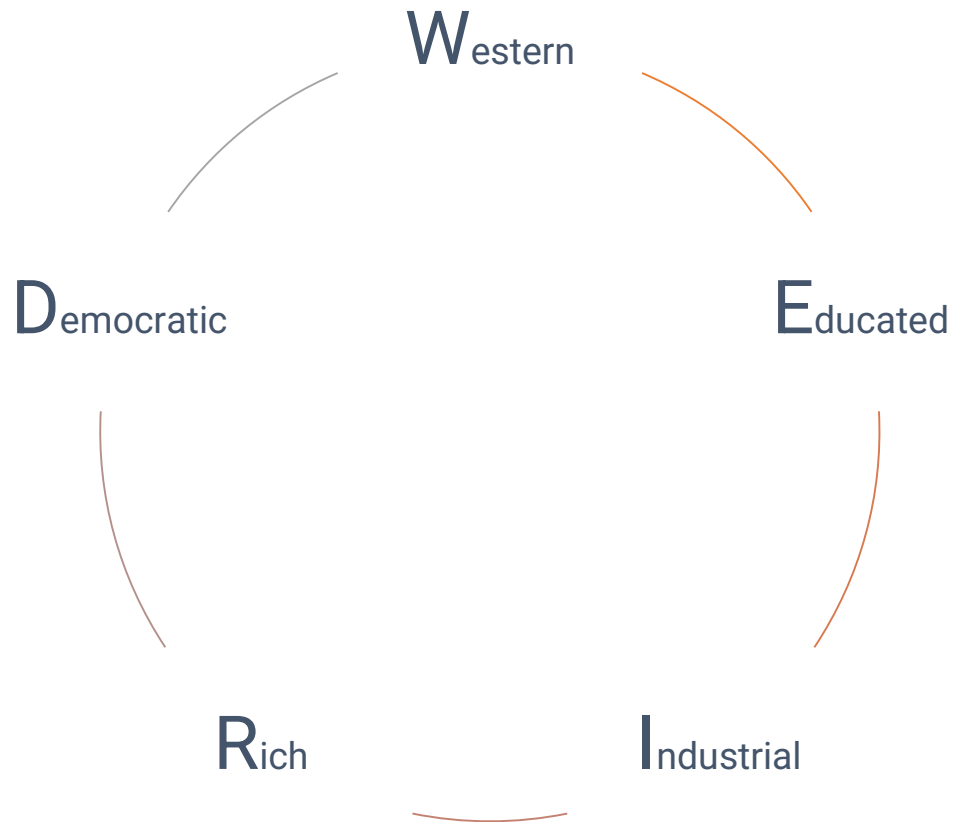


TRANSLATION AND ADAPTATION INTO ITALIAN OF CROSS-CULTURAL COGNITIVE ASSESSMENT TOOLS: BASIC, RUDAS & CNTB

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- E**
EDUCATION
- C**
CULTURE & ACCULTURATION
- L**
LANGUAGE
- E**
ECONOMIC ISSUES
- C**
COMMUNICATION STYLE
- T**
TESTING SITUATION
- I**
INTELLIGENCE
- C**
CONTEST OF IMMIGRATION

... From **WEIRD** to **ECLECTIC**

Why adaptation matters

Standardized tests may not generalize across cultures

Translation alone risks bias and misclassification

Implications for epidemiology, clinical decisions, and equity

	Culture	Language	Country	Translation	Cultural adaptation
Same population, no change in culture, language or country from source					
Established immigrant in source country	✓				✓
Other country, same language	✓		✓		✓
New immigrants, different language, same source country	✓	✓		✓	✓
Another country, another language	✓	✓	✓	✓	✓

Most tests were created in ONE culture. But people taking them come from MANY cultures.

