

# Language properties matter: evidence from vocabulary production in toddlers from low-income immigrant families in Italy with different heritage languages

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## 1 Background

The **vocabulary gap between bilingual and monolingual** children and the **relations between heritage language (HL) and majority language (ML)** in early vocabulary acquisition are still debated in the literature. For instance, positive associations were found between HL and ML vocabulary skills in English-French-speaking toddlers (Legacy et al., 2016) but not in Spanish-English-speaking toddlers (Marchman et al., 2010). In a recent study, bilingual toddlers showed a larger total vocabulary size than English-speaking monolinguals, and this difference was attributed to the **high proportion of translation equivalents** (cross-language synonyms) in their expressive vocabulary (Siow et al., 2023). One possible reason for the apparently contradictory findings in the literature is that the **specific ML-HL combination** varies from study to study, and the differences and similarities between the two languages may impact vocabulary acquisition. Indeed, higher **phonological overlap between HL and ML** led to higher levels of vocabulary production in the HL by bilingual toddlers learning English as the majority language (Floccia et al., 2018). Moreover, **cultural differences between different heritage language groups** is another insufficiently examined factor. Different language combinations need to be investigated to understand children's early bilingual vocabulary development across languages and cultures.

## 2 Aims

This study compared the vocabulary production in two-year-old monolingual Italian-speaking toddlers and bilingual toddlers paired for low-income conditions. Bilingual children were from two linguistic communities of immigrant families in Italy coming from different cultures and with heritage languages that differed in their phonological overlap with Italian: **Romanian and Nigerian English**.

## 3 Method

### Participants

N = 61 children of 24 months of age from equivalent low-income families  
**ROM bilingual group:** N = 22 children (8 f) from Romanian immigrant families exposed to Italian and Romanian  
**NEN bilingual group:** N = 17 children (8 f) from Nigerian immigrant families exposed to Italian and Nigerian English  
**MONO group:** N = 22 children from Italian families (11 f) exposed only to Italian

