ORIGINAL ARTICLE

Finding “hard to find” literature on hard to find groups: A novel technique to search grey literature on refugees and asylum seekers

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Abstract

There is a lack of information on how to execute effective searches of the grey literature on refugee and asylum seeker groups for inclusion in systematic reviews. High-quality government reports and other grey literature relevant to refugees may not always be identified in conventional literature searches. During the process of conducting a recent systematic review, we developed a novel strategy for systematically searching international refugee and asylum seeker-related grey literature. The approach targets governmental health departments and statistical agencies, who have considerable access to refugee and asylum seeker populations for research purposes but typically do not publish findings in academic forums. Compared to a conventional grey literature search strategy, our novel technique yielded an eightfold increase in relevant high-quality grey sources that provided valuable content in informing our review. Incorporating a search of the grey literature into systematic reviews of refugee and asylum seeker research is essential to providing a more complete view of the evidence. Our novel strategy offers a practical and feasible method of conducting systematic grey literature searches that may be adaptable to a range of research questions, contexts, and resource constraints.

KEYWORDS

asylum seeker, grey literature, hidden population, refugee, systematic review

1 | INTRODUCTION

There are many guides on how to conduct good quality searches for systematic and other forms of reviews (e.g., Hammerstrøm, Wade, & Jørgensen, 2010; Lefebvre, Manheimer, & Glanville, 2011), but when collating refugee and asylum seeker-relevant literature, these methods may omit important resources such as those found in grey literature (Mason, 2000). Grey literature refers to both published and unpublished information that is generally not peer reviewed or indexed in bibliographic databases (Tillett & Newbold, 2006) and may include government reports, newsletters, website notices, technical papers, or other forms of nonacademic documentation (Godin, Stapleton, Kirkpatrick, Hanning, & Leatherdale, 2015). Although the quality and form of grey literature can vary considerably, the value of this material has been formally recognised by an international

collaboration called *GreyNet* (GreyNet International, 1992–2017) and in recent Cochrane Collaboration guidelines for conducting systematic reviews, which stipulate that searches for grey literature should be included to avoid the potentially biased reporting of results in published academic material (Higgins & Green, 2011). However, there are currently a lack of standards and resources outlining how to apply systematic search methods to the grey literature (Godin et al., 2015).

Grey literature is of particular relevance in fields such as refugee and asylum seeker research, where academic researchers continue to have difficulty accessing and engaging the participation of these groups. Like other populations that are known to be “hard to find” or “hidden,” such as illegal immigrants, people with chronic mental illness, men who have sex with men, and the homeless (Lambert & Wiebel, 1990), refugees and asylum seekers present particular challenges for researchers at all stages of the sampling process, including identification, contact, recruitment (particularly of large and/or representative

List of abbreviations: UNHCR, United Nations High Commissioner for Refugees

samples), and data collection (Bloch, 2004; Enticott et al., 2017). In refugee and asylum seeker groups, these sampling challenges are likely to be exacerbated by issues around mental health and trauma, as well as concerns related to safety, privacy, and trust, particularly for those with undetermined refugee status. Language and cultural barriers and low levels of literacy can present additional difficulties for researchers working with these populations.

Because of these well-documented challenges (Bloch, 2004), a substantial amount of research on refugees and asylum seekers is undertaken by governments and national statistical agencies who will often have greater resources and access to these groups through official resettlement and other administrative records. Typically, these agencies will disseminate research findings in the form of grey literature. In addition to potentially avoiding some of sampling biases that are likely to be present in the academic literature in this field, grey literature is not subject to the competitive and time-consuming process of publishing in peer review journals. It may therefore also be less vulnerable to publication bias as well as more current and more rapidly disseminated than peer-reviewed academic literature (Hopewell, McDonald, Clarke, & Egger, 2007). However, because grey literature is generally not indexed in standard bibliographic repositories, this important and potentially rich source of adjunct information on refugee and asylum seeker groups is typically harder to locate (Mason, 2000). Moreover, given the variable nature of this material, conventional methods for searching academic databases are unlikely to translate adequately to grey resources, necessitating supplementary purpose-built approaches.

Here we describe a novel grey literature search methodology that was developed during the process of conducting a recent systematic review on obtaining representative samples in refugee and asylum seeker groups for participation in health research (Enticott et al., 2017). We provide an overview of the rationale for including a search of the grey literature in the review, describe the development and execution of our search strategy, and provide a brief summary of the results of the grey literature search within the context of the broader systematic review. We then go on to discuss the benefits of including grey literature in our review and consider the overall utility of the approach. Although the search strategy described herein was devised to address a specific research question in a very specific study population, it is hoped that this article describes a useful model for other researchers wishing to incorporate grey literature searches into the systematic review process.