*Language ≠ culture.
Culture ≠ homogeneity.*

CULTURAL VARIABLES WITH A SIGNIFICANT IMPACT ON NEUROPSYCHOLOGICAL PERFORMANCE



TEST PERFORMANCE

- education
- language
- numbers & measures
- communication
- behaviour processes and personality
- socialization



WIDER ASPECTS OF ASSESSMENT

- interpersonal relations
- family & social status
- early development
- health & welfare
- religious beliefs
- justice & law
- history

RECOGNIZED BIASES IN TEST ITEMS

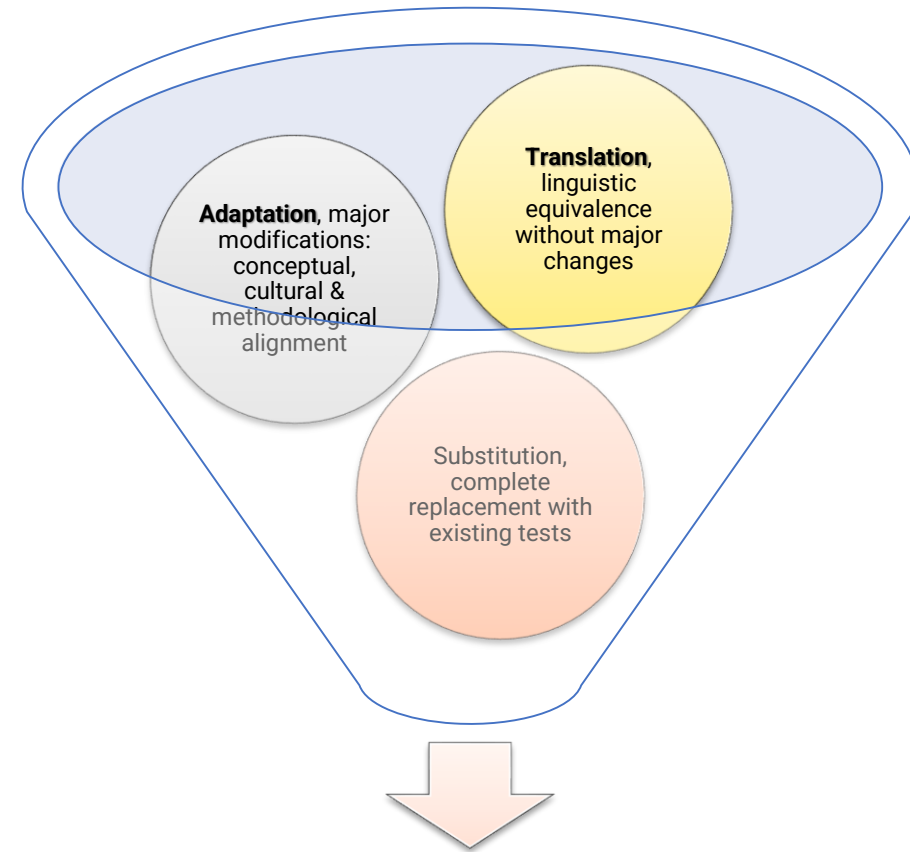
Item type	Examples	Potential bias	Observed bias
ORIENTATION TO TIME	Date / season	Requires habitual use of western calendar; meaning of season	Cultural Educational
ORIENTATION TO PLACE	Address / names of nearby streets	Requires familiarity with country of living address styles	Cultural
ATTENTION / CONCENTRATION	Serial subtractions Backward spelling	Requires literacy, numeracy in language of test	Educational
MEMORY FOR PREVIOUSLY LEARNED INFORMATION	Date of prominent public events Own date of birth	Requires familiarity with culture, prominent people / events or accurate knowledge of own date of birth	Ethnic group
MEMORY FOR NEW INFORMATION	Recall names of objects / phrases	Requires familiarity with type of material learned	Cultural Educational
LANGUAGE	Follow written / verbal commands Write sentence	Requires literacy / fluency in language of test	Cultural Educational
VISUO-SPATIAL SKILLS	Copy complex figure	Requires familiarity with geometric shapes	Cultural Educational

Adaptation vs. Translation

Translation: linguistic equivalence only

Adaptation: conceptual, cultural & methodological alignment

Need for multi-step, interdisciplinary processes



DEVELOPMENT OF INNOVATIVE TOOLS

If a test doesn't "fit" someone's background, the results can be: misleading, unfair or harmful for care and support

ITEM INCLUSION CRITERIA IN THE DEVELOPMENT OF RUDAS

Good construct validity

Independent of factors rich in cultural and linguistic variance or specific to a small number of cultures and languages

Endorsed by interpreters

Relatively short and easy to administer, without the need for complex stimuli or cue cards

• Full name, country of birth, country now, city or town, month, day of week, 4-item animal recall, **4-item grocery recall**, boy-big-dog sentence recall, circle pointing, children-fire story recall, design recognition and recall

