

Supplementary Information

The Montreal Cognitive Assessment in Spanish-speaking countries in Latin America and the Caribbean: A Systematic Review

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Supplementary Table 1. Steps of the Translation Process Reported by the Included Studies

Study	Translation	Back Translation	Users in co-production	Expert Recommendation	Revision based on step-by-step feedback	Involvement of the original testing author	Pilot
Gómez et al. 2012	NR	NR	NR	NR	NR	NR	NR
Matovelle et al. 2013	NR	NR	NR	NR	NR	NR	NR
Pereira-Manrique et al. 2013	NR	NR	NR	x	x	x	x
Gil et al. 2014	NR	NR	NR	NR	NR	x	NR
Pedraza et al. 2014	NR	NR	NR	NR	NR	NR	NR
Pedraza et al. 2016	NR	NR	NR	NR	NR	x	NR
González-Palau et al. 2018	NR	NR	NR	NR	NR	NR	NR
Aguilar-Navarro et al. 2018	NR	NR	NR	NR	NR	NR	NR
Delgado et al. 2019	NR	NR	NR	NR	NR	NR	NR
Rodríguez-López et al. 2020	NR	NR	NR	NR	NR	NR	NR
Serrano et al. 2020	NR	NR	NR	x	x	x	NR
Bello-Lepe et al. 2021	NR	NR	NR	NR	NR	x	NR
Vásquez et al. 2022	NR	NR	NR	NR	NR	NR	NR

NR: Not reported

Supplementary Table 2. List of full-text citations evaluated and included.

Author	Title	Year	Design
Gómez et al.	Applicability of the MoCA-S test in populations with little education in Colombia	2012	Cross-sectional study
Matovelle et al.	Validación de la Evaluación Cognitiva de Montreal en adultos mayores ecuatorianos	2013	Cross-sectional study
Pereira-Manrique et al.	Reliability and Validity of the Montreal Cognitive Assessment (MoCA) in a Population over Bogota, Colombia	2013	Psychometric study of technological development.
Gil et al.	Validation of the Montreal Cognitive Assessment (MoCA) in Spanish as a screening tool for mild cognitive impairment and mild dementia in patients over 65 years old in Bogotá, Colombia	2014	Validation study
Pedraza et al.	Puntuaciones del MoCA y el MMSE en pacientes con deterioro cognitivo leve y demencia en una clínica de memoria en Bogotá	2014	Cross-sectional study
Pedraza et al.	Confiabilidad, validez de criterio y discriminante del Montreal Cognitive Assessment (MoCA) test, en un grupo de adultos de Bogotá.	2016	Cross-sectional study
González-Palau et al.	Validez de La Prueba de Evaluación Cognitiva de Montreal (MoCA) Como Una Herramienta de Screening Para Detectar Deterioro Cognitivo Leve En Población de Buenos Aires, Argentina.	2018	Cross-sectional validation study
Aguilar-Navarro et al.	Validity and Reliability of the Spanish Version of the Montreal Cognitive Assessment (MoCA) for the Detection of Cognitive Impairment in Mexico.	2018	Cross-sectional validation study
Delgado et al.	Validation of the Spanish-language version of the Montreal Cognitive Assessment test in adults older than 60 years	2019	Cross-sectional validation study
Rodríguez-López et al.	Validación preliminar del test de evaluación cognitiva de Montreal en una muestra de adultos mayores.	2020	Cross-sectional study
Serrano et al.	Validation of the Argentine version of the montreal cognitive assessment test (MOCA) a screening tool for mild cognitive impairment and mild dementia in elderly.	2020	Cross-sectional validation study
Bello-Lepe et al.	Montreal Cognitive Assessment as Screening Measure for Mild and Major Neurocognitive Disorder in a Chilean Population.	2021	Cross-sectional study
Vásquez et al.	Validación de Montreal Cognitive Assessment (MoCA) en deterioro cognitivo.	2022	Validation study

Supplementary Table 3. List of citations evaluated at full text and excluded for the question.