2 | METHODS

2.1 | Overview of the need for a grey literature search

The grey literature search described in this article was devised during a systematic review conducted in 2016, which aimed to identify the most effective methods for achieving a representative sample of refugees and asylum seekers living in the community for participation in mental health research (Enticott et al., 2017). The complete methods of the systematic review are not the focus of this article

and are presented in detail elsewhere (Enticott et al., 2017), but for illustrative purposes, we will provide a brief overview of the broader study methodology in order to specify the decision points that led to the incorporation of a grey literature search into the review.

The initial scope of the systematic review was restricted to peer-reviewed academic literature. Publications were eligible for the review if they were a primary research article focused on health that sampled adult refugee and asylum seekers; published in English between 1995 and 2016; and reported the sampling technique used in the study in sufficient detail to replicate sampling. Although the review primarily focused on methods for achieving representative samples of refugee and asylum seeker groups, health-related research involving participants from other hidden groups (i.e., hard or difficult to reach populations such as men who have sex with men) was also included if the sampling methods used were suggested as potentially transferrable to other groups. Articles were excluded if they offered a service to participants (e.g., a free health check-up) or were classified as an incomplete article (see Enticott et al., 2017 for full description of the inclusion and exclusion criteria).

As recommended for all systematic review processes (Higgins & Green, 2011), we then devised a method of evaluating the quality of articles that met the initial inclusion criteria. In line with the objectives of our review, this involved assessing each publication against a graded system of level of evidence for obtaining a representative sample based on key study elements that indicated possible sources of sampling bias. Papers were rated as having low, medium, high, or unclear evidence of achieving a representative sample. A paper graded as having "high evidence," for example, was required to demonstrate that a clear, defined, and reliable sample frame had been established for the target group and a component of random sampling had been employed in the process of drawing from the sample frame. The graded appraisal system was adapted from Higgins and Green (2011) and is presented in Table 1. The final inclusion criteria required studies to have achieved a minimum of medium-level evidence of representativeness.

Following the screening and quality appraisal process, only 12 peer-reviewed publications were deemed eligible for the review, and of these, only two were judged as having a high level of evidence of having a representative sample. A further two studies were rated medium-high, and the remaining eight publications demonstrated only medium evidence for representative samples.

2.2 | Expert advisory committee

Given the low yield of high-quality eligible studies, the research team initiated a consultation process with key stakeholders to determine how other high-quality research evidence in the field could be identified. An expert advisory committee was established who advised that because governments are often well placed to undertake research in refugee and asylum seeker populations and the resulting reports are not always published in academic forums, a large quantity of research evidence would likely be located in the grey literature. Thus, including a grey literature search in the review would be essential to providing a comprehensive overview of available evidence in the field. The

TABLE 1 Level of evidence for a representative sample (high, med, low, and unclear)

High	"High" level of evidence for a representative sample (or low risk of selection bias)	<ol style="list-style-type: none"> 1. The investigators describe a clear, defined, and reliable sample frame for the target group: <ul style="list-style-type: none"> • sample frame already known, for example, hidden group reliably detected in census data or registry and • sample frame created by the researchers and includes the vast majority of the hidden target group. 2. The investigators describe a random component in the process of drawing from the sample frame such as <ul style="list-style-type: none"> • referring to a random number table and • using a computer random number generator. <p>*Note: Must fulfil both 1 and 2 criterion for a judgement to be made of high-level evidence for representativeness.</p>
Medium	"Medium" level of evidence for a representative sample (or medium risk of selection bias)	<p>Sampling frame and sampling processes are applied from both the high and low below criteria.</p> <p>Nonrandom sampling with</p> <ul style="list-style-type: none"> • Multiple efforts and techniques used with the a priori aim to approximate a representative sample including two or more of <ul style="list-style-type: none"> ○ respondent-driven sampling (RDS), ○ quota sampling, ○ maximum variation, ○ multiple starting points for snowballing, and ○ sample representativeness ascertained, for example, sample compared with census demographics of the hidden group.
Low	"Low" level of evidence for a representative sample (or high risk of selection bias)	<ol style="list-style-type: none"> 1. The investigators do not use a comprehensive sample frame for the hidden target group: <ul style="list-style-type: none"> • sample frame likely to exclude a significant proportion of the target group. 2. The investigators describe a nonrandom component in the sampling process, for example, <ul style="list-style-type: none"> • snowballing and • convenience sampling. 3. Low sample numbers 4. Low response rates
Unclear	"Unclear" evidence for a representative sample (or unclear selection bias)	Indicates a lack of information about the sample frame and sample drawn.

members of the expert advisory committee are named in the Acknowledgements section. The majority of members have published extensively on refugee and asylum seeker topics and, together, contributed expertise in interpretation of issues in the transcultural domain, specialist expertise in transcultural epidemiology, expertise on understanding transcultural mental health and participation in research, and knowledge on creating graded quality assessments based on the Cochrane method described by Higgins and Green (2011).

