Cultural Neuropsychology Frameworks and Intelligence Testing in Latin America

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Resources for Best Practices in Cultural Neuropsychology & Hispanic Neuropsychology

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Resources for Cultural Assessment Frameworks

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Useful Sources to Quickly Access Cultural Information

CIA Factbook
https://www.cia.gov/library/publications/the-world-factbook/

Cultural Atlas
https://culturalatlas.sbs.com.au/intro

UNESCO Institute for Statistics
http://uis.unesco.org/

UNESCO International Standard Classification of Education
http://uis.unesco.org/en/topic/international-standard-classification-education-isced

The World Bank
http://www.worldbank.org/

World Economic Forum
http://reports.weforum.org/global-competitiveness-index-2017-2018/

Pearson Clinical Translated and Adapted Tests
https://www.pearsonclinical.com/pharma-licensing/content-and-translations.html

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Intelligence tests for adults that are available in Spanish

	Test name	Structure of test	Norms	Age range (years)	Notes
Wechsler Tests	Escala de inteligencia de Wechsler para adultos-IV (WAIS-IV)	Four-factor scale assessing verbal comprehension, perceptual organization working memory, and processing speed as well as Verbal, Performance, and Full Scale IQ	Chile Mexico Argentina Spain USA Canada	16-90	All indexes influences by language proficiency
	Wechsler Abbreviated Scale of Intelligence (WASI-I)	Forms Verbal, Performance, and Full Scale IQ scores	USA	6-89	Short form of the WAIS-III that appears to underestimate IQ scores in minorities who are not acculturated to the USA
	Spanish not yet available: Wechsler Abbreviated Scale of Intelligence- Second Edition (WASI-II)	Forms Verbal, Performance, and Full Scale IQ scores	USA	6-90	Not yet available in Spanish
	Older Wechsler tests: Weschler Adult Inteligence Scale-Third Edition (WAIS-III) Escala de Inteligencia de Wechsler para Adultos (EIWA) Escala de Inteligencia de Wechsler para Adultos- Tercera Edicion (EIWA-III) Spanish Wechsler Adult Intelligence Scale- Third Edition (WAIS-III España) Mexican Wechsler Adult Intelligence Scale- Third Edition (WAIS-III Mexcio)	Four-factor scale assessing verbal comprehension, perceptual organization working memory, and processing speed as well as Verbal, Performance, and Full Scale IQ	USA Puerto Rico Puerto Rico Spain Mexico	16-90 16-64 16-64 16-94 16-70+	Scales influence by language proficiency Not recommended for clinical use Limited research, not recommended Adequate in Spain, underestimates in other Spanish-speaking populations Questionable norms, not well validated

Other Batteries	Reynolds Intellectual Assessment Scales (RIAS)	Forms verbal intelligence and nonverbale intelligence indexes as well as Full Scale IQ	USA Spain	3-94	Minimizes reliances on reading proficiency. Adaption normed in Spain.
	Batería III Woodcock-Muñoz-Pruebas de Habilidades Cognitivas (Batería III COG)	based on CHC model and has factors of crystalized intelligence, fluid reasoning, visual processing, short-term memory, long-term retrieval, processing speed, and auditory processing	Native Spanish Speakers	2-90+	Spanish version of the Woodcock-Johnson III Norming sample comprised of native Spanish speakers from Mexico, Coast Rica, Panama, Argentina, Colombia, Puerto Rico, and Spain and other Latin American countries Well-developed and good validity

Lacking Research Support	Kaufman Brief Intelligence Test-Second Edition (K-BIT)	Forms crystallized intelligence, fluid reasoning, and Full Scale IQ scores	USA	4-90	Short form of the Kaufman scales. Verbal answers can be given in Spanish or English with different scoring procesdures provided for both. Spanish speaking individuals not included in standardization sample.
	Stanford-Binet Intelligence Scales-Fifth Edition (SB5)	Based on CHC model and has factors of crystalized intelligence, fluid reasoning, visual processing, short-term memory, and quantitative knowledge	USA	2-90+	Very little research available on applicability towards Spanish speaking populations
	Desarrollo e las Habilidades Cognitivas (DHAC)	Forms abstract resoning and verbal resoning scores. Not clear if also provides a single IQ score.		11+	Author: de la Cruz. Publisher: TEA Ediciones.
	Test de Inteligencia Breve de Reynolds (RIST)	Verbal subtest and non-verbal subtest form measures of crystallized intelligence, fluid intelligence, and overall IQ		3-94	Authors: RW Kamphaus & CR Reynolds. Publisher: TEA Ediciones.

