Habla Ingles o Español?
The Neuropsychological Assessment of Hispanics in the U.S.
Course Description

• Hispanics in the United States
• Assessment complexities
  – Socio-demographic variables & psychosocial factors
• Barriers
  – Education & training opportunities
  – Assessment tools & normative data
  – Interpreters vs. translators
• Evolution of clinical practices
  – Hispanic Neuropsychology subspecialty
• Testing standards & guidelines
• Examinee-examiner variables
• Empirically based decision-making model
• Suggested readings & resources
Hispanics in the United States
51.9 million Hispanics lived in the U.S. in 2011...

An increase of 48% from 2000

35.2 million

2000

51.9 million

2011

Pew Research Hispanic Center tabulations of 2000 Census (5% IPUMS) and 2011 American Community Survey (1% IPUMS)
### Hispanic population (percent of all Hispanics)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexican</td>
<td>33.5M</td>
<td>65%</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>4.9M</td>
<td>9%</td>
</tr>
<tr>
<td>Salvadoran</td>
<td>2.0M</td>
<td>4%</td>
</tr>
<tr>
<td>Cuban</td>
<td>1.9M</td>
<td>4%</td>
</tr>
<tr>
<td>Dominican</td>
<td>1.5M</td>
<td>3%</td>
</tr>
<tr>
<td>All other Hispanics</td>
<td>8.1M</td>
<td>16%</td>
</tr>
</tbody>
</table>

Pew Research Hispanic Center tabulations of 2011 American Community Survey (1% IPUMS)
Two-thirds of Hispanics live in just five states...

1. **California**
   - 14.4 million Hispanics
   - 28% of all Hispanics

2. **Texas**
   - 9.8 million Hispanics
   - 19% of all Hispanics

3. **Florida**
   - 4.4 million Hispanics
   - 8% of all Hispanics

4. **New York**
   - 3.5 million Hispanics
   - 7% of all Hispanics

5. **Illinois**
   - 2.1 million Hispanics
   - 4% of all Hispanics

Nearly half (47%) live in California and Texas alone.
Hispanics in the U.S.

- Largest & fastest growing minority group - 53 million
- By 2050 - 30% of the population
- In 2011, 36% was foreign born
- Underestimate - unauthorized immigrant population
  11.2 million
- Spanish-speakers: 223% increase in the last 30 years
- March 2014 - Hispanics plurality in CA
- Largest linguistic ethnic minority group

Health Disparity

• Socio-demographic shift is creating unprecedented demands

• Trained neuropsychologists who speak Spanish are sharply underrepresented

• Hispanics represent a heterogeneous population

Echemendia, Harris, Congett, Diaz, & Puente, 1997; Ponton & Ardila, 1999; Wilkie, et al., 2004; Strutt, Ayanegui, Scott, Mahoney, & York, 2012
Neuropsychology for U.S. Hispanics

- Limited measures, manuals, normative data & validation studies
- Influence of socio-demographic variables, psychosocial factors & environmental barriers
- **Diagnostic accuracy - less than optimal**
  - Cultural discrepancies in instruments, procedures, & norms
- Evolution of clinical practices & subspecialty
  - Increase in available tools
  - Education of professionals & students
  - Increase in available measurements

Ardila, 1995; Puente & Agranovich, 2004; Ostrosky-Solis, Lozano Gutierrez, Ramirez Flores, & Ardila, 2007; Renteria et al., 2008; Mayeaux et al., 2011; Strutt Scott, Shrestha, & York, 2011; Strutt, et al., 2012
Neuropsychology for Spanish-speakers in the U.S.

