et al., 2021](#)) and the Japanese version ([Nakamura-Thomas et al., 2019](#)), with values of 0.69 and 0.77, respectively.

The construct validity was supported by the statistically significant relationships found between the ASCOT scores and other related constructs. As multiple association tests were performed, some statistically significant findings

may represent spurious findings in the context of multiple testing. Therefore, the results should be interpreted mainly in terms of the overall pattern of evidence and the proportion of predefined hypotheses that were supported (or kept confirmed). According to COSMIN criteria, construct validity is considered sufficient when at least 75% of predefined hypotheses are confirmed. Therefore, the confirmation of 88% of the hypotheses provides strong evidence supporting the construct validity of the instrument. This interpretation is further supported by the consistency of our findings with previous ASCOT validation studies conducted in other countries. The construct validity of the ASCOT has already been tested in people receiving social care services in England (Malley et al., 2012; Rand et al., 2017), the Netherlands (van Leeuwen et al., 2015), Japan (Nakamura-Thomas et al., 2019), Austria (Trukeschitz et al., 2020) and Finland (Nguyen et al., 2021). Moderate correlations (below 0.5) between the aggregated ASCOT score and the EQ-5D have also been reported in studies conducted in other countries, ranging from 0.35 (Trukeschitz et al., 2020) to 0.42 (Nguyen et al., 2021). This moderate correlation could be explained because the EQ-5D is a health-related quality of life measure and only partially captures social care needs (Rand et al., 2017). The association between *Control over daily life* and no unmet needs in ADLs and IADLs was also found in Austria, England (with CASP-19 items and the 'home suitability') and Finland (with 'feeling left out'). The item 'loneliness', which was not found to be significant in our study, was not hypothesised in Austria and the Netherlands and was found to be significant in England and Finland. The results for *Personal cleanliness and comfort* are similar to those found in Austria and England—people who report greater independence in using the toilet, bathing or dressing, report less unmet need in this domain. The association between *Food and drink* and the ability to prepare and organise food and go shopping was also found in English and Dutch validations. The same associations between *Personal safety* and ADLs, the EQ-5D and the 'home suitability' were found in Austria and England. *Occupation* was associated with higher scores on the 'usual activities' item of the EQ-5D, as in England and Austria, and with social contact as in Finland. Similar associations as in Austria were found for *Accommodation cleanliness and comfort* and the 'housekeeping' and 'home suitability' items; and for the ADLs as in England. As in Finland and England, *Social participation* shows a significant relationship with items that indicate contact with other people. 'Feeling left out' and 'satisfaction with care' support the construct validity of *Dignity*; 'satisfaction with care' was tested in Austria, Finland and England with similar results. Finally, our results also support discriminant validity, in line with the Austrian findings.

The results of the test-retest reliability analysis carried out one week later with 72 participants indicate that the instrument has a good level of reliability, ranging from substantial to almost perfect. Although some validation studies of the ASCOT have not performed test-retest

reliability analysis (Nguyen et al., 2021; Trukeschitz et al., 2020; Nakamura-Thomas et al., 2019), our results are aligned with those studies that have (Rand et al., 2017; van Leeuwen et al., 2015).

The ASCOT aims to measure the outcome of social care from the user's perspective. Therefore, it is to be expected that there would be an association between the ASCOT score and a measure of satisfaction with care services. In any case, the greater sensitivity of the ASCOT instrument compared to a simple satisfaction question should be highlighted. There is evidence that surveys of satisfaction with health or social care tend to show high levels of satisfaction even when the experience has not been positive (Willis et al., 2016). Our study also finds that 77% of the respondents are often satisfied with the services they receive (Table 4). However, the ASCOT is more sensitive and allows us to identify those domains with more room for improvement. For example, while more than 90% of our sample reported that their needs were met in terms of *Personal or Accommodation cleanliness*, this percentage dropped to 66% for *Control over daily life* and 53% for *Occupation* (Table 3).

Our study has several limitations. First, the sample size is small due to budgetary constraints. Although other ASCOT validation studies have used a sample size of around 200 for construct validity (van Leeuwen et al., 2015) and around 100 for test-retest validity (Rand et al., 2017), it is common to use larger samples (Trukeschitz et al., 2020; Nakamura-Thomas et al., 2019; Nguyen et al., 2021). The small sample size here may have affected the construct validity results, causing some associations to be nonsignificant despite having the expected sign. Secondly, we used a convenience sample, which may not be representative of the profile of long-term care users in Spain. Although our sample included residents with a wide range of dependency levels, the validation provides evidence supporting the use of the Spanish ASCOT-SCT4 among older adults living in residential care settings. The diversity of dependency levels suggests that the instrument may also be applicable in other long-term care settings, although further empirical research is needed to confirm this. In addition, because the ASCOT-SCT4 cannot currently be administered to individuals with moderate or severe cognitive impairment, the assessment of care-related quality of life remains limited for an important subgroup of long-term care users. Future research should therefore focus on extending the applicability of the instrument by adapting and validating the ASCOT Easy Read for older people (ASCOT-ER OP) for use in the Spanish context. This instrument assesses the same eight care-related quality-of-life domains and maintains the same four response levels for each domain, but uses simplified wording and changes to font size, layout and spacing to facilitate comprehension and response, amongst older people with cognitive impairment (Caiels et al., 2025; Mikelyte et al., 2026; Rand et al., 2026). Thirdly, we could