2.3 | Initial grey search strategy

On the basis of the recommendations of the expert advisory committee, an initial grey literature search was executed that involved conducting searches of Google and Google Scholar using the key search terms specified in the peer-reviewed literature component of the systematic review (see Enticott et al., 2017 for the complete list of search terms). Additionally, study investigators and members of the advisory committee were asked to identify relevant sources of nonpeer-reviewed literature known to them, such as websites or reports. This process identified 25 potentially eligible articles, of which only one fulfilled the inclusion criteria described above. The low yield prompted the development of a more targeted novel grey literature search methodology.

2.4 | Revised (novel) grey search strategy

The revised grey literature search began by identifying the top 20 countries that resettle refugees according to the United Nations High Commissioner for Refugees (UNHCR, 2010) global rankings of highest refugee "third country resettlement" intake per 1,000 inhabitants in 2010. The rationale for this was that there would be likely to be a greater abundance of relevant grey literature resources in these countries. We added a further three countries that were pertinent to our context and study objectives: Australia, Canada, and the United States of America; see Table 2. For each of these 23 countries, a team of research assistants were allocated 2 hr per country to search the Internet for relevant literature. Instructions given to the research assistants were begin the search by identifying the website for the Department of Health in the target country and spend a maximum of 1 hr searching this website using the key search terms, and next, identify any website for the statistical department in that country and again spend a maximum of 1 hr searching this website for relevant articles. If these searches resulted in links to other potentially relevant websites or sources in reference lists, the research assistants were encouraged to explore these leads. This targeted search was supplemented with general Internet searching using key terms in Google and Google Scholar. To keep costs contained within the limited funds available, the only strict requirement was to remain within

TABLE 2 The top 20 countries in the UNHCR global rankings in 2010 of highest refugee “third country resettlement” intake per 1,000 inhabitants plus Australia, Canada, and the United States of America

Ranking for “refugees to 1,000 inhabitants”	Country
1	Jordan
2	Syrian Arab Rep.
3	Congo, Rep. of
4	Chad
5	Montenegro
6	Djibouti
7	Malta
8	Iran (Islamic Rep. of)
9	Pakistan
10	Kenya
11	Sweden
12	Ecuador
13	Norway
14	Yemen
15	Mauritania
16	Serbia
17	Germany
18	Venezuela (Boliv. Rep. of)
19	Luxembourg
20	Switzerland
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28	Canada
69	Australia
73	the USA

Note. Technically, according to the United Nations High Commissioner for Refugees (UNHCR, 2010), the first country is where the refugees come from, the second country is where they spill into after fleeing, and the third country is where they resettle.

the specified time constraints for each country. The full grey literature search was anticipated to take 46 hr (approximately seven working days).

2.5 | Inclusion/exclusion criteria and quality appraisal

Grey literature sources were subject to the same inclusion/exclusion criteria (briefly outlined earlier with full details in Enticott et al., 2017) and quality appraisal (in Table 1) used for the peer-reviewed literature.

3 | RESULTS

The revised (novel) grey literature search strategy yielded 92 records, eight of which met inclusion criteria for the systematic review; see Figure 1. Two of the publications were rated as having high level of evidence of representative samples and a further four demonstrated medium-high evidence. The remaining two publications were assessed as having medium-level evidence of representativeness.

Half (4/8) of the eligible items identified in this revised grey literature search were peer-reviewed publications that were not detected in the main search of the academic literature; the remaining four nonpeer-reviewed articles were critically important governmental reports describing large, high-quality, government-resourced studies (Enticott et al., 2017).

The revised grey literature search strategy resulted in an eightfold increase in eligible grey literature sources compared to the initial conventional grey literature search. Crucially, the novel grey literature search also doubled the number of publications in the overall review that were rated as having high-quality evidence of a representative sample, tripled the number of medium-high evidence papers, and increased the overall number of eligible publications from 12 (academic literature search only) to 20, providing appreciably more high-quality content to inform the review.