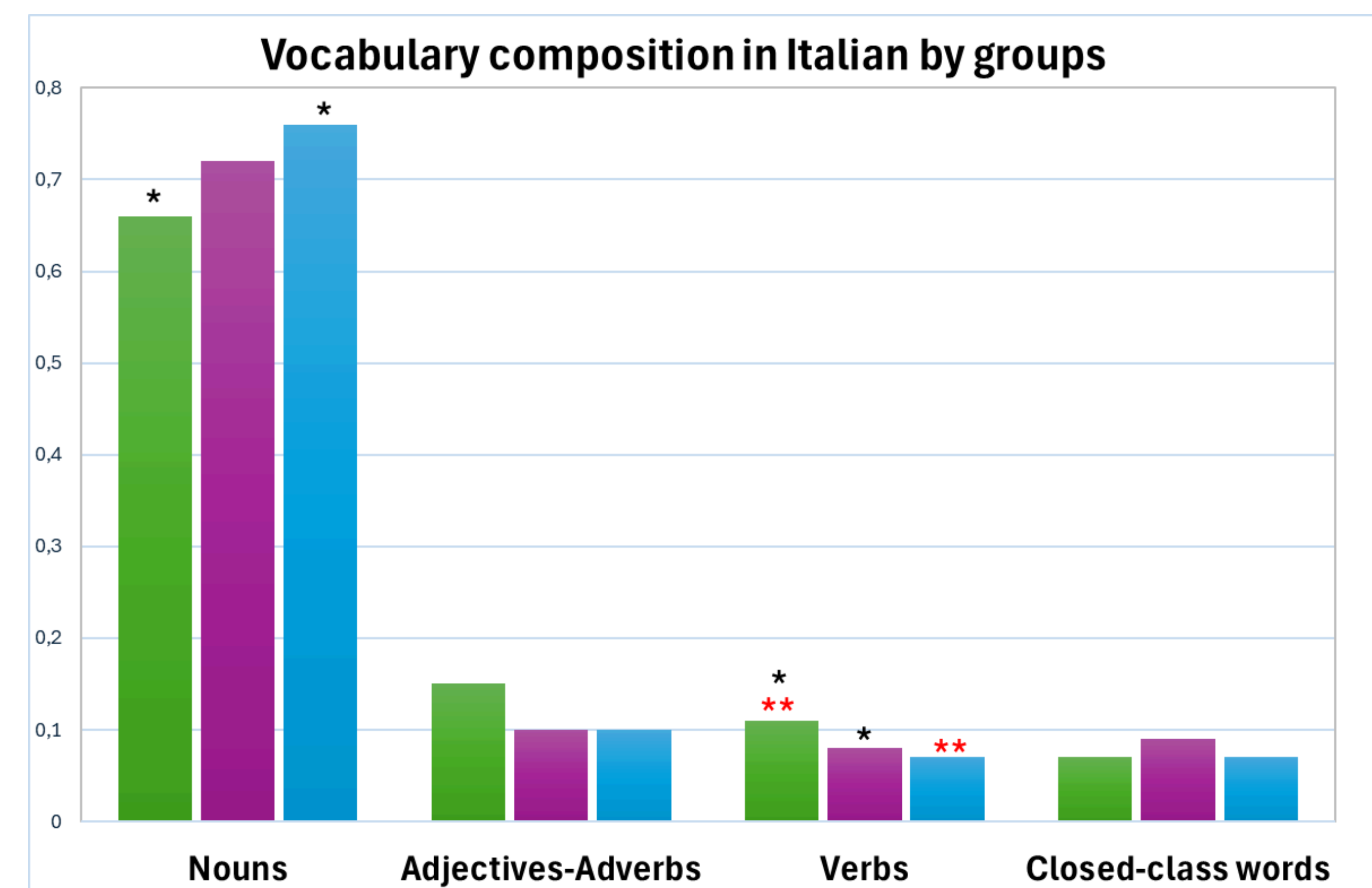
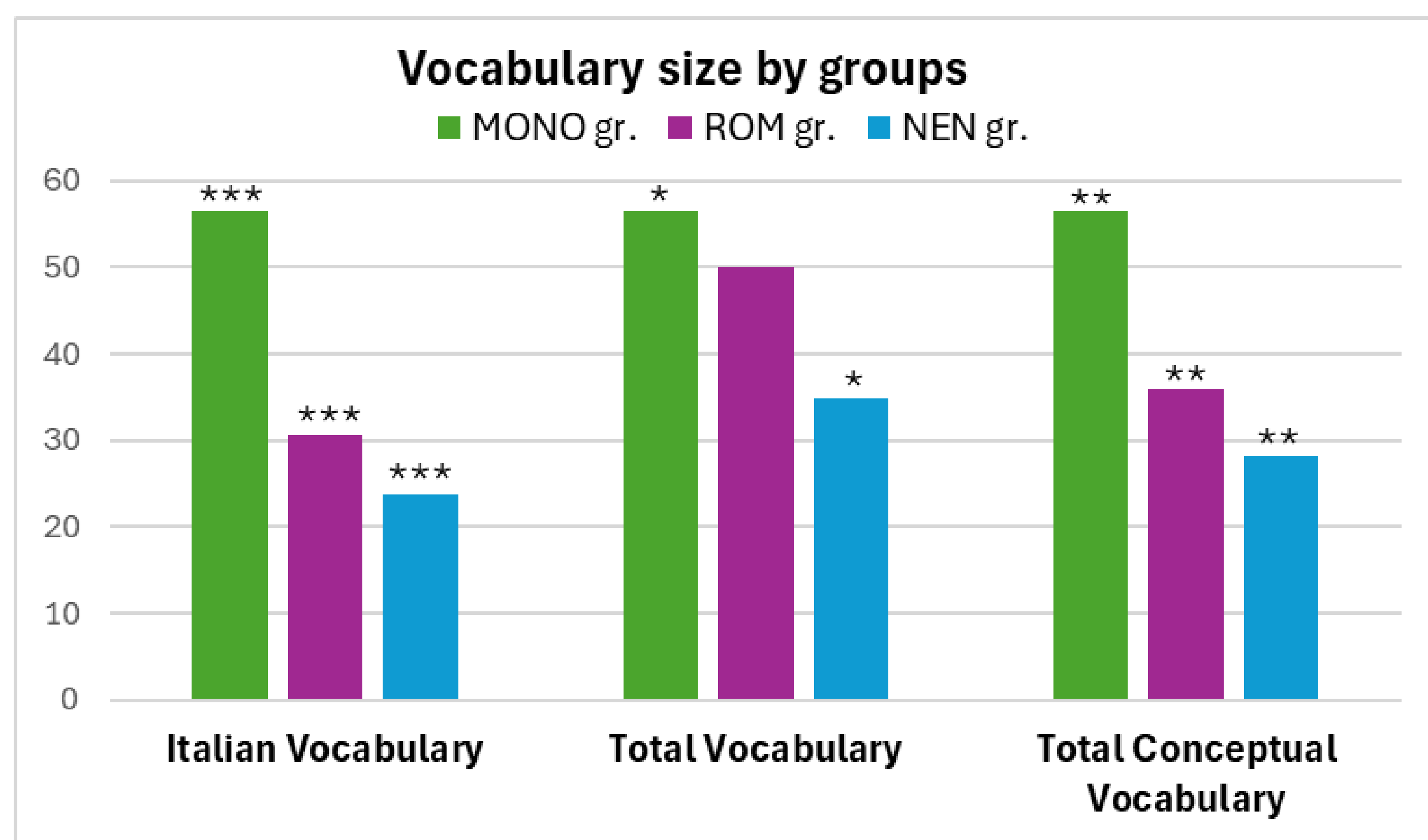
Percentage of weekly exposure to Italian: ROM = 48.8 (11.8); NEN = 57.1 (17.4)