Orientation, memory and learning



• **Body orientation**, body placement, tell the time, pattern discrimination, copy (**cube**, lemniscates, intersecting pentagons, draw clock)

Visuo-spatial & gnosis (including construction & drawing)



• **Animal generation**, food generation, naming objects, 3-stage command, naturalistic conversation on childhood games, **crossing the road**, bathroom fall, kitchen fire, locked-out

Language & judgement



• Symbol cancellation, days of week reversed, counting backwards from 20, finger tapping, ramparts

Attention & perseverance / initiation



• Simple maze, simple commands, **fist-palm alternation task**, fist-palm-side task

Planning & praxis

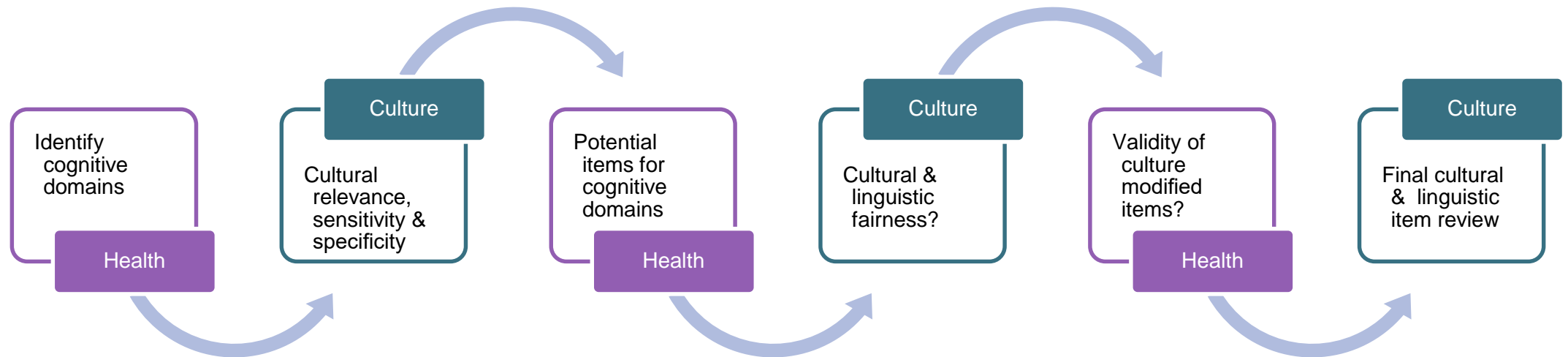
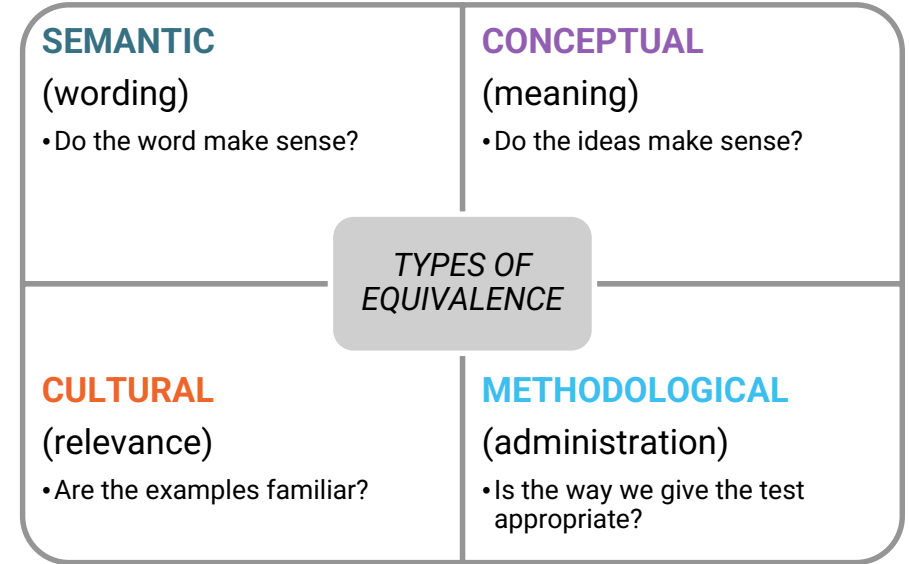
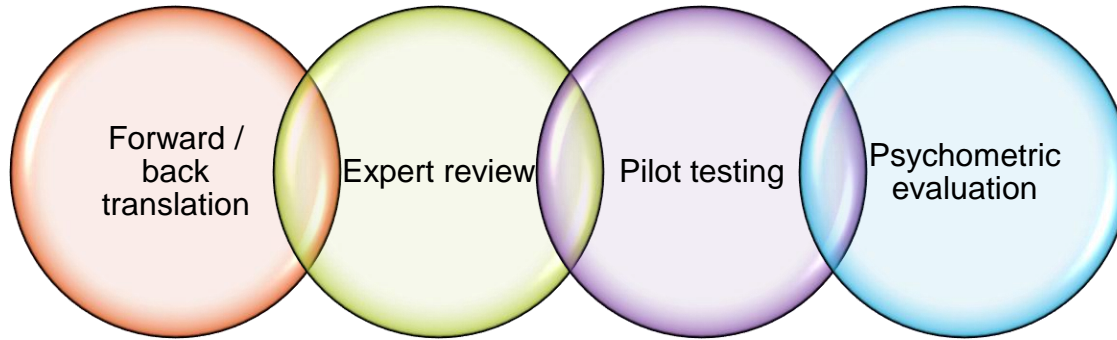