not test the criterion validity of the ASCOT because there is no other SCRQoL index against which we can assess the performance of a new measure. Finally, interviewer effects could also affect the quality of our data (West and Blom, 2017).

In conclusion, this study provided robust evidence that the Spanish version of ASCOT is valid, reliable and comparable to the original English version. In the absence of instruments in Spain that assess the quality of the social care considering the preferences of the users, the adaptation of the ASCOT fills this gap and will be extremely useful not only for the dependent person receiving care and his or her family, but also for decision-makers, in order to better allocate social care resources. The subsequent stage of the process will be the estimation of the Spanish preference weights, which will enable the instrument to be used for decision-making purposes.

DATA ACCESSIBILITY STATEMENT

The datasets generated and analysed during the current study are available in the ZENODO repository, <https://doi.org/10.5281/zenodo.14767532>.

ADDITIONAL FILE

The additional file for this article can be found as follows:

- **Supplementary Material.** Supplementary material containing concise descriptions of the eight ASCOT domains, a summary of the cognitive debriefing process, and a detailed comparison of the associations between ASCOT domains and analogous domains in other relevant instruments. DOI: <https://doi.org/10.31389/jltc.481.s1>

ETHICS AND CONSENT

Written informed consent was obtained from each participant, and the Committee on Ethics of Clinical Research in Galicia (Spain) approved the study (ref. 2022/084). Participants were informed of the right to refuse to participate.

ACKNOWLEDGEMENTS

The authors would like to thank all the participants in the cognitive debriefing and validation interviews, and the social services staff who helped to conduct these interviews. We also thank Silvia González (RWS company) and Belen Couce for their advice on the translation process.

FUNDING INFORMATION

This study was funded by the CASER Foundation (programme 'Ayudas a la Investigación Sociosanitaria', edition 2022).

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR CONTRIBUTIONS

ER-M and BC contributed to the design of the project, acquired funding, conducted the cognitive debriefing interviews, designed the questionnaire and supervised the data collection in the validation phase, performed the statistical analysis, and drafted the manuscript. A-MT and EW, members of the ASCOT/development team, coordinated and reviewed the translation process, contributed to the interpretation of the qualitative data from the cognitive debriefing interviews, and substantially revised the pre-final and final versions of the paper. All authors read and approved the final manuscript.

AUTHOR AFFILIATIONS

Bruno Casal  orcid.org/0000-0003-4888-2527
University of A Coruña, Spain

Eva Rodríguez-Míguez  orcid.org/0000-0002-7287-7894
University of Vigo, Spain

Ann-Marie Towers  orcid.org/0000-0003-3597-1061
King's College London, United Kingdom

Elizabeth Welch  orcid.org/0000-0002-4284-6501
University of Kent, United Kingdom

REFERENCES

- Caiels, J., Rand, S., Mikelyte, R., Webster, L., Field, E. and Towers, A.M. (2025) 'Enhancing quality of life measurement: adapting the ASCOT easy read for older adults accessing social care', *Quality of Life Research*, 34(1), pp. 189–200. Available at: <https://doi.org/10.1007/s11136-024-03791-0>
- Cohen, J. (1992) 'A power primer', *Psychological Bulletin*, 112(1), pp. 155–159. Available at: <https://doi.org/10.1037/0033-2909.112.1.155>
- Ericsson, K.A. and Simon, H.A. (1980) 'Verbal reports as data', *Psychological Review*, 87(3), pp. 215–250. Available at: <https://doi.org/10.1037/0033-295X.87.3.215>
- Herdman, M., Gudex, C., Lloyd, A., Janssen, M.F., Kind, P., Parkin, D., Bonsel, G. and Badia, X. (2011) 'Development and preliminary testing of the new five-level version of EQ-5D (EQ-5D-5L)', *Quality of Life Research*, 20(10), pp.