### Measures and Procedure

- Vocabulary size:** single - language vocabulary in Italian and HL, total vocabulary, and total conceptual vocabulary
- Vocabulary composition in Italian:** nouns, verbs, adjectives-adverbs and closed-class words
- Translations Equivalents (TEs):** including (total TEs) and excluding cognates and semi-cognates

Vocabulary skills were assessed using the Italian/HL version of the CDI completed by nursery teachers and/or parents.

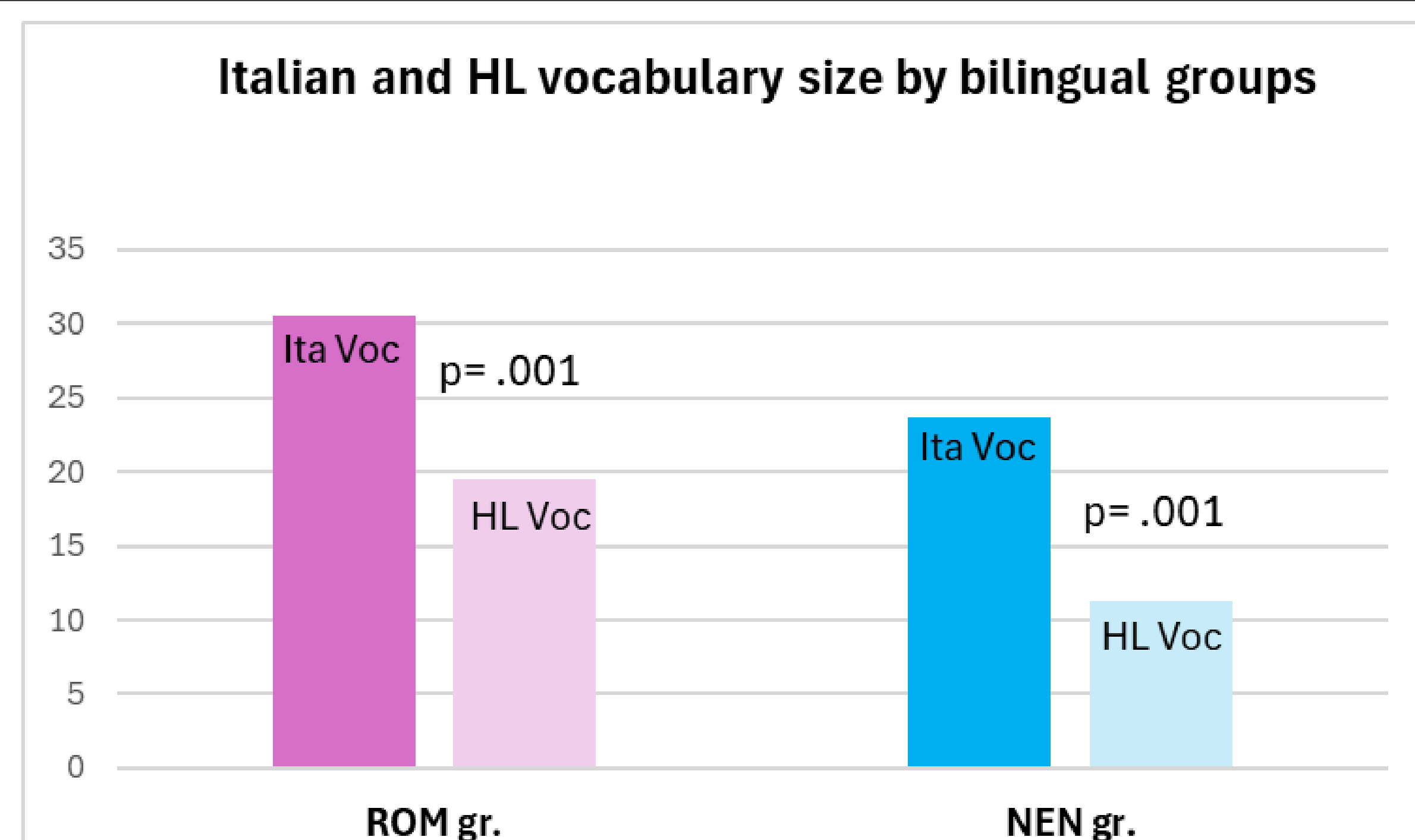
## 4 Results



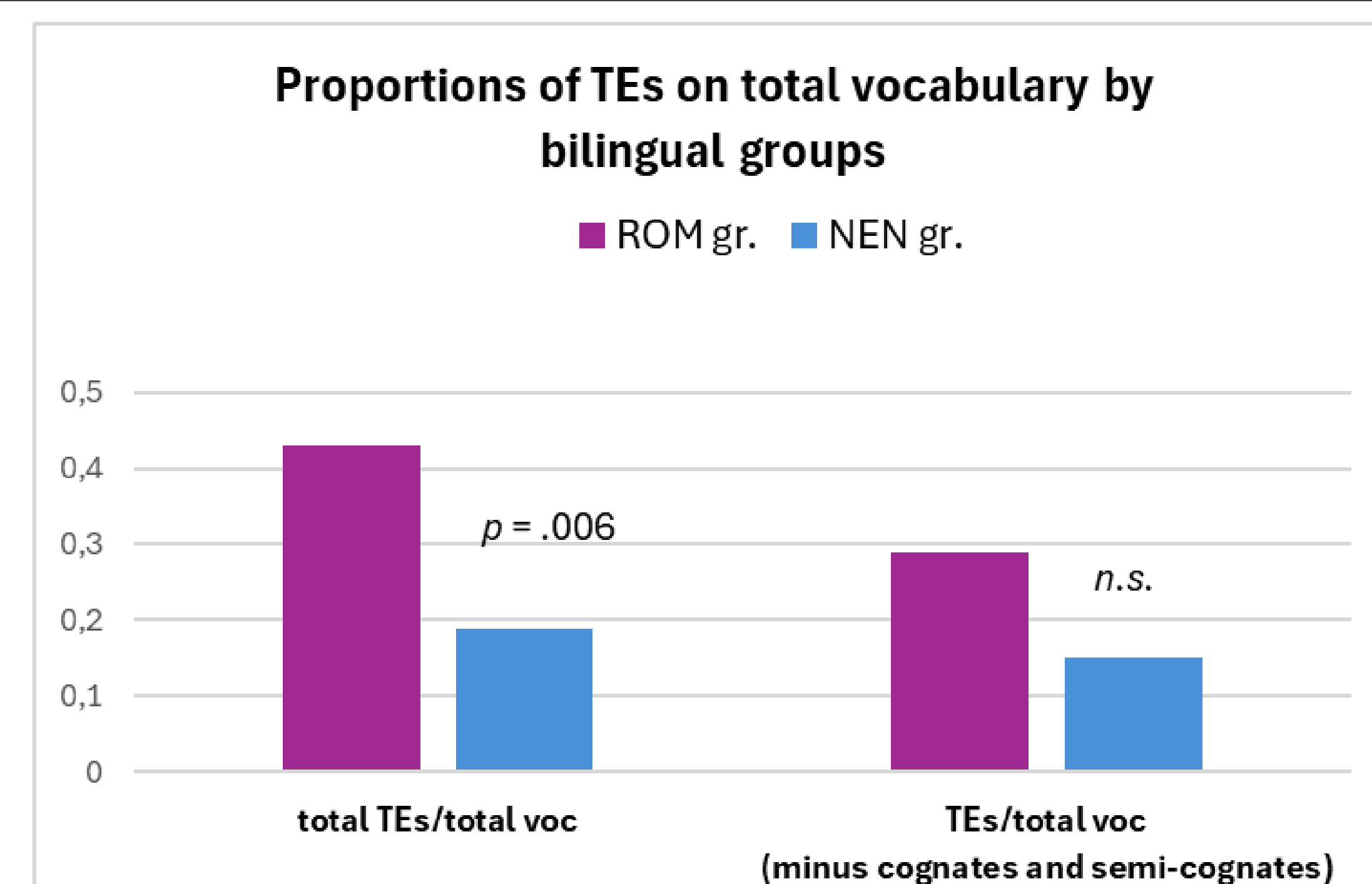
MONO vs. ROM and MONO vs. NEN comparisons. \*p < .05, \*\*p < .01, \*\*\*p < .001

