

Comparison of search design and output of Embase using two different search interfaces: Embase.com and OVID

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Background

Searching different databases provides different results due to indexing different journals, conferences, and other sources. However, searching the same database via different interfaces can also result in different results as different interfaces use different search functionalities and indexing. This has serious implications for the development of search strategy and the comprehensiveness of the search.

There is limited published research that formally assesses the differences between search interfaces and their impact on search results. Instead, most papers are descriptive in nature, offering advice on how to search each interface. There are, however, a few evaluations that have gone beyond a descriptive comparison.

Objective

This research investigated the variances between the two most used search interfaces (OVID and Embase.com) and their impact on search results.

Methods

We compared access to Embase through Embase.com and OVID interface in the following ways: coverage, results of step-by-step searching using different approaches (e.g., general syntax, combinations, truncations, phrase and field search), keywords (n=10), and operational characteristics rated on a scale of 1-10 by different (n=4) researchers. We used Mesothelioma and diabetes mellitus as disease case studies.

Results

Even with a higher number of journals indexed by OVID, citations were consistently lower than those retrieved from Embase.com for identical search approaches. Interestingly, in searches using proximity operators, the difference in citations retrieved across interfaces was reduced but still lower in OVID. Furthermore, the search by journal name (e.g., Nature) also retrieved different results.

Apart from coverage, the variability may be due to differences in indexing, e.g.,

- ▶ **Mesothelioma:** A search in OVID showed twelve relevant terms indexed as sub-headings, while Embase.com indexed those same terms as appropriate sub-headings (n=3), synonyms (n=7) and under dissimilar disease sub-headings (n=2).
- ▶ **Diabetes mellitus:** Its search resulted in exactly the same sub-headings (n=13) across both interfaces

Table 1: Comparison of coverage and operational features

Parameter	Embase.com	OVID
Coverage of journals from (year)	1947 onwards	1947 onwards
No. of Journals indexed	3086	3584
No. of conference abstracts indexed	3.6 million	2.1 million
Coverage of abstracts from (year)	2010 onwards	2009 onwards
Easier to use	✓	✗
Less complex	✓	✗
Search recall	✓	✗
Mean scores	9.1	8.3

Conclusion

These findings will have implications for search protocols using an indexed term approach, emphasizing the need to include multiple sources and scrutinize indexing (sub-headings, synonyms).