Article

How individual consultations with a librarian can support systematic reviews in the social sciences

Michelle Dalton, Scholarly Communications Librarian, University College Dublin Library. Email: michelle.dalton@ucd.ie Twitter: @mishdalton ORCID: 0000-0001-5551-3565

Abstract

The use of systematic review as a research method has become increasingly prevalent in the social and human sciences. However, the role of the librarian in delivering library and information skills (LIS) support in this area remains relatively undocumented, in contrast with the health sciences where systematic review support is often highly visible and embedded. This exploratory study uses qualitative survey data collected from researchers who attended an individual consultation with a librarian and aims to identify the potential role and impact that LIS support can have. The results indicate that both the skills and confidence of researchers increased as a result of the interaction, and that the personalised nature of the consultation provided additional value. However, awareness of the service was relatively low, indicating the need for additional marketing and promotion, as well as increased liaison and engagement with academic and research staff. These findings provide a foundation for further research into the design and delivery of LIS support to those undertaking systematic reviews in the social sciences.

Keywords

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1. Introduction

Systematic review refers to the process of collating all evidence that meets pre-defined eligibility criteria to answer a specific research question (Green et al., 2011), and has been used as a key research method in the area of health sciences since the late 1970s and early 1980s (EPPI-Centre: History of Systematic Reviews, n.d.). However, in more recent times, its use has also become increasingly prevalent across the domain of social and human sciences as a means of evaluating the effectiveness of social interventions. While library and information skills (LIS) support is often seen as an embedded and intrinsic part of the systematic review process in the health sciences (Harris, 2005; Spencer and Eldridge, 2018), its role in the area of social sciences is less well documented. It remains largely unclear what level of LIS assistance – if any – is typically available to students and researchers who are undertaking a systematic review in the social sciences, what type of support is offered, and the potential impact or value that it generates.

This exploratory study seeks to illuminate the role that LIS support can play in helping postgraduate and post-doctoral researchers who are undertaking systematic reviews in the social sciences. Using open-ended survey questions, the research aims to identify the impact, if any, that an extended one-to-one research consultation with a librarian had on the quality or effectiveness of the research project, as well as on the skills and knowledge of the researcher. The results can help to inform how libraries can design and deliver support to researchers in this area, and also to inform future studies which could investigate the type and level of support

provided in more detail, and whether there is a potential role for a widespread use of embedded librarians in the social sciences.

2. Literature Review

2.1 The significance and growth of systematic review as a research method in the social sciences

Systematic reviews 'seek to collate all evidence that fits pre-specified eligibility criteria in order to address a specific research question' and 'minimize bias by using explicit, systematic methods' (Green et al., 2011, Chapter 1.1). In contrast with a traditional literature review, systematic review aims to gather all the eligible evidence available using an explicit, documented and reproducible methodology. The included studies are then assessed for validity, and systematically presented and synthesised to communicate the findings. A meta-analysis, whereby statistical methods are utilised to summarise the results of the included studies, may also be incorporated within a systematic review (Green et al., 2011). As the concept of evidence-based practice has strengthened and permeated new fields, the rationale for the use of systematic reviews has become well-established: 'Health care providers, researchers, and policy makers are inundated with unmanageable amounts of information; they need systematic reviews to efficiently integrate existing information and provide data for rational decision making' (Mulrow, 1994, p.587).

This was not always the case however, and Archie Cochrane's seminal statement in 1979 propositioned that 'it is surely a great criticism of our profession that we have not organised a critical summary, by specialty or subspecialty, adapted periodically, of all relevant randomized controlled trials' (Cochrane cited in Chalmers, 1993, p.157). The ensuing emergence of the Cochrane Collaboration in 1993, and the Cochrane Database of Systematic Reviews, undoubtedly played an influential and catalytic role in helping to firmly establish it as a research method.

Systematic review has since gained traction as a method beyond the healthcare sphere. The Campbell Collaboration, a related organisation to Cochrane, was subsequently formed in 1999, and 'produces and disseminates systematic reviews on the effects of interventions in the social and behavioural sciences' (Cochrane: Our funders and partners, n.d.). The EPPI-Centre, a specialist centre for developing methods for systematic reviewing and the synthesis of research evidence, was first established at the Social Science Research Unit, Institute of Education, University of London in 1992 and 'aimed to develop a database of well designed evaluations of interventions in the fields of education and social welfare' (EPPI-Centre: History of Systematic Reviews, n.d.).