- Practices have not matched expansion
- Problems with translations, cultural adaptations, reliability & validity
- In-house translations & poor use of available tools

Cherner et al., 2007; Pedraza & Mungas, 2008; Strutt, et al., 2012
Assessment Complexities

Socio-demographic variables & psychosocial factors
Culture & Acculturation

- Adaptation of an individual to a new culture through prolonged contact - learning language, values, & cognitive style
- Affects measurement of brain & behavior
- Impact construct validity more than true population differences
- Relevance to patient; consider daily routine & life experiences
- Outcomes may misclassify neurocognitive skills
- Value of human relationship (i.e., interaction with the examiner)
- **No test is free of cultural or educational influences**
- Spanish-speakers tend to underperform on non-verbal measures

Jacobs et al., 1997; Manly et al., 1998; Pineda, Rosselli, Ardila, Mejia, Romero, & Perez, 2000; Rosselli, Tappen, Williams, & Salvatierra, 2006; Siedlecki et al., 2010; Farias, et al., 2011; Mayeaux et al., 2011; Arentoft et al., 2012
Family Values & Traditions

- Role of family
- Individualism vs. communalism
- Locus of control
  - Religion & spirituality
- Response to authority
  - Interaction style
- Expected role of therapist
  - Cadence of conversation
- Depth of disclosure
  - Limits of confidentiality
- Personal space

Quiros, 2014
Assessing Acculturation

• Several measures of acculturation available
• Common elements - preferred language & proficiency, social affiliation, cultural identity, community participation, pride, exposure, & preferences
• Time spent in the U.S., English fluency, generational status - correlated to performance
• Lack of contact with dominant culture

Boone et al., 2007; Mayaux et al., 2011; Arentoft et al., 2012
Acculturation & Education

• Education contributes to acculturation
• Formal schooling - number of years
• Parental education, pre-school participation (e.g., Head Start programs), & quality of education significantly impact neurocognitive development
Education

- Education - cognitive protective factor
- Limited academic achievement, economic opportunity & exposure to westernized practices
- Low or no educational attainment requires an additional skill set for examiner
- Peer consultation recommended
• Lack of, poor quality, or curriculum differences
• Literacy - lack of consensus; can misrepresent skills
• Basically literate (i.e., able to write name and/or read a simple paragraph); unable to complete more complex tasks (i.e., conceptualize reading)
• Significant discrepancies in visuospatial skills & memory at lower end of continuum
• Adequate neurocognitive performance requires abilities obtained through formal education
• Technological illiteracy

Ardila, et al., 1994; Ardila & Moreno, 2001; Lawless, et al., 2010; Robbins, et al., In Review
Quality of Education

• Some countries have standards & regulations
• Many small towns & cities in Central & South America do not
  – Poverty, limited academic resources (i.e., few or no textbooks), & few or no qualified instructors
• Elementary level of education
  – Poor attendance; academic advancement by age
  – High relevance - lower end of continuum

Ponton & Ardila, 1999; Ostrosky-Solis, et al., 2007
Quantity of Education

- U.S. quantity & quality should be examined
- Hispanics living in the U.S. have lower academic achievement and/or poor quality of education
- Terminology (i.e. Bachillerato - Puerto Rico vs. Mexico)

Educational level in the U.S. by population percentage

Strutt, et al., In Review

Gasquoine, Croyle, Cavazos-Gonzalez, & Sandoval, 2007
Language

- Basic Interpersonal Communication Skills (BICS) & cognitive academic linguistic proficiency (CALP)
- BICS: day-to-day language skills used during social situations
- CALP: formal academic learning, essential for academic success
- Objectively measure CALP skills - cognitive abilities
- Degree of bilingualism & language proficiency must also be examined
  - Disadvantages in lexical access, vocabulary, & fluency
  - Advantages in executive control & cognitive reserve

Baker, 2006; Schon, et al., 2008; Bialystok & Craik, 2010; Craik, et al., 2010; Strutt et al., In Review
Degree of Bilingualism

• 35 million (74%) ages 5 & over speak Spanish at home
• “Spanglish” borrowing & code-switching
• Screen for level of mastery; dominant language assessment: most valid results
• Comparison against American norms if in reference to English-language environment; both languages (e.g., aphasia)
• Inaccuracies of self-report
• Continuous variable; performance depends upon degree
• Frameworks to assist

