

Exploring demographic differences in a large-scale study of Spanish word association norms: The role of age, gender, and nationality

Gabriel Blanco-Gomez

University of Toronto, Toronto, Ontario, Canada

Simon De Deyne

University of Melbourne, Melbourne, VIC, Australia

Ivaro Cabana

Universidad de la Repblica, Montevideo, Uruguay

Blair Armstrong

University of Toronto, Toronto, Ontario, Canada

Abstract

Free association techniques, which involve listing the first word that comes to mind after a probe word (e.g., probe word DOG eliciting response BONE) are powerful tools in the cognitive sciences. However, their validity and generalizability depend on the total sample size and the diversity of the participant pool. We report a large-scale free association norming study conducted in Spanish, the most widely spoken and geographically diverse romance language, using the methodology laid out by De Deyne and colleagues (2019, BRM). Our results include 1 million responses to 5,000 cues from 20,000 participants. Using our norms, we explored how the demographic factors of age, gender, and nationality shaped responses. We observed that between 12-18% of cue-response pairs varied systematically based on these demographic factors. Our results illustrate how free associations can reveal broad similarities and systematic demographic differences in lexico-semantic structure.