

Analyzing the effects of bilingualism in children with Autism Spectrum Disorder (ASD): a Meta-analysis

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Purpose

About 25% of children with Autism Spectrum Disorder (ASD) are believed to reside in a bilingual household in the U.S (Trelles & Castro, 2019).

Parents may be actively advised by professionals (i.e., speech pathologists, teachers etc.) against exposing their child to a second language in the home, due to the belief that doing so may "confuse" the child with ASD (Kay-Raining Bird et al., 2012).

Parents may adopt these beliefs and prioritize the language commonly spoken in the learning environment (Yu, 2013).

However, such practices may lead to fewer familial interactions and the devaluation of one's culture (Reimann & Ratto, 2023).

Additionally, the literature surrounding linguistic competency in bilingual children with ASD remains split.

Primary aims of this meta-analysis:

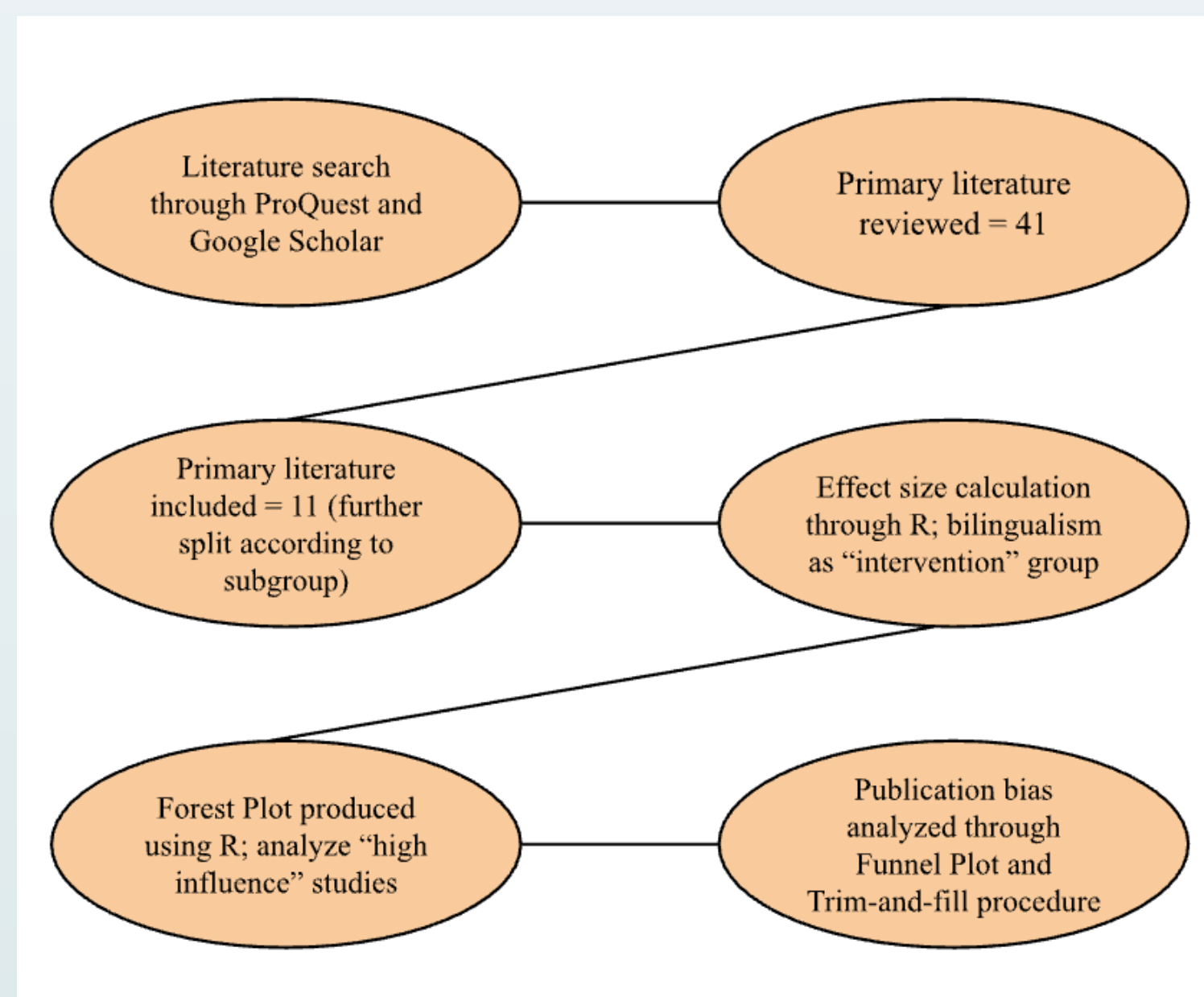
1. To evaluate the validity of the 'skeptical viewpoint' surrounding bilingualism in children with ASD
2. To offer a consensus based on diverse sample demographics