• Self-rated insight, assessor-rated insight, behavioural rating by assessor, functional rating by assessor

Insight, behaviour & function

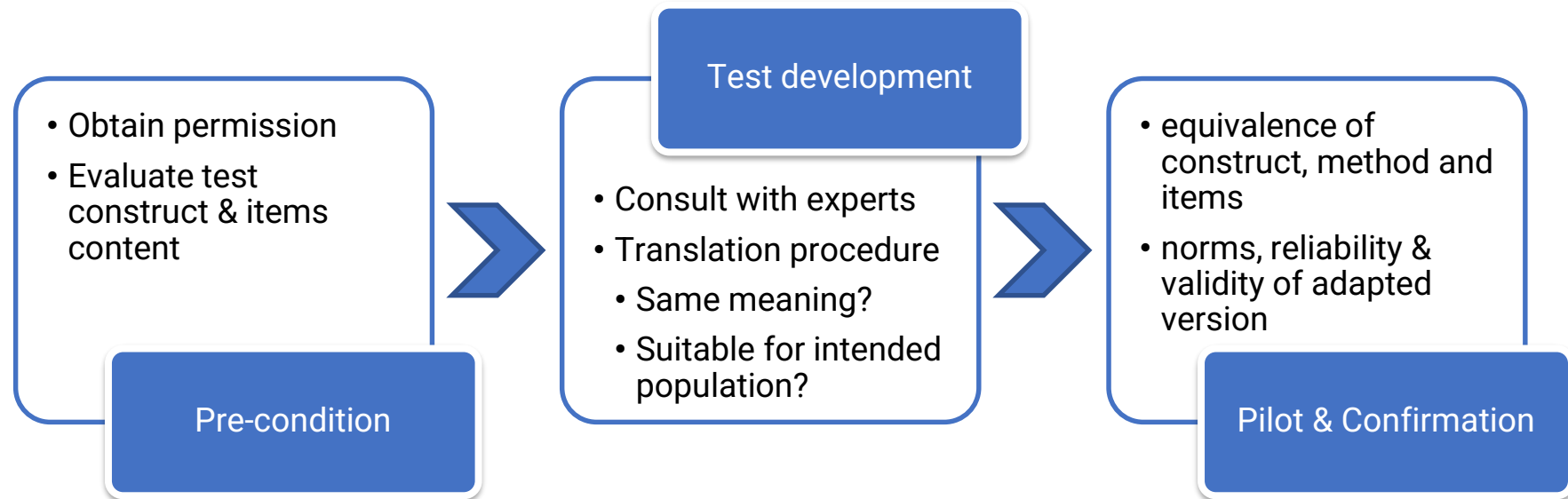


KEY STAGES OF ADAPTATION



BALANCE BETWEEN HEALTH AND CULTURAL ISSUES

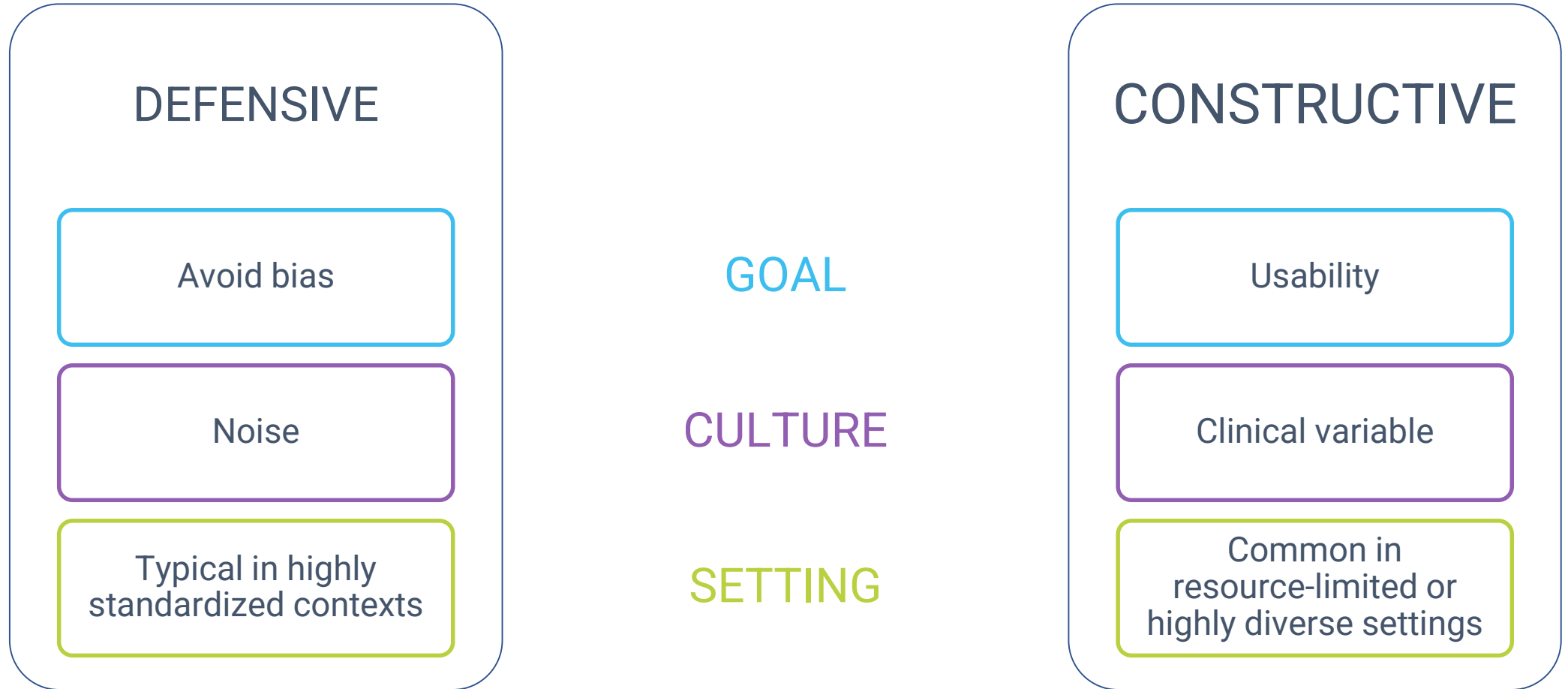
NEUROPSYCHOLOGICAL APPLICATION OF THE INTERNATIONAL TEST COMMISSION GUIDELINES FOR TRANSLATION AND ADAPTING OF TESTS



THROUGHOUT THE PROCESS

- provide technical **documentation of changes**, including evidence of equivalence, when a test is adapted to a different population
- provide documentation to support good practice in the use of an adapted test in the **target population**

TYPES OF ADAPTATION



DEFENSIVE

Avoid bias

Noise

Typical in highly standardized contexts

CONSTRUCTIVE

Usability

Clinical variable

Common in resource-limited or highly diverse settings

GOAL

CULTURE

SETTING

PSYCHOMETRICS VS. FEASIBILITY



Academic priorities:

