Phrasing in reproducible search methodology: The consequences of straight and curly quotation marks

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Introduction

- Phrase-searching with quotation marks is a search strategy designed to target results with 2 or more words together (e.g., “Cognitive Behavioral Therapy”)
- With reviews such as systematic reviews and meta-analysis, search strategies need to be transparently reported as indicated by reporting guidelines and checklists.
- Depending on language settings, some word processors default to curly quotation marks

Methods

- In March/April 2019, 40 bibliographic platforms were tested: curly quotation marks, straight quotation marks, and no quotation marks
- Planned for the following outcomes:
 - The search results when using straight quotation marks and curly quotation marks were the exact same
 - There was a variance between search results when using straight quotation marks compared to using curly quotation marks
 - The use of curly quotation marks was rejected due to unsupported characters

Results

- Of the 40 bibliographic platforms tested...
 - 17 (42.5%) platforms ignored curly quotation marks
 - 4 (10%) platforms did not recognize either straight or curly quotation marks
 - 1 platform flagged curly quotation marks as an unsupported character
 - 12 (30%) of the bibliographic platforms acknowledged curly quotations
 - 6 (15%) platforms, curly quotation marks were not treated the same as straight quotation marks, but it was unclear to the authors as to how they were read and interpreted

Platform	Results Performance
AGRIIS	Curly Quotation Marks Ignored
F1000Research	Curly Quotation Marks Ignored
Project Muse	Curly Quotation Marks Ignored
arXiv	Unclear
Campbell Collaboration Library	Unclear
Science.gov	Unclear
bioRxiv	Phrase-Searching Works with Curly
JSTOR	Phrase-Searching Works with Curly
Google Scholar	Phrase-Searching Works with Curly
PubMed	Phrase-Searching Works with Curly
Scopus	Phrase-Searching Works with Curly
Web of Science	Phrase-Searching Works with Curly
NCJRS	Regardless of Curly or Straight, No Phrasing Occured
Preprints.org	Regardless of Curly or Straight, No Phrasing Occured
Ovid	Curly Quotation Marks Were Flagged Unsupported Characters

Recommendations

- Search platforms should report syntax changes more transparently, users should be alerted when minor and major adjustments are made
 - Changes may impact day-to-day results, and can compromise search strategies reliant on evidence synthesis guidelines
- Journals accepting manuscripts wherein transparent and reproducible search strategies are included need to practice stylistic flexibility
 - If a journal changes quotation marks or other punctuation to fit style guide, they may undermine the integrity of the study

References & Credits

Preprint available:
Wilson, K., & Riegelman, A. (2020, July 22).
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quotation marks.
<https://doi.org/10.31229/osf.io/pcgj5>

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