Indeed, within the social sciences, systematic reviewing is now utilised across a broad range of fields such as crime, welfare, transport, education, and psychology to evaluate the effectiveness of interventions, but its relative nascency means that it is still only emerging and evolving to some extent. Petticrew and Roberts note:

> The science of systematic reviewing for social policy purposes is still relatively young, and we do not assume that systematic reviews as presently constituted are perfect, or that they are appropriate for all purposes… However, we believe that they can be used more widely than at present, can often be made more useful, and are now an essential scientific tool that *any* scientist (social, or otherwise) should know how to use. (Petticrew & Roberts, 2006, p.xiv).

The reasons for this diffusion are many. There has been a growing emphasis on the need for evidence-based policy across all areas of public management and administration in a 'quest to understand and explain what works for whom in what circumstances' (Sanderson, 2002, p.2).

An understanding of how potential policy interventions may effect social change or impact on society is essential for politicians, policymakers and civil society. Systematic review does not just help to resolve the potential problems of bias and unrepresentativeness which may surface in literature reviews, but also provides a solution to the problem of information overload for practitioners, decision-makers and policy-makers who have been faced with an 'explosion of the amount of research information' over the past twenty years (Petticrew & Roberts, 2006, p.7). With the latter trend showing no immediate signs of abating, it seems likely that the use of systematic review will continue to strengthen and take root in new areas to help inform policy and support practice.

2.2 The librarian's role in supporting systematic reviews

The increasing use of systematic review as a research method has been accompanied by 'a general trend for librarians to be involved in key roles at most stages of the project' (Desmeules, Campbell & Morgan, 2016, p.45). Ross-White (2016) presents a synthesis of key organisations in the health sciences that advocate for, or recognise, the role of a librarian or information specialist when undertaking systematic reviews including, the aforementioned Cochrane Collaboration, The Institute of Medicine, Tufts Evidence Practice Center, and The Joanna Briggs Institute. Consequently, involving LIS professionals in the search process has become increasingly prevalent and is indeed now often accepted as good practice (Rethlefson, Murad, Livingston, 2014).

The nature and extent of the role of the librarian can vary depending on the project however. Harris' study highlights some of the functions a typical librarian may be expected to perform including the requirement to be an 'expert searcher', the ability to interact with clinicians in order to sufficiently inform the search process, knowledge of the subject area, and proficiency in the intricacies of database coverage and conventions (Harris, 2005, p.86).

Silfen and Zgoda describe how the increased emphasis on evidence-based practice within the area of social work has precipitated a change in how the library designs its instruction for students, such that librarians will now 'spend less time talking about the basic mechanics of using a database and more time discussing how to retrieve high-quality information' and 'pay special attention to the tools that allow researchers to limit their results to systematic reviews and meta-analyses' (2008, pp.112-113). If we are training our future practitioners how to consult and utilise systematic reviews in their practice, it is logical that we should also be equipping our researchers with the research and information skills necessary to undertake them.

However, in contrast with the health sciences, there remains a notable lack of existing research on how libraries support systematic reviews in the social sciences. This is encapsulated by what Bausman and Ward (2015) describe as 'the dearth of literature about information literacy instruction in social work education', noting that 'one cannot help but be curious about how individual social work librarians and instructional teams are approaching information literacy instruction' (p.33). This study seeks to address this gap by exploring library support for postgraduate students and researchers across many different disciplines, including social work and cognate areas.

2.3 The use of one-to-one research consultations as a channel of support

While one-to-one consultations with patrons have long been utilised as a channel of support by librarians (Adams, 1980; Yi, 2003), instruction to small and large groups (for example, as part of an embedded session in the teaching curriculum) allows library staff to reach an increased number of users. While this greater efficiency limits the degree of personalisation or customisation of support, it can represent an attractive model, especially in the context of reduced library or staffing budgets where offering any kind of individualised service, even in a limited way, is simply not feasible. Watts and Mahfood (2015) highlight the challenge presented

by the lengthy time commitment involved in such consultations, which must be balanced against the benefits afforded by allowing the librarian to 'tailor research assistance to the individual needs of the students' (p.71).