Paradis & Libben, 1987; Harris et al., 1995; Artiola i Fortuny, & Mullaney, 1998; Mendez, Parryman, Ponton, & Cummings, 1999; Ardila, et al., 2001; Ponton 2001; Harris & Llorente, 2005; Rivera Mindt et al., 2008; Judd, et al., 2009; Pew Research Center, 2014
Pediatrics

- Bilingual children misidentified - language disorders and/or learning disabilities
- Over and under identified for special education
- Lack of balanced bilingualism rather than a true language disorder
- Assessment of proficiency & skills in both languages is necessary
- A clear pattern of dominance may not yet be established
- Language disorder - diagnosed when significant difficulties are seen in both language
- Bilingual children with language impairment are similar in deficit patterns and acquisition of language as monolingual children with language impairment

Genesee, Paradis & Crago, 2006; Salinas, et al., In Review
• Bilingualism is lost in order obtained
  – Development of a neurodegenerative condition - loss of second language occurs before the loss of the first

• Assessment of both languages, even with simple tests likes phonetic or semantic fluency
  – Administration of both phonetic (F-A-S in English; P-M-R in Spanish) and semantic fluency might be useful; counter-balanced presentation

Acevedo & Lowenstein, 2007; Salinas, et al., In Review; Strutt et al., In Review
Measurements

• No clear & easily administered tests of bilingual abilities with equivalent versions
• Woodcock-Johnson-III & the Bateria III
  Woodcock-Muñoz (Spanish version of WJ-III)
• WASI, WRAT, or the Nelson-Reedy
• Speech pathologists: PLS-5
  – First in Spanish; incorrect items in English
  – Overall score of language ability rather than one score in English & one in Spanish

Quiros, 2014
Clinical Interview & Observation

• Determine language dominance
  – Country of origin
  – Initial language exposure
  – Language spoken at home, school/work & socially
  – Music, television programs and/or books read
  – Individual’s preference - caution

• Asking questions in both languages; rate speed, length & quality
Language Complexities

• Tacos
• Pinche
• Molinillo
Socio-economic Status

- Income, education, & occupation
- Both SES & relative deprivation affect health
- Lower SES - Hispanic immigrants
- HS completion: Cuban 80%, Puerto Ricans 74%, Mexicans 54%
- BA/BS: Cuban-Americans three times the rate of Mexican Americans
- Hispanic children more likely to have parents with lower education & less likely to use a computer
- Income disparities persist at every level
  - Hispanic men earn less than Caucasians
- Differences in familiarity with task stimuli

CEAPIR, 1998; Gallo, et al., 2009; Adler & Stewart, 2010; Kawachi, et al., 2010; Williams, et al., 2010; Chin, Negash, & Hamilton, 2011
SES & Health Disparities

• 2-3 times more likely than Caucasians to be living in poverty
• Low birth weight
• More likely to experience stunting & malnourishment
• Disproportionate risk for various diseases
  – Diabetes, hypertension, neurodegenerative conditions
• Greater psychological distress than U.S.-born Hispanics
• Job-related risks

Galler et. al., 1987; CDC, 2008 & 2011; Williams et al., 2010; Bartolini, et al., 2011; Chin, et al., 2011; Lorenzo-Blanco, et al., 2012; Strutt et al., In Review
Mood & Behavior

- Culture bound syndromes: Ataque de nervios, susto or espanto
- Endorse more symptoms when disorders are present; fewer disorders than Caucasians (i.e., “the Hispanic paradox”)
- Greater tendency to somaticize - Latinas with lower SES & acculturation levels
- Core features of mood disorders are invariant across cultures
- Psychosocial issues not addressed
  - Familismo (e.g., placing a high value on the needs of family members), respeto (i.e., honoring parents and the elderly), fatalismo (i.e., an orientation to the present over an uncertain future), gender roles
  - Impact of psychiatric disruptions

