

# Psychometric properties of the Spanish version of the Edinburgh Handedness Inventory in a sample of Chilean undergraduates

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An individual's nervous and cognitive systems are lateralized, and handedness represents a behavioral manifestation of such organization. Therefore, accurately and reliably measuring handedness has repercussion on our understanding of both the human brain and cognition. The Edinburgh Handedness Inventory (EHI) is the most frequently used instrument to measure handedness both in clinical practice and research. We assessed the psychometric properties of the Spanish version of the EHI in a sample of 348 Chilean university students by confirmatory factor analysis. Cronbach's alpha and composite reliability were calculated to evaluate the internal consistency and reliability of the EHI, while the average variance extracted was estimated to evaluate its convergent validity. A 10-item unifactorial structure was confirmed, with factor loadings  $>0.50$ , showing excellent goodness-of-fit indicators, very high internal consistency and adequate composite reliability and convergent validity. Socio-demographic variables (sex, area of residence and belonging to an indigenous people or community) did not significantly modulate the EHI scores. Overall, by using this validated version of the EHI to accurately and reliably measure handedness in the greater Spanish population, researchers will be able to produce robust data to tackle the still open questions of lateralization in human cognitive and neural architecture. © 2019 Elsevier Inc.

Confirmatory factor analysis

Edinburgh Handedness Inventory

Handedness

Reliability

article

confirmatory factor analysis

convergent validity

Cronbach alpha coefficient

handedness

human

human experiment

indigenous people

internal consistency

major clinical study

Spaniard

university student

adolescent

adult

Chile

factor analysis

female

hemispheric dominance

male

physiology

psychometry

questionnaire

reproducibility

student

young adult

Adolescent

Adult

Chile

Factor Analysis, Statistical

Female

Functional Laterality

Humans

Male

Psychometrics

Reproducibility of Results

Students

Surveys and Questionnaires

Young Adult