4 | DISCUSSION

In this brief paper, we have described a novel technique for systematically searching grey literature on refugee and asylum seeker groups. Although locating appropriate grey literature can require additional efforts and the development of alternative search protocols, our experiences demonstrate the potential advantages to including grey literature searches in reviews. As well as substantially increasing the breadth and overall number of sources that were eligible for inclusion, the addition of several high-quality government-resourced studies provided a richer and more comprehensive evidence base to inform our findings. The inclusion of this information will also serve to increase the credibility of our review for stakeholders familiar with the extensive range of resources available outside of the academic literature and is likely to reduce the potential for publication bias that may have been present if only peer-reviewed literature had been included. The search also recovered several relevant peer-reviewed papers that were not identified in our main search of the academic literature, demonstrating the potentially inconsistent indexing of refugee-related publications, a previously documented shortcoming of this literature (Mason, 2000).

A limitation of our novel approach is that it does not permit an exhaustive search of grey literature sources, raising the possibility that not all relevant information will be identified in the allocated search time. However, by prioritising highly pertinent sources of refugee and asylum seeker-relevant grey material, the search technique minimises this limitation and seeks to achieve an acceptable balance between comprehensiveness and the efficient use of resources and time.

Despite this potential limitation, including a search of the grey literature such as the one described can be a critical source of information in systematic reviews in some domains of research. There is, however, a lack of standards for how to complete such searches (Godin et al., 2015). The methodology described in this study now adds to the methods available for the application of “systematic, transparent and reproducible” (Mahood, Van Eerd, & Irvin, 2014, p. 221) search strategies for grey literature (Godin et al., 2015; Mahood et al., 2014). The strategy can be easily modified to suit a range of research

FIGURE 1 Grey literature search strategy

questions and study objectives including fields beyond refugee and asylum seeker research. For example, researchers investigating the economic outcomes of health interventions might begin the development of their grey literature search protocol by searching websites believed to contain relevant literature. The selection of these initial websites could be informed by preliminary web browsing or based on advice from experts in the field. Depending on the outcomes of this exploratory phase, the researchers might go on to develop a grey literature search strategy that targets the websites of government health or finance departments or major health services within specified countries or regions. The strategy described in this paper can also be adjusted to accommodate common time and resource constraints associated with conducting reviews. For instance, the number of search hours assigned to each country could be reduced or expanded depending on staffing resources.

An important point to remember when including grey literature sources in reviews is that, as with academic literature, the quality of grey literature must be evaluated (Higgins & Green, 2011). Ideally, this will be carried out using the same quality criteria applied to peer-review sources to enable unified conclusions to be drawn across all studies included in the review. Researchers undertaking a quality appraisal of grey literature must be aware that this material is generally not subjected to the same level of scrutiny as academic peer-reviewed publications and may therefore demonstrate much greater variability in terms of quality, reporting standards, and the level of completeness of information provided. Furthermore, unlike peer-reviewed publications, which generally conform to a standard format (i.e., introduction, methods, results, and discussion) and tend to be of similar length due to journal word limit specifications, grey literature is often not bound by the same constraints (Mahood et al., 2014).

During the process of conducting the quality appraisal of grey literature in our review, we found that locating specific information within often large and poorly structured grey literature documents required considerably more time and effort than academic publications and often resulted in the need for additional discussions between study investigators to resolve uncertainties. Despite these challenges, appraising the quality of grey literature is essential to the review process. We would encourage researchers including both grey and academic literature in systematic reviews to develop a formal quality appraisal tool capable of assessing both forms of literature, similar to that depicted in Table 1. Although the tool used in this study was developed to meet the specific aims and objectives of our review, we offer it as an illustrative example to interested researchers, who may wish to adapt the instrument to their own research requirements. Box 1 provides a summary of the general lessons learned about incorporating grey literature searches into systematic reviews.

Box 1. Lessons learned about incorporating grey literature searches into systematic reviews

1. When conducting systematic reviews, researchers should incorporate a systematic search of grey literature to ensure the most complete view of the evidence is obtained.
2. Grey literature searches should follow a systematic and transparent protocol such as that described in the current paper.
3. Systematic searches for grey literature should include the searching of websites that are believed to provide relevant literature or links to other sites with potentially relevant grey literature. These initial websites will be informed by preliminary web searches plus advice from experts in the field and should be clearly documented.
4. Systematic grey literature searches may uncover relevant peer-reviewed publications that are not identified in standard academic database searches.

There has been growing interest in including grey literature in systematic reviews, and we believe that the novel approach outlined in this article makes a valuable contribution in advancing methodology. Although specifically developed to locate grey literature relevant to refugees and asylum seekers, the approach is readily adaptable to other domains and provides researchers with an innovative and practical technique for incorporating relevant grey literature searches into the review process.

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DECLARATION OF INTEREST STATEMENT

The authors have no conflicts of interest to declare.

AUTHORS' CONTRIBUTIONS

All authors participated in the design of this project and were involved in drafting the manuscript or revising it critically for important intellectual content. All authors read and approved the final manuscript.

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