- Validity
- Reliability
- Comparability

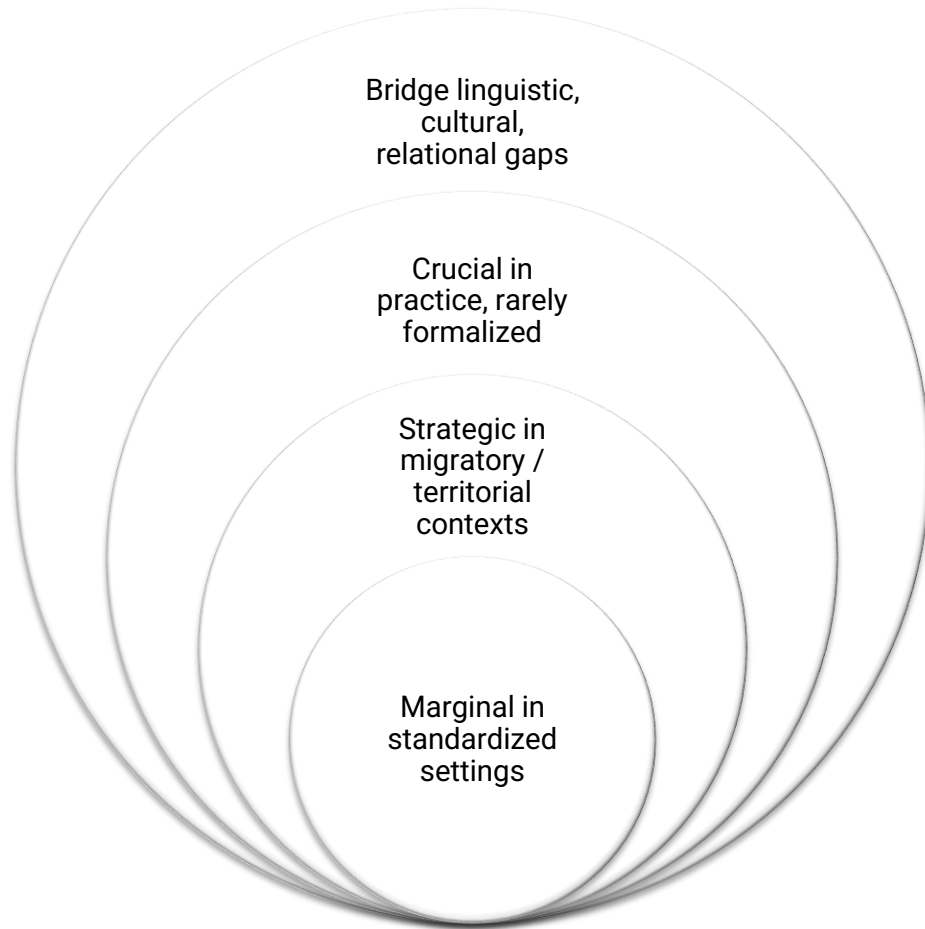


Public health priorities:

- Speed
- Acceptability
- Sustainability

Quality depends on objectives, not only on statistics

THE CULTURAL MEDIATOR



Major role

- Knowledge
- Ability to explain
- Support
- Insight

Key Tasks

- Clarify meaning
- Flag cultural mismatches
- Support communication
- Maintain neutrality

What Should Be Avoided

- Explaining the solution
- Changing the difficulties
- Adding examples
- Speaking privately with the patient
- Minimizing or hiding

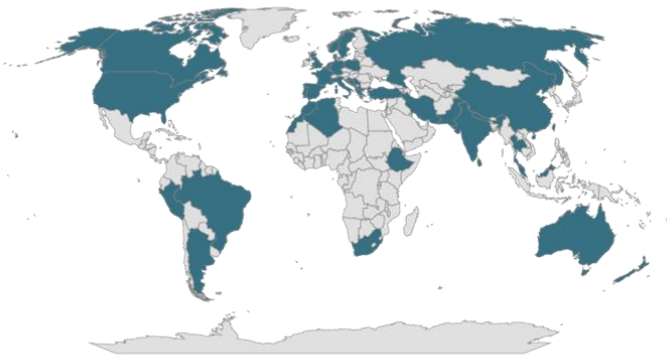
What Clinicians Need

- Honesty
- Real-time feedback
 - Collaboration not correction
 - Cultural insight not test interpretation

The hidden hero. They help the test “speak the same language” as the person — in meaning, not just words.