Methodology

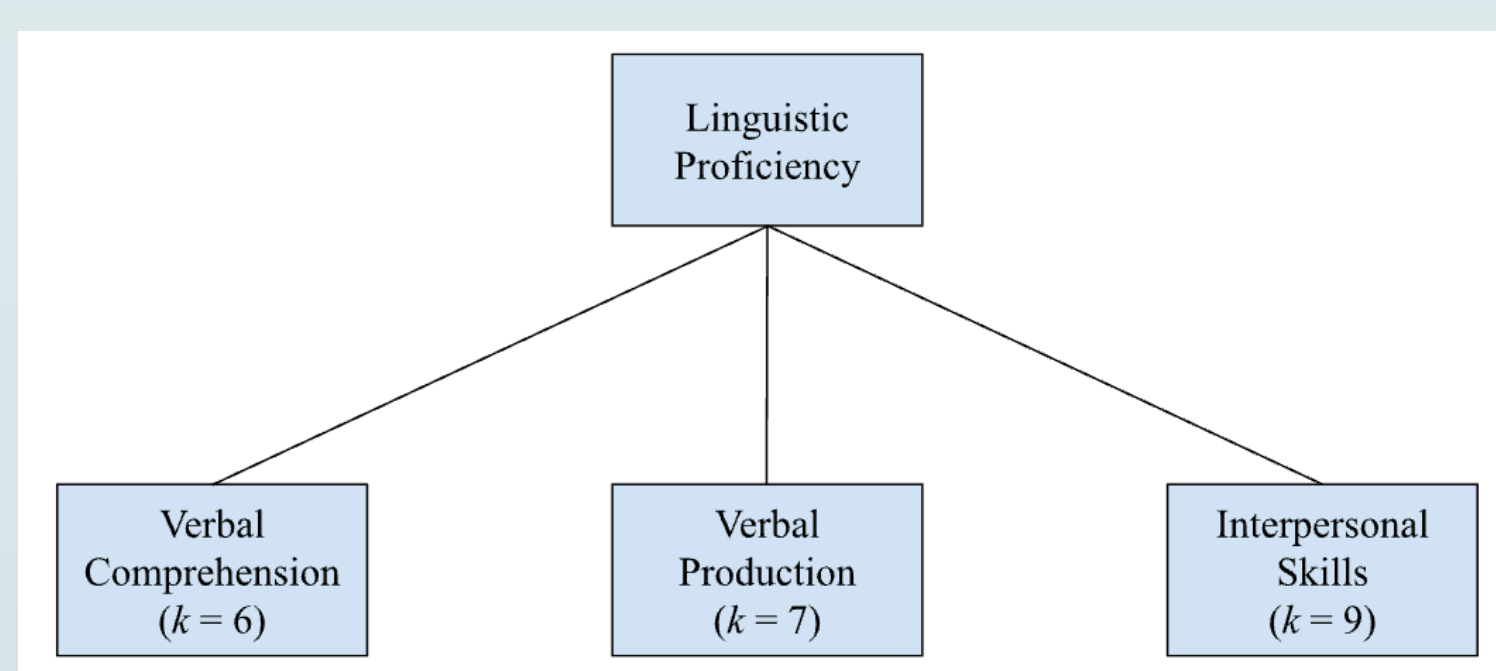
Inclusion criteria:

- Peer-reviewed
- Usage of valid and reliable inventories: VABS-II, M-CDI, SRS etc.
- Presence of a monolingual group with ASD
- Evaluation of linguistic competency in children specifically