Skilback, et al., 1984; Myers et al., 2002; Gallo, et al., 2009; Lorenzo-Blanco et al., 2012; Strutt, et al., In Review
Identification & Stressors

Identity → Stigma

Stigma → Oppression

Oppression → Underserved

Underserved → Discrimination

Discrimination → Identity

Nettles & Balter, 2012
Can you break through?
Education & Training Opportunities
Training & Competence

- Little detail provided in Houston Conference guidelines
- Formal integration of multicultural issues to foster cultural competence in curricula, didactics, & training is unknown
- Limited number of APA-approved internships with Hispanic supervisors who evaluate Spanish-speakers
- Less opportunities for post-doctoral training that includes Spanish-speaking faculty and/or provides clinical experience with Hispanics
- Currently 12 post-doc fellow members of HNS
- Despite findings by Echemendia et al, neuropsychologists with little training continue to provide services
- Problem- more cases, less personnel, little training = crisis in the making

Echemendia, Harris, Congett, Diaz, & Puente, 1997; Hannay et al., 1998; Salinas, et al., In Review
Early Education

- Difficulties at all levels of training & professional development
- Increase in proactive efforts
- “Fractured pipeline”
- Lack of funding mechanisms, mentorship, research
  - 4% of college faculty are Hispanic
  - Fewer in graduate programs with neuropsychology tracks
- Hispanics - 8.8% Bachelor’s Degree in Psychology; 5.8% at the Doctorate level
- Hispanics represented 7% (179/2650) of students who applied for internships via APPIC matching system in 2010
- Ethnic minorities - disproportionately underrepresented

Assessment Tools & Normative Data
Consequences of Issues Regarding Assessment of Spanish-speakers

• Current translations must be reviewed
  – Differences between Spanish & English cultures
    • Test equivalence
    • Reliability
    • Validity

• Can culture be held constant so the construct in question is accurately measured?
  – Time factor
  – Acculturation
  – Different cognitive styles
  – Bilingualism
  – Level of education
  – Socio-economic status

• Implications of using translated tests
Test Selection

• Theoretical orientation
• Standardization
  – Procedures; sample; inclusion/exclusion; norms
• Reliability & validity
  – Research vs. clinical tools
• Adapted vs. translated
  – Generalizability
• Appropriateness
  – Examinee variables

Quiros, 2014
Normative Data Sets

- Standardized translations & cultural modifications
- Interpretation can be complex
- Normative data - scarce & often incomplete
- Effect of education on cognition is asymptotic
- Caucasians: 10 years of education - 91.5%
- Many U.S. norms stratified by age
- Age-by-education stratified norms are often necessary
- Specificity is compromised; multiple caveats in interpretation

Ostrosky-Solis, et al., 2007; Renteria et al., 2008; Artiola i Fortuny, 2009; U.S. Census Bureau, 2010; Mindt, Byrd, Saez, & Manly, 2010; Mayeaux et al., 2011; Strutt, et al., 2011; Strutt, et al., 2012; Robbins et al., In Review
Normative Data Sets Cont’d.

• Group-specific normative sets
• Better diagnostic accuracy (reducing Type I error)
• Clinicians are warned against decreasing sensitivity (increasing Type II error)
• Aware: small sample sizes & samples of convenience with reduced within-group variability
• Data for Spanish-speakers should focus on factors that create observed ethnic differences
  – Acculturation, quality of education, length of residence outside the U.S., and extent of English language use

Boone, Boone, Victor, When, Razani, & Ponton, 2007; Strutt et al., In Review
Table 1. A Sampling of Neuropsychological Assessment Tools Adapted and/or Validated for Spanish-speaking Adults