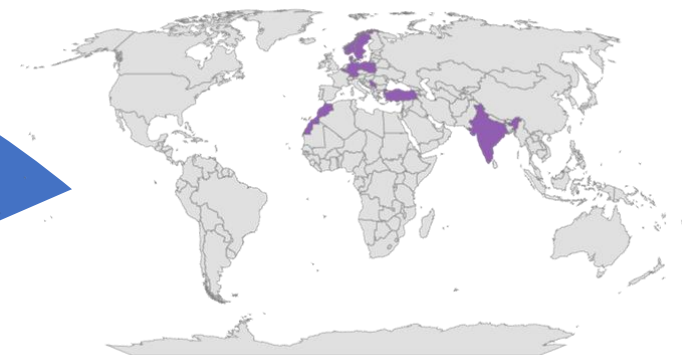


Community-based screening
(BASIC, est. 2019)



Con tecnologia Bing

Cinical use
(RUDAS, est. 2004)








Con tecnologia Bing

In-depht culturally adapted assessment
(CNTB, est. 2018)

Figure 1: Adaptation of CNTB subtests (A: Enhanced Cued Recall Task)

Figure 1A. Enhanced Cued Recall Task

Item	Category in original version	Category in italian adapted version	Reason for adaptation
	<u>animal</u>	<u>animale feroce</u> (ferocious animal)	other animals are present in the task (an eagle and a spider)  
	<u>ship</u>	<u>mezzo di navigazione</u> (<u>mean of navigation</u>)	in Italian, the equivalent word for “ship” (barca) is embedded in the name of the object (barca a vela)
	<u>clothes</u>	<u>cosa che si indossa</u> (<u>something you wear</u>)	Twenty-one out of 40 participants preferred “something you wear” to “item of clothing”, considering that the Italian alternative was not easily associated with accessories such as shoes.

Adaptation of RUDAS items		
Original version	Italian adapted version	Reason for adaptation
Tea	Coffe	Improvement of ecological familiarity
Cooking oil	Olive oil	

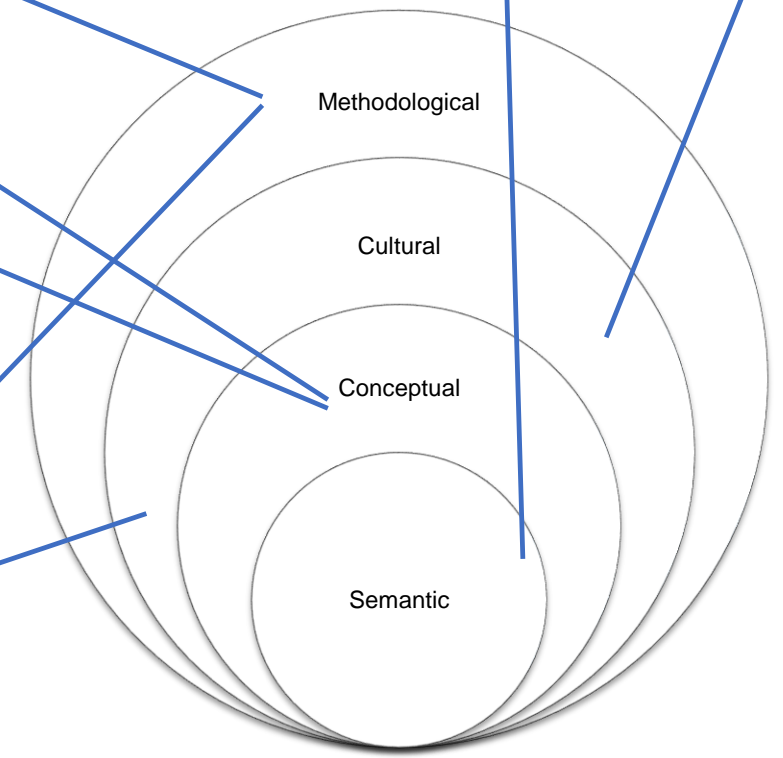


Figure 1B. Continuous subtraction of 20-3

Instructions in original version	Instructions in italian adapted version	Reason for adaptation
Please subtract 3 from 20 and continue to subtract 3 from the answer you get, until I say stop.	Please start with 20 and remove 3, then remove another 3 from the result and continue like this until I stop you.	The original version was considered unclear by 10 out of the 40 participants in the pilot study. The simplified version was correctly understood by all participants.

Challenges:

Operational constraints

Validity across heterogeneous groups

Limited norms

Future Needs:

Integration into public health systems

Interdisciplinary collaboration

Culturally informed strategies



Take-home message

Everyone deserves a fair test.

To make that happen, we need tools that respect people's languages, cultures, and life experiences ...

... not just their answers.