Procedure:



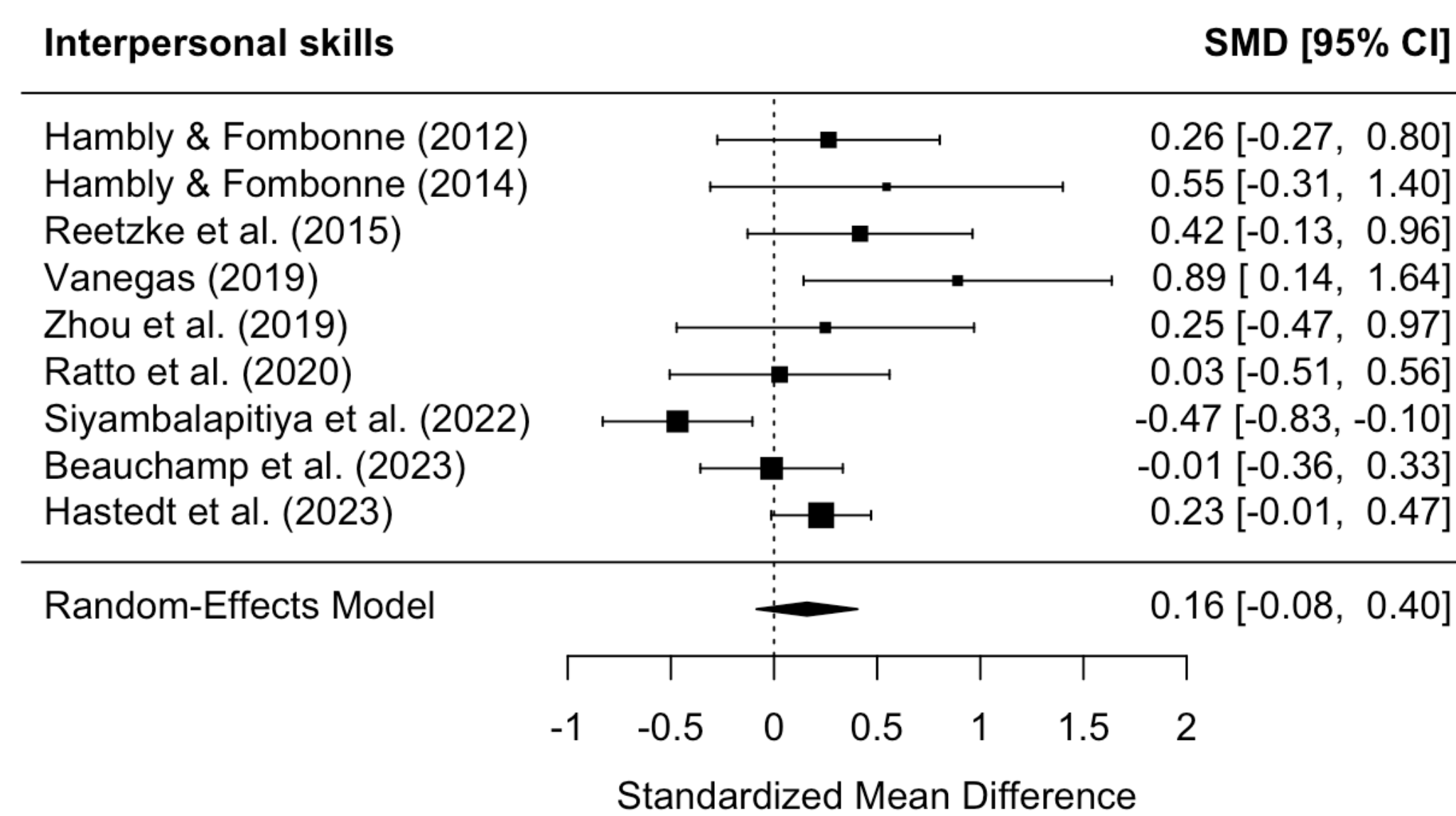
Subgroup analysis structure:



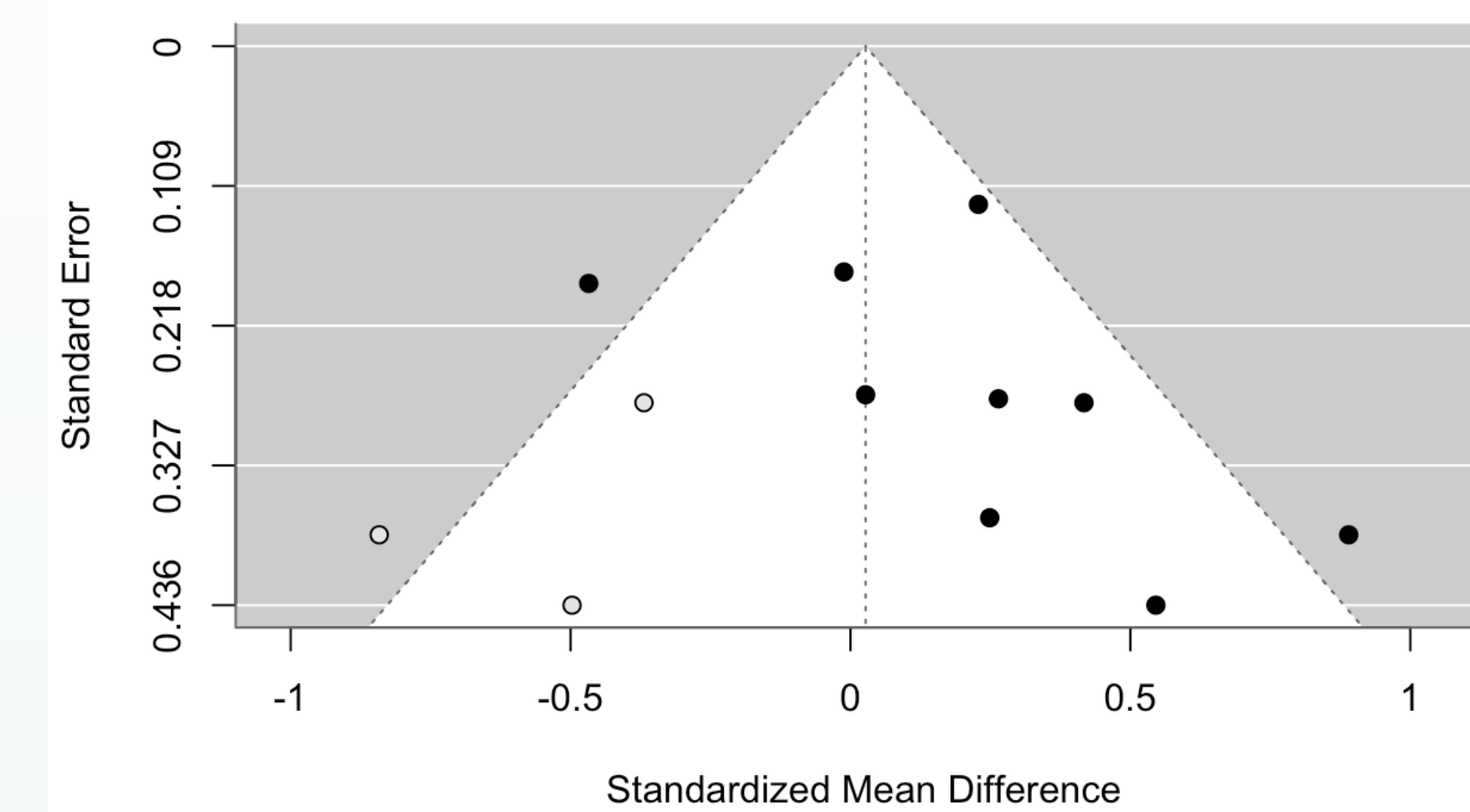
Results

Interpersonal skills

Forest plot:



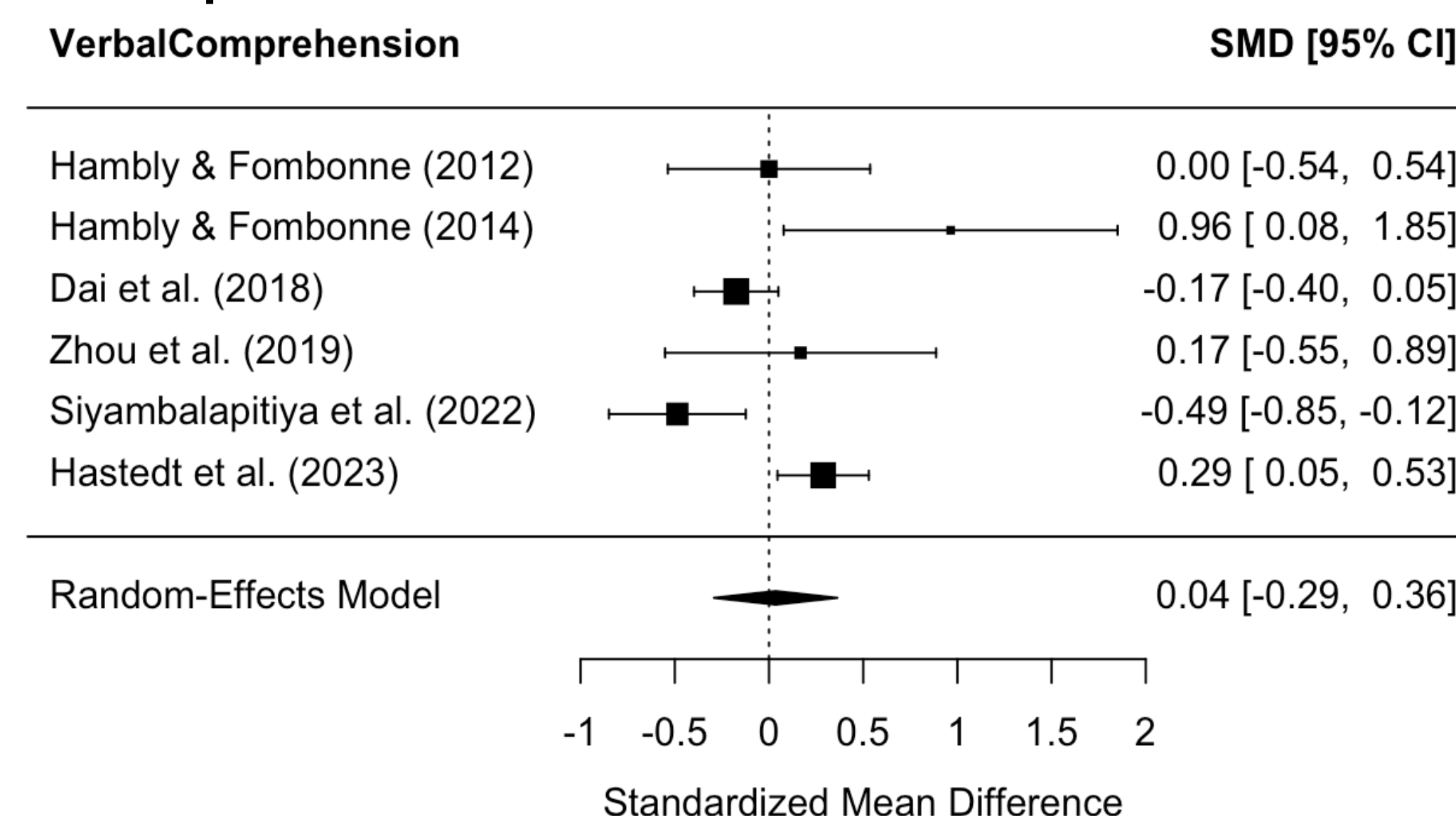
Funnel plot (with trim-and-fill data points):