- 1727–1736. Available at: <https://doi.org/10.1007/s11136-011-9903-x>
- Hyde, M., Wiggins, R.D., Higgs, P. and Blane, D.B.** (2003) 'A measure of quality of life in early old age: the theory, development and properties of a needs satisfaction model (CASP-19)', *Aging & Mental Health*, 7(3), pp. 186–194. Available at: <https://doi.org/10.1080/1360786031000101157>
- Koo, T.K. and Li, M.Y.** (2016) 'A guideline of selecting and reporting intraclass correlation coefficients for reliability research', *Journal of Chiropractic Medicine*, 15(2), pp. 155–163. Available at: <https://doi.org/10.1016/j.jcm.2016.02.012>
- Landis, J.R. and Koch, G.G.** (1977) 'The measurement of observer agreement for categorical data', *Biometrics*, 33(1), pp. 159–174. Available at: <https://doi.org/10.2307/2529310>
- Lawton, M.P. and Brody, E.M.** (1969) 'Assessment of older people: self-maintaining and instrumental activities of daily living', *Gerontologist*, 9(3), pp. 179–186. Available at: https://doi.org/10.1093/geront/9.3_Part_1.179
- Mahoney, F.I. and Barthel, D.W.** (1965) 'Functional evaluation: the Barthel Index: a simple index of independence useful in scoring improvement in the rehabilitation of the chronically ill', *Maryland State Medical Journal*, 4, pp. 61–65.
- Malley, J.N., Towers, A.M., Netten, A.P., Brazier, J.E., Forder, J.E. and Flynn, T.** (2012) 'An assessment of the construct validity of the ASCOT measure of social care-related quality of life with older people', *Health and Quality of Life Outcomes*, 10, pp. 1–14. Available at: <https://doi.org/10.1186/1477-7525-10-21>
- Mikelyte, R., Oliver, K., Oliver, R., Caiels, J., Rand, S., Field, E., Webster, L. and Towers, A.M.** (2026), 'Co-designing an easy-read adult social care outcomes measure for older people: approach to and reflections on involving people living with dementia and their supporters', *Health Expectations*, 29, e70712. Available at: <https://doi.org/10.1111/hex.70712>
- Ministerio de Derechos Sociales y Agenda 2030.** (2022) *Informe de Evaluación del Sistema de Promoción de la Autonomía Personal y Atención a las Personas en Situación de Dependencia (SAAD)*. Available at: https://sid-inico.usal.es/wp-content/uploads/2022/09/estudio_evaluacion_saad.pdf (Accessed: 4 November 2024).
- Mokkink, L.B., de Vet, H.C., Prinsen, C.A., Patrick, D.L., Alonso, J., Bouter, L.M. and Terwee, C.B.** (2018) 'COSMIN risk of bias checklist for systematic reviews of patient-reported outcome measures', *Quality of Life Research*, 27, pp. 1171–1179. Available at: <https://doi.org/10.1007/s11136-017-1765-4>
- Mokkink, L.B., Terwee, C.B., Patrick, D.L., Alonso, J., Stratford, P.W., Knol, D.L., Bouter, L.M. and de Vet, H.C.** (2010) 'The COSMIN study reached international consensus on taxonomy, terminology, and definitions of measurement properties for health-related patient-reported outcomes', *Journal of Clinical Epidemiology*, 63(7), pp. 737–745. Available at: <https://doi.org/10.1016/j.jclinepi.2010.02.006>
- Nakamura-Thomas, H., Morikawa, M., Moriyama, Y., Shirowa, T., Kyougoku, M., Razik, K. and Malley, J.** (2019) 'Japanese translation and cross-cultural validation of the adult social care outcomes toolkit (ASCOT) in Japanese social service users', *Health and Quality of Life Outcomes*, 17(1), pp. 1–16. Available at: <https://doi.org/10.1186/s12955-019-1128-7>
- Netten, A., Burge, P., Malley, J., Potoglou, D., Towers, A.M., Brazier, J., Flynn, T. and Forder, J.** (2012) 'Outcomes of social care for adults: developing a preference-weighted measure', *Health Technology Assessment*, 16(16), pp. 1–166. Available at: <https://doi.org/10.3310/hta16160>
- Nguyen, L., Linnosmaa, I., Jokimäki, H., Rand, S., Malley, J., Razik, K., Trukeschitz, B. and Forder, J.** (2021) 'Social care-related outcomes in Finland. Construct validity and structural characteristics of the Finnish ASCOT measure with older home care users', *Health & Social Care in the Community*, 29(3), pp. 712–728. Available at: <https://doi.org/10.1111/hsc.13328>
- OECD/European Union.** (2022) *Health at a Glance: Europe 2022: State of Health in the EU Cycle*. Paris: OECD Publishing. Available at: <https://doi.org/10.1787/507433b0-en> (Accessed: June 2025).
- Ramos-Goñi, J.M., Craig, B.M., Oppe, M., Ramallo-Fariña, Y., Pinto-Prades, J.L., Luo, N. and Rivero-Arias, O.** (2018) 'Handling data quality issues to estimate the Spanish EQ-5D-5L value set using a hybrid interval regression approach', *Value in Health*, 21(5), pp. 596–604. Available at: <https://doi.org/10.1016/j.jval.2017.10.023>
- Rand, S., Caiels, J., Mikelyte, R. and Towers, A.-M.** (2026) 'The adult social care outcomes toolkit easy read for older people (ASCOT-ER OP): an exploratory factor analysis and Rasch validation study', *Quality of Life Research*, 35(4), pp. 1–14. Available at: <https://doi.org/10.1007/s11136-026-04169-0>
- Rand, S., Malley, J., Towers, A.M., Netten, A. and Forder, J.** (2017) 'Validity and test-retest reliability of the self-completion adult social care outcomes toolkit (ASCOT-SCT4) with adults with long-term physical, sensory and mental health conditions in England', *Health and Quality of Life Outcomes*, 15(1), pp. 1–15. Available at: <https://doi.org/10.1186/s12955-017-0739-0>
- Smith, N., Towers, A. and Razik, K.** (2017) *Adult Social Care Outcomes Toolkit (ASCOT) SCT4 guidance*. Discussion Paper 2937. Canterbury: Personal Social Services Research Unit, University of Kent.
- Taber, K.S.** (2018) 'The use of Cronbach's alpha when developing and reporting research instruments in science education', *Research in Science Education*, 48(6), pp. 1273–1296. Available at: <https://doi.org/10.17863/CAM.8256>
- Trukeschitz, B., Litschauer, J., Hajji, A., Kieninger, J., Schoch, A., Malley, J., Rand, S., Linnosmaa, I. and Forder, J.** (2020) 'Cross-cultural adaptation and construct validity of the German version of the adult social care outcomes toolkit for service users (German ASCOT)', *Health and Quality of Life Outcomes*, 18(1), pp. 1–19. Available at: <https://doi.org/10.1186/s12955-020-01533-7>

