The effects of contextual diversity on lexical processing: A scoping review
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Background
Diversity is thought to be an organising principle of the lexicon
Defined differently over time:
- Adelman et al. (2006): number of documents in which a word appears
- Jones et al. (2012), Hoffman et al. (2013): degree of semantic overlap between the contexts in which a word appears
Impacts both word form and meaning processing (Hoffman & Woollams, 2015)
No current synthesis of the findings

Aim: review how different measures of diversity influence lexical processing

Research Questions
1. What different terms have been used to refer to diversity?
2. How has diversity been operationalised across studies?
3. Does diversity benefit word form processing and what factors might modulate this?
4. Does diversity benefit word meaning processing and what factors might modulate this?

Methods: Protocol
Developed in accordance with JBI and PRISMA guidelines
Pre-registered with OSF

Methods: Search strategy
<table>
<thead>
<tr>
<th>Search Scope</th>
<th>Search Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titles, abstracts, keywords</td>
<td>“contextual diversity” OR “semantic diversity” OR “semantic distinctiveness” OR “document count” OR “context variance” OR “semantic variance” OR “contextual informativeness” AND “word”</td>
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Methods: Inclusion criteria
Include a behavioural outcome measure
Report how diversity was defined and operationalised
Report how diversity was manipulated
Available in English
Included in a peer reviewed journal

Results: Operationalisations and terminology
Operationalisations and terminology do not always correspond
Four metric categories:
- Count: count of unique contexts in which a word appears
- Computational: level of topic overlap between contexts in which a word appears assessed via computational procedures (LSA, SDM, Distributional)
- Composite: combination of one or more metrics
- Unspecified: exact calculation unretrievable
All metrics use same definition of high (more/more varied contexts) and low (fewer/uniform contexts) diversity

Results: Form processing
High diversity benefits word form processing across tasks and operationalisations

Results: Meaning processing

Conclusions
High diversity facilitates form processing regardless of operationalisation
Diversity effects on word meaning processing linked to semantic precision required
High count-based diversity facilitates general semantic category judgement - increases general accessibility of a word (e.g., Adelman et al., 2006; Jones et al., 2012)
High LSA-derived diversity impairs tasks requiring precise word meaning selection- experiencing words in diverse semantic contexts leads to variable representations (e.g., Hoffman & Woollams, 2015)