<table>
<thead>
<tr>
<th>Attention/Working Memory</th>
<th>Stimuli</th>
<th>Norms</th>
<th>Validity</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Sustained Attention Test</td>
<td>T</td>
<td>X, Age</td>
<td>U.S.</td>
<td>Strutt et al., under review</td>
</tr>
<tr>
<td>Batteries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batería III Woodcock Munoz</td>
<td>A/T</td>
<td>X, Age or Edu</td>
<td>U.S.</td>
<td>Woodcock et al., 2007</td>
</tr>
<tr>
<td>Batería Neuropsicológica en Español (BNE)</td>
<td>A/N/T</td>
<td>MA, SA, Age x Edu</td>
<td></td>
<td>Artiola i Fortuny et al., 1999</td>
</tr>
<tr>
<td>Escala de Inteligencia de Wechsler para Adultos III (EIWA-III)</td>
<td>A</td>
<td>PR</td>
<td>Age</td>
<td>Wechsler, 2008</td>
</tr>
<tr>
<td>Evaluación Neuropsicologico Breve en Español (NEUROPSI)</td>
<td>A/N</td>
<td>M, Age x Edu</td>
<td></td>
<td>Ostrosky-Solis et al, 1994</td>
</tr>
<tr>
<td>Dementia Rating Scale Second Edition (DRS-2)</td>
<td>A</td>
<td></td>
<td></td>
<td>Strutt et al., 2012</td>
</tr>
<tr>
<td>General Ability Measure for Adults</td>
<td>T</td>
<td>US, Age</td>
<td>Spain</td>
<td>Naglieri &amp; Bardos, 1997</td>
</tr>
<tr>
<td>Mini Mental Status Exam</td>
<td>A</td>
<td>S, Age &amp; Edu</td>
<td></td>
<td>Folstein et al., 1975; Blesa, 2001</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>M, Age &amp; Edu</td>
<td></td>
<td>Peña-Casanova et al., 2009</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>X, Age</td>
<td></td>
<td>Ostrosky-Solis et al., 2000</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td></td>
<td></td>
<td>Strutt et al., under review</td>
</tr>
<tr>
<td>NEURONORMAS</td>
<td>A</td>
<td>S</td>
<td>Spain</td>
<td>Peña-Casanova et al., 2009</td>
</tr>
<tr>
<td>Neuropsi Attention and Memory</td>
<td>A/N</td>
<td>M, Age x Edu</td>
<td></td>
<td>Ostrosky-Solis et al., 2007</td>
</tr>
<tr>
<td>Neuropsychological Screening Battery for Hispanics</td>
<td>A</td>
<td>MA, Age x Edu x Sex</td>
<td></td>
<td>Ponton et al., 1996</td>
</tr>
</tbody>
</table>

1 This is a partial list; a more comprehensive list is available at [http://hnps.org/test-database/](http://hnps.org/test-database/)
# Top 25 Most Utilized Spanish Tests