- van Leeuwen, K.M., Bosmans, J.E., Jansen, A.P., Rand, S.E., Towers, A.M., Smith, N., Razik, K., Trukeschitz, B., van Tulder, M.W., van der Horst, H.E. and Ostelo, R.W. (2015) 'Dutch translation and cross-cultural validation of the adult social care outcomes toolkit (ASCOT)', *Health and Quality of Life Outcomes*, 13(1), pp. 1–13. Available at: <https://doi.org/10.1186/s12955-015-0249-x>
- West, B.T. and Blom, A.G. (2017) 'Explaining interviewer effects: a research synthesis', *Journal of Survey Statistics and Methodology*, 5(2), pp. 175–211. Available at: <https://doi.org/10.1093/jssam/smw024>
- Wild, D., Grove, A., Martin, M., Eremenco, S., McElroy, S., Verjee-Lorenz, A. and Erikson, P. (2005) 'Principles of good practice for the translation and cultural adaptation process for patient-reported outcomes (PRO) measures: report of the ISPOR task force for translation and cultural adaptation', *Value in Health*, 8(2), pp. 94–104. Available at: <https://doi.org/10.1111/j.1524-4733.2005.04054.x>
- Willis, G.B. (2015) 'The practice of cross-cultural cognitive interviewing', *Public Opinion Quarterly*, 79(S1), pp. 359–395. Available at: <https://doi.org/10.1093/poq/nfu092>
- Willis, R., Evandrou, M., Pathak, P. and Khambhaita, P. (2016) 'Problems with measuring satisfaction with social care', *Health & Social Care in the Community*, 24(5), pp. 587–595. Available at: <https://doi.org/10.1111/hsc.12231>
- World Health Organization. (2022) *Newsroom: Questions and Answers*. Available at: <https://www.who.int/europe/news-room/questions-and-answers/item/long-term-care> (Accessed: 4 November 2024).

TO CITE THIS ARTICLE:

Casal, B., Rodríguez-Míguez, E., Towers, A.-M. and Welch, E. 2026. Spanish Translation, Cross-Cultural Validation and Test-Retest Reliability of the Adult Social Care Outcomes Toolkit (ASCOT). *Journal of Long-Term Care*, (2026), pp. 224–239. DOI: <https://doi.org/10.31389/jltc.481>

Submitted: 01 September 2025 **Accepted:** 09 July 2026 **Published:** 22 July 2026

COPYRIGHT:

© 2026 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (CC BY-NC-ND 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

Journal of Long-Term Care is a peer-reviewed open access journal published by LSE Press.