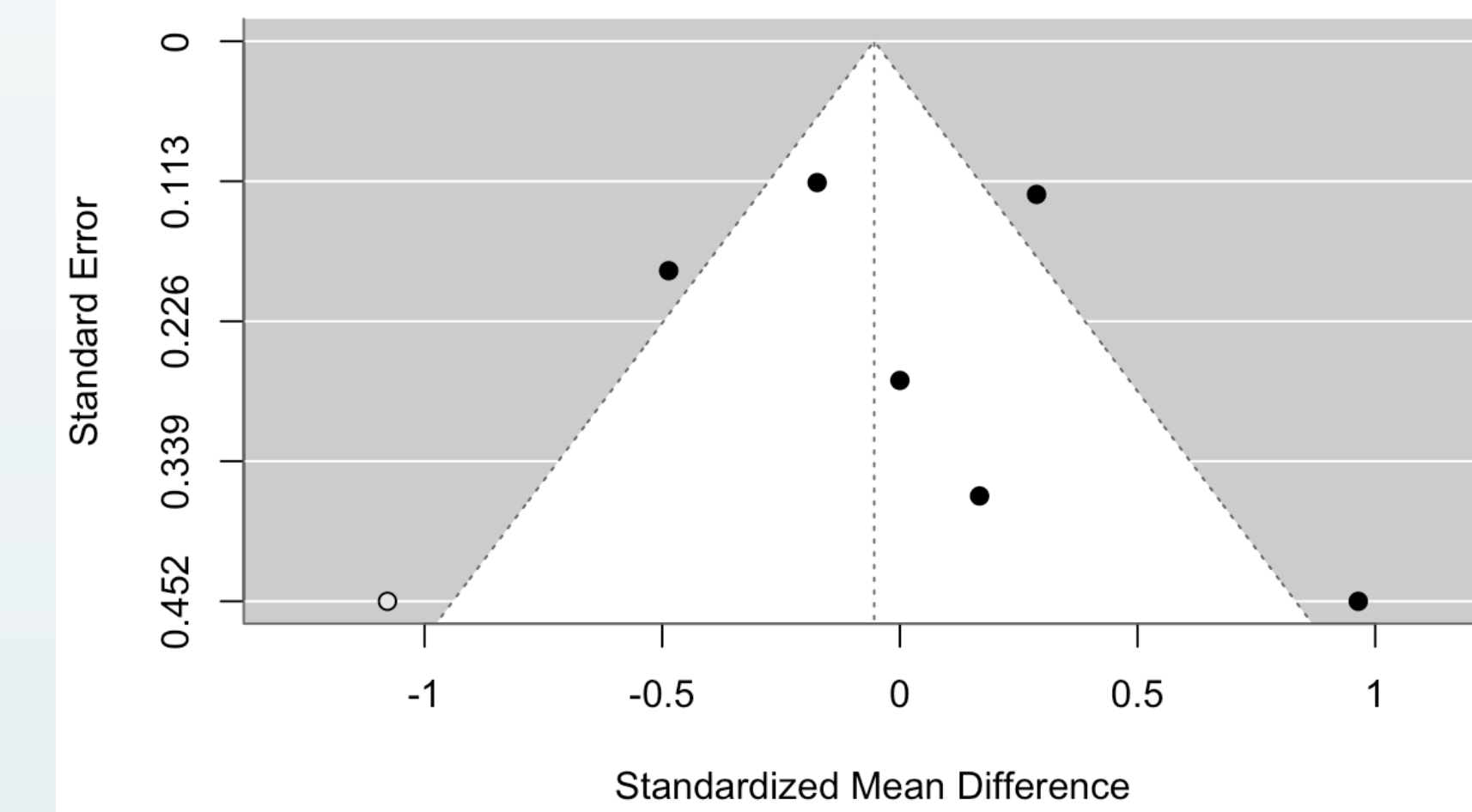
I^2 (total heterogeneity / total variability): 57.38%

Verbal Comprehension

Forest plot:



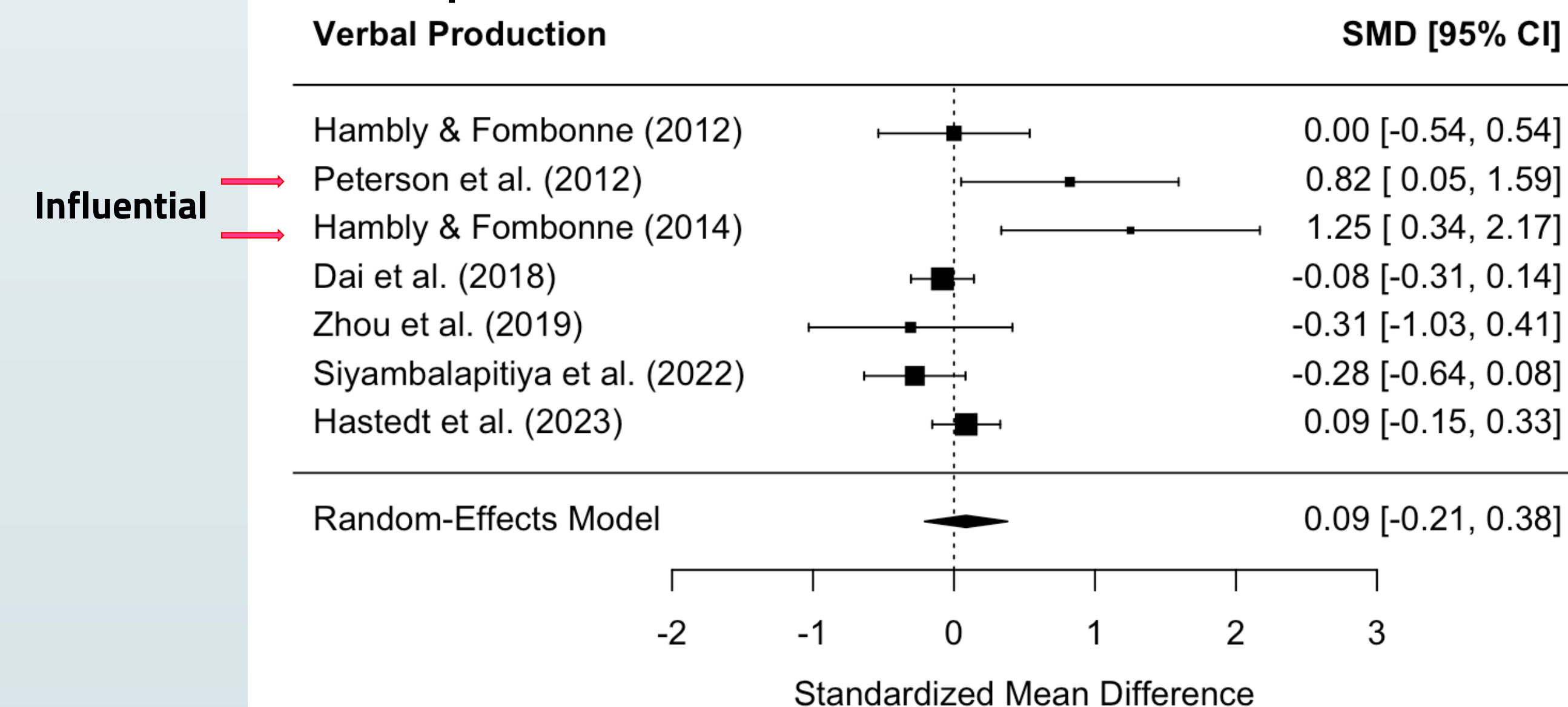
Funnel plot (with trim-and-fill data points):



