

Introduction

Post-Traumatic Stress Disorder (PTSD) affects individuals across linguistic and cultural boundaries, yet psycholinguistic markers—patterns of language use linked to trauma—remain underexplored in diverse languages. Understanding these markers is critical for accurate diagnosis and culturally informed interventions. This study investigates PTSD-related psycholinguistic markers in French, English, Spanish, Italian and Arabic to identify language-specific and universal patterns.

Objectives

1. To identify and compare PTSD psycholinguistic markers across French, English, Spanish, Italian and Arabic.
2. To determine language-specific differences and universal patterns in the expression of trauma-related symptoms.
3. To assess the feasibility of AI tools and internet-based methodologies for cross-linguistic PTSD research.

Methods

This study employed an internet-based approach to recruit participants from French-, English-, Spanish-, Italian and Arabic-speaking populations. Participants self-reported experiencing a traumatic event and completed an online survey that included standardized PTSD symptom measures (the PCL for DSM-5) and open-ended questions about their experiences. The text responses were analyzed using AI and Natural Language Processing (NLP) techniques to identify psycholinguistic markers. AI specialized algorithms were adapted to account for the psychopathological processes in each language, ensuring accurate transdiagnostic and cross-linguistic comparisons.

Participants were stratified by language group, and statistical methods, including regression analysis and machine learning clustering, were applied to detect patterns in PTSD markers within and across languages. Ethical considerations, including informed consent, data anonymity, and cultural sensitivity, were prioritized throughout the study.

Results

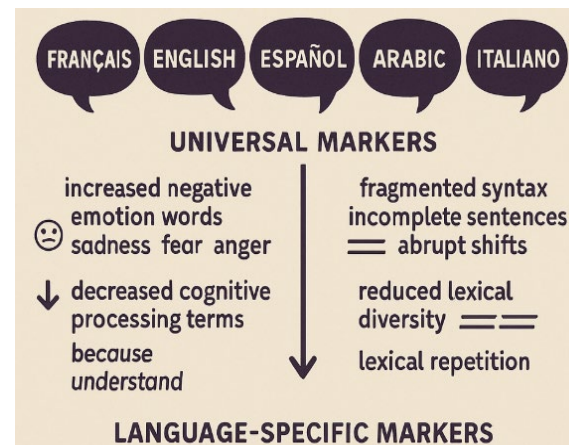
The study revealed universal and language-specific psycholinguistic markers of PTSD across French, English, Spanish, Arabic, and Italian, offering a nuanced understanding of trauma-related linguistic expressions.

Universal Markers

Participants with high PTSD symptom severity in all five languages consistently showed an increased use of negative emotion words and fragmented syntax. Additionally, there was a notable decrease in cognitive processing terms.

Language-Specific Markers

Distinct linguistic trends emerged in each language.



PSYCHOLINGUISTIC MARKERS OF PTSD

UNIVERSAL MARKERS

- Increased use of negative emotion words
sadness fear anger
 - Decrease in cognitive processing terms
because understand
- Fragmented syntax
I can't sleep because... I... _ _
- Lexical repetition and reduced lexical diversity

LANGUAGE-SPECIFIC MARKERS