**Frequency and Rank Order of Top 25 most utilized Spanish Tests**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Trail Making Test (TMT)</td>
<td>35</td>
<td>76.1%</td>
</tr>
<tr>
<td>2- Beck Depression Inventory (BDI-II)</td>
<td>33</td>
<td>71.7%</td>
</tr>
<tr>
<td>3- Boston Naming Test (BNT)</td>
<td>29</td>
<td>63.0%</td>
</tr>
<tr>
<td>4- Test of Memory Malingering (TOMM)</td>
<td>28</td>
<td>60.9%</td>
</tr>
<tr>
<td>5- Beck Anxiety Inventory (BAI)</td>
<td>27</td>
<td>58.7%</td>
</tr>
<tr>
<td>6- Inventario Multifásico de Personalidad de Minnesota-2 (MMPI 2)</td>
<td>26</td>
<td>56.5%</td>
</tr>
<tr>
<td>6- Stroop Test de Colores y Palabras (STROOP)</td>
<td>26</td>
<td>56.5%</td>
</tr>
<tr>
<td>7- Bateria III Woodcock Muñoz (BATERIA III)</td>
<td>24</td>
<td>52.2%</td>
</tr>
<tr>
<td>8- Vineland Adaptive Behavior Scales (VABS)</td>
<td>23</td>
<td>50.0%</td>
</tr>
<tr>
<td>9- Color Trails Test (CLT)</td>
<td>22</td>
<td>47.8%</td>
</tr>
<tr>
<td>9- Escala de Inteligencia de Wechsler para Adultos III (EIWA III)</td>
<td>22</td>
<td>47.8%</td>
</tr>
<tr>
<td>9- Raven Matrices Progresivas (RAVEN)</td>
<td>22</td>
<td>47.8%</td>
</tr>
<tr>
<td>10- Escala Wechsler de Inteligencia para Niños IV (WISC IV)</td>
<td>21</td>
<td>45.7%</td>
</tr>
<tr>
<td>10- Evaluación Neuropsicológica Breve en Español (NEUROPSI)</td>
<td>21</td>
<td>45.7%</td>
</tr>
<tr>
<td>11- Wechsler Adult Intelligence Scale Third Edition (WAIS III)</td>
<td>20</td>
<td>43.5%</td>
</tr>
<tr>
<td>12- Wechsler Memory Scale 3rd Edition (WMS III)</td>
<td>19</td>
<td>41.3%</td>
</tr>
<tr>
<td>13- California Verbal Learning Test (CVLT)</td>
<td>18</td>
<td>39.1%</td>
</tr>
<tr>
<td>13- Examen Cognoscitivo Mini-Mental (MMSE)</td>
<td>18</td>
<td>39.1%</td>
</tr>
<tr>
<td>13- Test de Copia de una Figura Compleja de Rey (RCF)</td>
<td>18</td>
<td>39.1%</td>
</tr>
<tr>
<td>14- Escala de Inteligencia Wechsler para Adultos (EIWA)</td>
<td>17</td>
<td>37.0%</td>
</tr>
<tr>
<td>15- Test de Vocabulario en Imagenes Peabody (PEABODY)</td>
<td>16</td>
<td>34.8%</td>
</tr>
<tr>
<td>15- Test de Clasificacion de Tarjetas de Wisconsin (WCST)</td>
<td>16</td>
<td>34.8%</td>
</tr>
<tr>
<td>16- Bateria Woodcock Muñoz (BWM)</td>
<td>15</td>
<td>32.6%</td>
</tr>
<tr>
<td>17- Adaptive Behavior Assessment System (ABAS-II)</td>
<td>14</td>
<td>30.4%</td>
</tr>
<tr>
<td>17- Prueba Beery Buktenica del Desarrollo de la Integración Visomotriz (VMI)</td>
<td>14</td>
<td>30.4%</td>
</tr>
</tbody>
</table>

Puente, Ojeda & Zink, In press
Example: **WAIS-III in Capital Cases**

*Atkins v Virginia* – execution of the mentally retarded, a violation of the Eighth Amendment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mexican Norms</th>
<th>English Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Scale IQ</td>
<td>79</td>
<td>66</td>
</tr>
<tr>
<td>Confidence Intervals</td>
<td>65 – 105</td>
<td>63 – 71</td>
</tr>
<tr>
<td>Mentally Retarded</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Death Penalty</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>
Interpreters vs. Translators
Interpreters vs. Translators

• Refer to bilingual colleague
• Professionals who are adequately trained & have appropriate certifications
• Professional interpreters who have experience & familiarity with neuropsychological evaluations
• Family members should be avoided
• Neuropsychologists may need to gain informal & formal training
• Document the use of an interpreter or other personnel (e.g., Spanish speaking psychometrist) & translations used

Judd, et al., 2009
Evolution of Clinical Practice

Hispanic Neuropsychology Subspecialty
History of Hispanic Neuropsychology

• Publication
  – First book: *Neuropsychological Evaluation of the Spanish Speaker*
  – First Journal; *Revista Neuropsicologia, Neuropsiquiatria y Neurociencias*
  – First online book: *Guia para el diagnostico neuropsicológico*