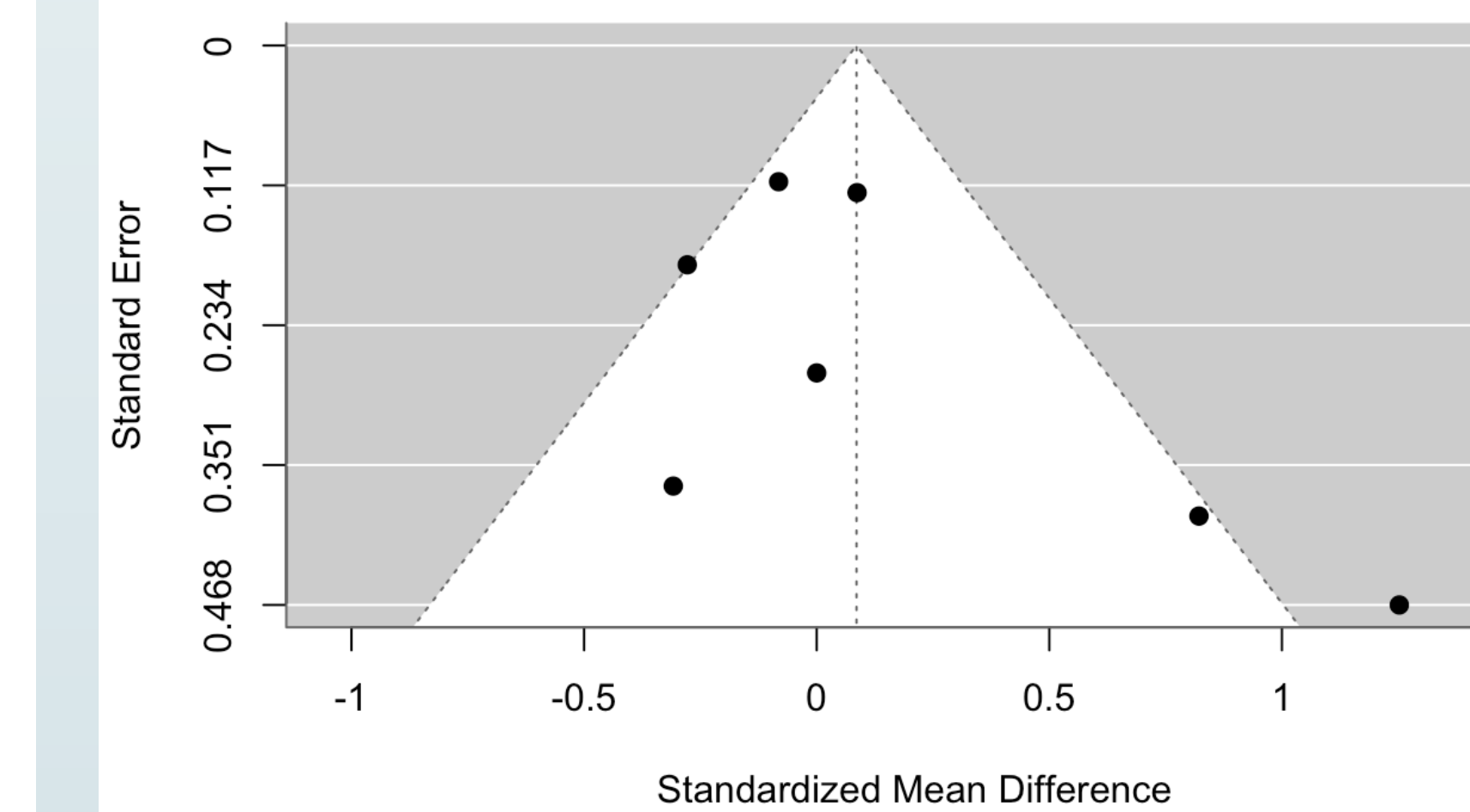
I^2 (total heterogeneity / total variability): 75.35% (controlling for an "influential" study)

Verbal Production

Forest plot:



Funnel plot (with trim-and-fill data points):



I^2 (total heterogeneity / total variability): 69.35%

Reflection

There does not seem to be an overall disadvantage of bilingualism in children with ASD in any of the analyzed domains. However, there seems to be an overall bias against reporting results where monolinguals outperform bilinguals.

Substantial heterogeneity exists between the studies. However, this was expected given the diversity of the samples and the inventories.

Many studies do not control for **socioeconomic status (SES)**. Future studies should control for SES differences to determine the true effect of bilingualism in children with ASD.

Many studies also focus on expressive vocabulary in a single language when assessing language outcomes. However, vocabulary deficits in a single language are even evident in neurotypical bilinguals. Instead, a focus on **conceptual vocabulary** is recommended.

Most studies examine **simultaneous bilinguals** rather than sequential bilinguals. It is possible that negative effects of bilingualism are more significant among sequential bilinguals. Hence, effects of *sequential* bilingualism in children with ASD should be examined moving forward.

The results of this study do not infer effects on **academic performance** – just everyday functioning.

Overall, by aggregating results from various cultures, the meta-analysis offers a general consensus that can be utilized in parent decision-making.

Acknowledgements

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References

Scan for references:

