

## Google Search as an Additional Source in Systematic Reviews

Jan Piasecki<sup>1</sup> · Marcin Waligora<sup>1</sup>  · Vilius Dranseika<sup>2</sup>

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Marko Curkovic in his letter (2017) points out that using Google Search in our systematic review (Piasecki et al. 2017) could have led to the so-called “bubble effect”, a form of selection bias. We take seriously this concern. Google Search is indeed an imperfect tool to perform systematic reviews: the search algorithm is not known and cannot be controlled, Google adapts the search to each user in order to personalize information and, as a result, a systematic search is quite probably not replicable. To avoid problems related to a personalized search, the primary source of the data in our study was a systematic search in PubMed. Searches in Google Scholar and Google Search were considered to be additional sources only. We expected that the total number of documents will be low, and we were rather more concerned with the comprehensiveness of our search than its representativeness, having in mind the qualitative, not the statistical character of the study. Moreover, in order to avoid personalization of search results, we logged off from all Google accounts. We regret that we did not describe this step in our paper. As a result, Google Search allowed to identify three additional guidelines.

Google Scholar and Google Search are considered to be important sources of grey literature, governmental and institutional reports (Haddaway et al. 2015; Hagstrom et al. 2015). In performing our study, we assumed that not all the guidelines

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✉ Marcin Waligora  
m.waligora@uj.edu.pl

Jan Piasecki  
jan.piasecki@uj.edu.pl

Vilius Dranseika  
vilius.dranseika@fsf.vu.lt

<sup>1</sup> REMEDY, Research Ethics in Medicine Study Group, Department of Philosophy and Bioethics, Faculty of Health Science, Jagiellonian University Medical College, Kraków, Poland

<sup>2</sup> Department of Logic and History of Philosophy, Faculty of Philosophy, Vilnius University, Vilnius, Lithuania

have been published in scientific journals. Therefore, although Google Scholar and Google Search have their limitations and should not be used as the only source for systematic reviews, both seemed to be apt for the purposes of some types of qualitative systematic reviews.

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## References

- Curkovic, M. (2017). Need for controlling of the filter bubble effect. *Science and Engineering Ethics*. <https://doi.org/10.1007/s11948-017-0005-1>.
- Haddaway, N. R., Collins, A. M., Coughlin, D., & Kirk, S. (2015). The role of Google Scholar in evidence reviews and its applicability to grey literature searching. *PLoS ONE*, *10*(9), e0138237.
- Hagstrom, C., Kendall, S., & Cunningham, H. (2015). Googling for grey: Using Google and Duckduckgo to find grey literature. In *Abstracts of the 23rd Cochrane Colloquium. Cochrane database systematic reviews supplements* (pp. 1–327).
- Piasecki, J., Waligora, M., & Dranseika, V. (2017). What do ethical guidelines for epidemiology say about an ethics review? A qualitative systematic review. *Science and Engineering Ethics*, *23*, 743. <https://doi.org/10.1007/s11948-016-9829-3>.