• Presentation
  – First NAN presentation was in 1996

• Organization
  – Hispanic Neuropsychological Society
Hispanic Neuropsychology

• Only 42 professional members of HNS & <1% are reportedly Spanish-speakers
• NAN - 96 (of over 3,000) members identify themselves as professionals who can provide clinical services in Spanish
• AACN directory: 767 board-certified neuropsychologists
  – 19 identify themselves as able to provide clinical services in Spanish

Romero, et al., 2009; Salinas, Bordes-Edgar, & Puente, In Review
AACN Guidelines 2007

• Available for underserved populations & cultural issues

• Limitations:
  – Brief
  – Offer little in practical suggestions for creating a pathway for neuropsychologists to gain appropriate training & experience
  – Do not provide minimum competency levels

AACN, 2007; Mindt, Byrd, Saez, & Manly, 2010
NAN Position Paper 2009

• Guidance: service delivery, training & organizational policy
  – Cultural & linguistic competence
  – Languages of evaluation; acculturation
  – Use of interpreters
  – Test translation, adaptation & interpretation
  – Test norms
  – Intervention

Judd, Capetillo, Carrion-Baralt, Marmol, San Miguel-Montes, Navarrete, Puente, Rodas Romero, & Valdes, 2009
A Call To Action

• Need to increase neuropsychological services for ethnic minorities
• Health disparities
• Current challenges
• Previous & continuing efforts
• Involvement
• Tools & resources

Mindt, Byrd, Saez, & Manly, 2010
Hispanic Neuropsychology Subspecialty

1. Science & theory
2. Tests & norms
3. Personnel
4. Standard of care
5. In our lifetime?
Testing Standards & Guidelines
New Testing Standards

• Major revision of 1999 being published & available within the next several weeks (Spring, 2014)

• Major change:
  – Three core principles and chapters
    • Reliability
    • Validity
    • Fairness
    – Applied validity
    – Reduction of construct irrelevance
Fairness

“Absolute fairness to every examinee is impossible to attain, if for no other reasons than the fact that tests have imperfect reliability and that validity in any particular context is a matter of degree.”

(AERA, 1999; p. 73)

However:

1. Instruments should be reviewed carefully
2. Should be subjected to empirical checks in order to decrease bias
3. Language differences should not decrease the reliability and validity of test scores
Examinee Variables
Examinee Variables to Consider

- ID of client
- Referral/reason
- Medical & mental health
- Motivation
- Socio-demographics
- Immigration
- Standardized testing experience
- Test-wiseness
- Trauma
- Status
- SES
- Race & Ethnicity
- Culture
- Language
- Acculturation
- Education
- Secondary gain
- Repercussion
- Ct perspective

Robbins, Schuler, Ferrett & Strutt, In press
Examiner Variables
Empirically Based Decision-Making Model

**Test Selection**
- Examinee variables
- Verbal vs. non-verbal
- Availability of standardized measures

**Normative data**
- Availability
- Quality
- Sample
- Expected performance
- Proximity/similarity
- Generalizability

**Testing Session**
- Intro to procedures
- Test naiveté/intimidation
- Behavior observations
- Interpreter
Empirically Based Decision-Making Model

Third Party Involvement
- Interpreter
- Family/care provider
- Other collateral informants
- Record review

Debriefing
- Examinee

Test Interpretation
- Standardized scores
- Qualitative data
- Qualitative modification in interpretation
- Socio-demographic influences
- Clinical practice experience
- Base rates
Empirically Based Decision-Making Model

Diagnostic Impression
- Reliability and validity
- Limits of clinical impression
- Limit interpretation to referral question

Dissemination of Outcomes
- Referral source

Reference
- Robbins, Schuler, Ferrett, & Strutt, In press
Suggested Readings


Resources

• American Psychological Association
  – Ethical Standards for Psychologists
  – Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists
  – Standards for Educational and Psychological Tests & Assessments
• National Academy of Neuropsychology
• Hispanic Neuropsychological Society
• Available book chapters & articles
  – www.antonioepuente.com
  – www.alfredoardila.wordpress.com
Gracias
Q & A