This commitment also underscores the need to demonstrate the potential impact and value of the service, in order to evaluate whether time could be spent more efficiently on other supports or through other channels which facilitate greater scalability – for example teaching more generic skills to larger groups in a workshop format. Sikora, Fournier & Rebner (2019) explore this impact in their study of individual research consultations. Using a pre- and post-test method, the authors found improvements in some aspects of students' skills, such as the use of appropriate search strings, as well as increased confidence.

The primary function of this kind of consultation is captured by Lee (2004) who notes that 'the goal of the research consultation service is to empower the client with both the skills necessary to accomplish his or her research objective and to educate the client on information resources available' (p.170). In this respect, such support can play an important role in developing the skills and confidence of users to undertake research independently, thereby having a long-term impact rather than simply providing a quick fix.

In contrast perhaps with larger group teaching, individual consultations also afford the opportunity for more in-depth and detailed support, which can be in high demand from students. Magi and Mardeusz (2013) found that students still very much valued individual, face-to-face support as it enabled them to 'collaborate with another person who has expertise and experience' and 'to "bounce" ideas off them' (p.612). Yi's study also found that approximately eighty per cent of such requests were for 'in depth research assistance on specific topics' (Yi, 2003, p.347). This context is very relevant to those undertaking systematic reviews, where a detailed and comprehensive approach, accompanied by exceptional rigour, is required. However, as other models of support such as small and large group teaching are likely to be more sustainable for many libraries, individual consultations may need to be acknowledged as just one element within a suite of supports for different contexts and needs, and one that is perhaps most appropriate solely for high-level and complex queries.

3. Methods

In this exploratory study, a short survey comprising three open-ended questions was circulated to all postgraduate students and post-doctoral researchers who had attended a one-to-one research consultation of greater than 30 minutes duration with the social sciences librarian in relation to undertaking a systematic review. The participants were researching across a range of areas in social sciences, including social work, education, psychology, and social justice.

A survey with open-ended questions was chosen as the research method as it provided most flexibility for respondents (some of whom are based off campus for significant periods) while also allowing for the collection of qualitative data which was a priority (Denscombe, 2014). As the maximum potential sample size was relatively small, a high response rate was essential in order to generate any kind of meaningful inferences. The use of a focus group had been considered as an alternative, however as the researchers attended for consultations at different points throughout the year and were all working on different timelines, this made the possibility of using a focus group highly problematic, as the participants would likely be at different stages, with some having only recently attended a consultation, and others perhaps having attended up to a year previously.

Interviews would likely have provided richer data allowing for deeper clarification and analysis, however it is likely that the response rate would have been impacted negatively, and as this study was underpinned by an exploratory approach, survey data was viewed as being adequate

given the scope of the project. However, as a result of this choice of method, participants could not be prompted or probed to further expand on their responses which is a significant limitation of the data (Bryman, 2016). A follow-up study using interviews could perhaps be undertaken to delve deeper into specific aspects and questions raised by the findings in the present study - ideally with an independent researcher rather than the librarian whom the participants had met with previously in order to reduce potential bias.

The survey was generated and collected via Google Forms for convenience and was circulated approximately 6-8 weeks after students attended the consultation, to try and ensure that researchers would have progressed sufficiently, or even in some cases completed the systematic review, and would be better placed to reflect on the extent to which the support offered by the librarian was of value in the overall process. All participants were informed that the survey would be used to improve service delivery as well as for research purposes and consent was recorded.

Twenty researchers attended consultations of longer than 30 minutes during a 12-month period, with an average duration of 48 minutes per consultation. 18 researchers responded to the survey, answering at least one question. Descriptive data regarding the specific level of participants, or their subjects and topics etc. were not collected in order to preserve the anonymity of responses as the number of participants was relatively small. The responses were collected directly by the researcher at the end of the data collection period. As this was an exploratory study, an open coding approach was utilised with emergent codes and themes identified, and data grouped and categorised accordingly (Strauss and Corbin, 1990, cited in Bryan, 2016). While the responses were all coded by a single researcher and this is an acknowledged limitation, all data was considered fully, and codes and themes were refined based on multiple readings and analyses to reduced confirmation bias. The survey questions were also piloted and discussed with two peers in advance in order to avoid the inclusion of leading questions or other elements that may have increased the potential for bias.