- The Italian vocabulary and total conceptual vocabulary sizes of the bilinguals were significantly smaller than those of monolinguals
- Romanian-Italian-speaking children were comparable to monolinguals in total vocabulary
- No difference in vocabulary size between the bilingual groups

- All bilingual children showed significantly lower proportions of verbs than monolingual children
- NEN bilingual children showed significantly higher proportions of nouns than monolingual children



In both bilingual groups Italian vocabulary was significantly higher than HL vocabulary



ROM gr. produced a higher proportion of total TEs than NEN gr. but no differences emerged when cognates and semi-cognates were excluded from the count of TEs

## 6 Discussion

Evidence of a **gap between bilingual and monolingual toddlers** in early expressive vocabulary in the majority language, although both groups were **equivalent for low-income condition**.

The **dominance of the majority language in the expressive vocabulary** of young bilingual children from immigrant families regularly speaking their heritage languages suggests that we need to deepen our understanding of the role of educational and cultural contexts in multiple language acquisition.

Evidence of a **cross-language activation based on the phonological form** is in line with the hypothesis that phonological similarity plays a facilitation role in bilingual word learning (Floccia et al., 2018) and specifically that cognateness may boost bilingual lexical acquisition (Mitchell et al., 2024; Garcia-Castro et al., 2025).

Floccia, C., Sambrook, T. D., Delle Luche, C., Kwok, R., Goslin, J., White, L., ..., & Plunkett, K. (2018). Vocabulary of 2-year-olds learning English and an additional language: Norms and effects of linguistic distance: III: Analyses and results for Study 1: Estimating the effect of linguistic distance on vocabulary development. *Monographs of the Society for Research in Child Development*, 83, 43-60.  
 Garcia-Castro, G., Avila-Varela, D. S., Castillejo, I., & Sebastian-Galles, N. (2025). Cognate beginnings to bilingual lexical acquisition. *Child development*, 96(1), 286-300. <https://doi.org/10.1111/cdev.14170>  
 Legacy, J., Zesiger, P., Friend, M., & Poulin-Dubois, D. (2016). Vocabulary size, translation equivalents, and efficiency in word recognition in very young bilinguals. *Journal of Child Language*, 43, 760-783.

Marchman, V. A., Fernald, A., & Hurtado, N. (2010). How vocabulary size in two languages relates to efficiency in spoken word recognition by young Spanish-English bilinguals. *Journal of Child Language*, 37, 817-840.  
 Mitchell, L., Tsui, R. K., & Byers-Heinlein, K. (2024). Cognates are advantaged over non-cognates in early bilingual expressive vocabulary development. *Journal of Child Language*, 51(3), 596-615. <https://doi.org/10.1017/S0305000923000648>  
 Siow, S., Gillen, N. A., Lepädatu, I., & Plunkett, K. (2023). Double it up: Vocabulary size comparisons between UK bilingual and monolingual toddlers. *Infancy*, 28(6), 1030-1051. <https://doi.org/10.1111/inf.12562>