

Grey literature: Additional source facilitating a balanced view of evidence

Poudel P,¹   Dahal S² 

¹Prakash Poudel, Assistant Professor, Department of Orthodontics and Dentofacial Orthopaedics, Kathmandu Medical College, Duwakot, Bhaktapur, Nepal; ²Sirjana Dahal, Assistant Professor, Department of Community Dentistry, Institute of Medicine, Maharajgunj, Kathmandu, Nepal.

We, as researchers, mostly hunt for peer-reviewed published articles during our literature search to explore evidence. We trust the information provided through articles published in indexed journals as they have most of the references and have gone through the most rigorous review process. Yes, we are somehow doing right because any article maintaining scientific standards as determined by the experts in a particular field are published in peer-reviewed journals, otherwise rejected.¹ However, have we ever thought about the information that goes unpublished? Are they important in any way? Do we need to consider information that is not published in any indexed journal but exists somewhere around the globe? Or should we ignore them completely in our fact-finding process?

These sort of information and data that are not disseminated through published academic sources like journals or books but included in unpublished researches, reports, thesis, conference proceedings, newspapers, fact sheets, websites, or policy documents are known as Grey literature.² Grey literature is defined as

the “information produced on all levels of government, academics, business, and industry in print and electronic formats, but which is not controlled by commercial publishers; meaning, where publishing is not the primary activity of the producing body.” This definition has been received from the third international conference of Grey literature at Luxembourg in 1997 and expanded during the sixth International Conference at New York in 2004.³

Some researchers question the representativeness of several meta-analyses that incorporate only published studies. They highlight the fact that relying exclusively on published work may provide quality control but, it can also introduce distortion because of the combined effects of publication bias and the file-drawer effect.⁴ Positive results are most favourably cited in the scientific and medical literature due to which papers including such findings are more likely to be published, cited, and accepted by high-ranking journals. Most of the clinical trials with serious adverse events or researches with negative findings often remain unpublished, leading to false positive outcomes in meta-analysis giving misinformation to the researchers, doctors, and policy makers.⁵ Grey literature includes those neutral or negative results along with the positive ones. Therefore, in order to generate more accurate effect sizes and to provide a balanced view of evidence, developing techniques to incorporate grey literature along with scientifically published items in systematic review and meta-analysis may become helpful.

The Cochrane Handbook on Systematic Reviews also highlights the fact that failure to identify trials reported in the conference proceedings and other grey literature might affect the results of a systematic review.⁶ Grey literature can provide some hidden proofs of evidence that may not be present in the commercially or scientifically published literature. Moreover, it has been shown to be the source of approximately 10% of the studies referenced in Cochrane reviews.⁵ However, searching for grey literature systematically becomes

Access this article online

Website: www.jkmc.com.np

DOI: <https://doi.org/10.3126/jkmc.v10i3.41205>

HOW TO CITE

Poudel P, Dahal S. Grey literature: Additional source facilitating a balanced view of evidence. *J Kathmandu Med Coll.* 2021;10(3):107-8.

Address for correspondence

Dr. Prakash Poudel
Assistant Professor,
Department of Orthodontics and Dentofacial Orthopaedics,
Kathmandu Medical College, Duwakot, Bhaktapur, Nepal.
E-mail: i_prakash@hotmail.com

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ISSN: 2019-1785 (Print), 2091-1793 (Online)



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challenging for many reviewers as there is no “gold standard” strategy or methods for its rigorous search due to which the search may become troublesome and time consuming. In addition, it may be difficult for reviewers to confidently judge the relevance of the searched grey literature during initial stages due to missing volume, issue, page number, and other citation information or abstracts. Nevertheless, accepting the challenge of including that information helps to review a broader scope of literature and provide a more comprehensive view of the available evidence. Since, the methodological quality of both grey and scientifically published literature have an impact on overall results of the systematic review, it is also necessary to check their quality and contact the authors if methodology is unclear before incorporating it in the fact-finding process. In order to enable evaluation and critical appraisal of grey literature, Jess Tyndall, Medical Librarian and Head of the Gus Fraenkel Medical Library at Flinders University has developed the AACODS checklist (authority, accuracy, coverage, objectivity, date, and significance).⁷

Listed below are examples of some resources in finding access to Grey information:

1. Databases
 - a. OpenSIGLE “System for information on Grey literature in Europe” and OpenGrey
 - b. Dissertation Abstracts International (DAI) database
 - c. ClinicalTrials.gov
 - d. Ethos
 - e. TRIP database
 - f. Proquest dissertations and theses
 - g. Web of Science
 - h. PsycEXTRA
2. Search engines
 - a. Google Advanced Search
 - b. BASE (Bielefeld Academic Search Engine)
 - c. Google Scholar
 - d. MedNar web search engine
3. Targeted websites like greylit.org (Grey literature report), greynet.org (GreyNet International), ala.org (American Library Association), bl.uk (British library)
4. Hand search

Although, grey literature poses a challenge in definitive search, at times, it becomes the only source of up-to-date information regarding a particular topic of interest due to time lag between conducting research and getting it commercially published. Grey literature mainly contributes and serves as the additional source of evidence in the research area where there is paucity of published articles. Most of the time, those dissertations or theses incorporated in finding evidence can become future published literature. Thus, grey literature can be searched in addition to published literature for ensuring a meticulous review and giving a wise conclusion by safeguarding the true evidence.

“It is wrong always, everywhere, and for everyone, to believe anything upon insufficient evidence.” – William James.⁸

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