Studies	Reason for exclusion
Standardized results of the Montreal Cognitive Assessment (MoCA) for neurocognitive screening in a Chilean population	Different type
Use of the MoCA in detecting early Alzheimer's disease in a Spanish-speaking population with varied levels of education	Different population
Validation of the Montreal Cognitive assessment-Spanish version test (MOCAS) as a screening tool for mild cognitive impairment and mild dementia in Bogotá, Colombia	Different type
Standardization Project: Montreal Cognitive Assessment and Semantic Verbal Fluency in Puerto Rican Adults Aged 50 to 90 Years	Different type
[Montreal Cognitive Assessment (MoCA): normative data for Rosario metropolitan area population, Argentina].	Different type
Is the Montreal Cognitive Assessment (MOCA) test better suited to cognitive impairment detection among Latino people than the Mini-Mental State Examination (MMSE)?	Different population
Validity of Cognitive Assessment Tools for Older Adult Hispanics: A Systematic Review	Different type

Supplementary Box 1. MTRQ and MCAQ tools

Manchester Translation Reporting Questionnaire (MTRQ)

Score	
0	The translation procedure is not mentioned.
1	The translation procedure is mentioned with no details of the process.
2a	The translation procedure is mentioned in insufficient detail for replication.
2b	The translation procedure is mentioned by referring to another publication that describes the translation process in insufficient detail for replication.
3	The translation procedure is only described according to pre-existing guidelines on translating the assessment, with a reference to the guidelines provided.
4a	The translation procedure is described in sufficient detail for replication of the process.
4b	The translation procedure is mentioned by referring to a publication that describes the translation process in sufficient detail for replication, with a reference to that publication.

Manchester Cultural Adaptation Reporting Questionnaire (MCAQ)

Score	
0	The cultural adaptation procedure is not mentioned.
1	The cultural adaptation procedure is mentioned with no details of the process.
2a	The cultural adaptation procedure is mentioned in insufficient detail for replication.
2b	The cultural adaptation procedure is mentioned by referring to another publication that describes the cultural adaptation process in insufficient detail for replication.
3	The cultural adaptation procedure is described only according to pre-existing guidelines on culturally adapting the assessment, with a reference to the guidelines provided.
4a	The cultural adaptation procedure is described in sufficient detail for replication of the process, including reasons for cultural adaptation and for the selection and replacement of items in the assessment.
4b	The cultural adaptation procedure is mentioned by referring to a publication that describes the cultural adaptation process of that assessment in sufficient detail for replication, including reasons for cultural adaptation and for the selection and replacement of items in the assessment, with a reference to that publication.

Supplementary Box 2. QUADAS-2 Traffic Light Plot

	Risk of bias domains				
	D1	D2	D3	D4	Overall
Gomez et al. 2012					
Matovelle et al. 2013					
Pereira-Manrique et al. 2013					
Gil et al. 2014					
Pedraza et al. 2014					
Pedraza et al. 2016					
Gonzales-Palau et al. 2018					
Aguilar-Navarro et al. 2018					
Delgado et al. 2019					
Rodriguez-Lopez et al. 2020					
Serrano et al. 2020					
Bello-Lepe et al. 2021					
Vasquez et al. 2022					

Caption: Traffic light plot summarizing the risk of bias and applicability concerns for each included study, based on the QUADAS-2 tool. Each row represents a study, and each column corresponds to a QUADAS-2 domain: D1 – Patient Selection, D2 – Index Test, D3 – Reference Standard, and D4 – Flow and Timing. Colors indicate the level of risk: green = low risk, yellow = unclear risk, and red = high risk.

Supplementary Table 4. Search Summary for Primary Studies.

N °	PICO question (study eligibility criteria)	Type of study	Search dates (from, to)	Number of citations identified in each database	Number of full-text citations evaluated/ Number of included studies
1	P: Patients with Alzheimer's disease in Latin America and the Caribbean I: Magnetic resonance protocols O: - C:-	Primary	01/01/1953 a 06/10/2024	• Scopus: 183 • Embase: 460 • PubMed: 140 • Web of Science: 150 • PsycINFO: 210 • ScienceDirect: 151 • LILACS: 366 • Scielo: 30 Other source • Google Scholar: 4	20/13