	Test de Interpretatción Selectiva de Datos (TISD)	Estimates general intellectual capacity through the evaluation of the ability to capture and assimilate information presented through tables and graphs.	Spain Argentina	Adults	Author: N Seisdeos. Publisher: TEA Ediciones. Especially intended for the evaluation of the mental capacity in adults of superior cultural level, professionals, etc.
	Evaluación Factorial de las Aptitudes Intelectuales (EFAI)	Provides verbal intelligence, non-verbal intelligence, and general intellegience scores		EFAI 4: adults	Authors: P Snatamaría, D Arribas, J Pereña & N Seisdedos. Publisher: TEA Ediciones.
	Batería de Aptitudes de TEA (BAT-7)	Provides estimates of inteligencia fluida (Gf), inteligencia crislizada (Gc), & factor g o capacidad general (g)	Spain Colombia	12+	Authors: D Arribas, P Santamaría, F. Sánchez-Sánchez & I Fernández-Pinto. Publisher: TEA Ediciones.

Nonverbal	Factor "g" Escales 2 y 3	Nonverbal test that contains four tests, which results in an overall socre	Spain Mexico	Scale 3: 15+	Authors: RB Cattell & AKS Cattell. Publisher: TEA Ediciones. Especialmente destinada a la evaluación de la capacidad mental en adultos de nivel cultural superior, profesionales, etc.
	Matrices, Test de Inteligencia General	Nonverbal test that provides estimate of fluid intelligence (Gf) with matrices		6-74	Authors: F Sánchez-Sánches, & P Sanatamaría. Publisher: TEA Ediciones.
	Matrices TAI, Test de Adaptativo Inteligencia General	Nonverbal test that provides estimate of fluid intelligence (Gf) with matrices		6-74	Authors: FJ Abad, F Sánchez-Sánches & P Sanatamaría. Publisher: TEA Ediciones.
	Test Beta II, Instrumento No Verbal De Inteligencia	Nonverbal test that includes 5 components including visual information processing, processing speed, spatial reasoning, non-verbal reasoning, and fluid intelligence to produce a FSIQ.		16-89	Authors: CE Kellog & NW Morton. Publisher: Manual Moderno.
	Inteligencia General, Nivel 2 (IG-2)	Nonverbal test that provides IQ estimate		Adolescentes y adultos	Author: Departamento I+D de TEA Ediciones, S.A. Publisher: TEA Ediciones.
	Niveles Elemental, Medio y Superior (NAIPES II)	Nonverbal test that provides IQ estimate		Superior: 16+	Authors: N García Nieto & C. Yuste. Publisher: TEA Ediciones.
	Test de Intligencia No Verbal (TONI-2)	Nonverbal test that provides IQ estimate	Spain Chile	5-85	Autor: L. Brown, RJ Sherbenou & SK Johnsen. Publisher: TEA Ediciones.

Based on research by E. C. Duggan, and adapted from Ojeda (2010); Thaler & Jones-Forrester (2013); and von Thomsen, Gallup, &

DISSEMINATING CULTURAL NEUROPSYCHOLOGY RESEARCH

FIVE KEY RECOMMENDATIONS FOR SKILL DEVELOPMENT

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OBJECTIVE: Cultural neuropsychology has been called upon to meet the demand for more empirical tools and frameworks to use with our diverse populations. While much is being done, we have largely been "playing a game of catch-up" (Manly, 2008) and researchers have been encouraged to reinvent their approaches (Suchy, 2016). In this regard, one area of opportunity is promoting the development of cultural neuropsychology research dissemination. **METHODS:** Relevant literature and professional experiences were used to identify cultural neuropsychology research dissemination barriers and provide 5 recommendations.

1. USE EMPIRICALLY SUPPORTED KNOWLEDGE DISSEMINATION FRAMEWORKS

Good resources include:

- Brownson et al. (2018). Getting the word out: New approaches for disseminating public health science. JPHMP, 24(2), 102-111
- Wilson et al. (2010) . Disseminating research findings: What should researchers do? A systematic scoping review of conceptual frameworks. *Implementation Science, 5*(91), 1-16.

2. COLLABORATE

Professional collaboration and research visibility are fundamental to the success!

- Tripathy et al. (2017). Ten tips to improve the visibility and dissemination of research for policy makers and practitioners. *Public Health Action, 7*(1), 10-14.

3. PROVIDE CLEAR CLINICAL APPLICATIONS

Present findings with clinical application in easily understood and implementable ways.

- Use clear titles and clarify "insider" knowledge.
- How would you "export" your protocol? See: Hruschka et al. (2018). Learning from failures of protocol in cross-cultural research. *PNAS*, 1-7.

4. REPORT INFORMATION ACCESSIBLY

Report study variables in internationally compatible/ meaningful units.

- Education can be reported using UNESCO's International Standard Classification of Education (ISCED; uis.unesco.org).
- Details about socioeconomic structure and status can quickly be accessed at the Word Bank (www.worldbank.org).

5. Translate!

- Negotiate with journals to allow for translated manuscripts and supplemental materials.
- Often translations and other creative content can go on your personal website.

¡Traducir!

FIVE KEY RECOMMENDATIONS

DISCUSSION: Neuropsychologists are eager for more culturally informed and clinically applicable research. Thus, cultural neuropsychology researchers focusing on developing their dissemination skills in these five highlighted areas are well positioned increase the impact of their work and promote growth within cultural neuropsychology and neuropsychology more broadly.

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