The results section below synthesises the responses for each of the three questions separately, before discussing the implications for the design and delivery of library support in this area.

4. Findings

Feedback received from each of the three questions included in the survey is discussed below:

4.1 Question 1: Please explain what impact, if any, did the research consultation have on the quality or effectiveness of your research project?

This question was designed to capture the impact that LIS support had, if any, on the research output, that is, the finished systematic review. 17 of the 18 participants answered this question, and all indicated that it had been a positive experience in some way. A number of respondents identified tangible ways in which the support had assisted noting it 'made my research methodology more rigorous'; 'improved the scope and quality of my searching strategy'; 'could find more publications related with our topic'; and 'a strong impact on the quality of my systematic review'. It is important to note that this evaluation is based on the perception of the researcher and may not be an objective assessment.

Others described how the consultation had been of value in less specific terms: 'I found the whole process very professional and critical to getting my research off on the right foot' and 'it pointed me in the right direction'. This feedback suggests that the consultation was particularly helpful by assisting researchers in getting started with their projects, allowing them to avoid potential stumbling blocks which may hinder them at an early stage and prevent them moving forward with the project. This feedback may also indicate that the research consultation format

allowed support to be delivered at the point of need when the individual researchers were first embarking on their projects, thereby maximising the opportunity to create a 'teachable moment'.

4.2 Question 2: How could the consultation have been improved?

Ten of the eighteen respondents answered this question, which was designed to identify how the service and support can be further developed to provide a greater benefit. Of these, three stated that no improvement was necessary, while another respondent noted that they were 'still a little unsure of how to use CINHAL [sic] when I left'. The latter suggests that the provision of a visible source of further follow-up support for any questions arising after the consultation is also important (e.g. via email, phone or indeed face to face), to ensure researchers can navigate any road blocks they may encounter at various stages throughout the process of undertaking the review, and not just at the initial stages. Indeed another researcher noted elsewhere that 'the option to make another appointment was most welcome, as it did not put me under pressure to learn everything at this one meeting', perhaps indicating that some researchers may require scaffolded support over time rather than a single consultation.

A recurring theme highlighted that researchers were unaware of the level and type of support available with seven of the respondents raising this either directly or indirectly, noting: 'I should have gone earlier in the process'; 'encourage lecturers, supervisors etc. to highlight the specific supports you can provide'; 'I wonder how many students realize this amazing service exists or how personalised it is?'; and 'under utilized service'.

This feedback points to the need for librarians to work with teaching and research staff, perhaps through an embedded approach, to highlight the expertise and support that is available through the library.

4.3 Question 3: Is there anything you now do differently as a result of attending the research consultation?

The final question was aimed at exploring the impact that the support offered by the librarian had on the development of researchers' skills, competencies and knowledge in undertaking systematic reviews. This question was answered by 14 of the 18 respondents. One researcher stated 'no' and another 'not as of yet, but I am much more confident about using different databases and searches to locate relevant information, and more efficiently', whilst the other twelve respondents indicated that their experience or behaviour had changed in some way as a result of the consultation. Increased confidence was the most notable impact, and was an aspect raised by eight of the respondents who stated they were 'much more confident'; 'I research a lot better and with more confidence'; and 'it helped me be more confident in the search terms I had chosen'.

Other practical differences or benefits were described also, including being able to 'find materials quicker'; 'the way I search databases'; 'my search strategy is more focused and quicker'; and 'use search strategies more effectively'. Such feedback appears to highlight a prior gap in terms of the students' knowledge and ability specifically in relation to search skills and the use of databases, highlighting a key area where librarians can add value through their expertise. This information can also be a useful tool to open dialogue and conversations with teaching staff around embedding library support in the curriculum.

5. Discussion

This study aims to provide an exploratory glimpse of the role and potential value of one-to-one research consultations to those undertaking systematic reviews in the social sciences. The small sample size utilised in the survey significantly limits the ability to generalise the results to

the broader population, however the responses can offer some initial or tentative insight into the role of LIS support in this area, helping to inform future studies. Furthermore, the high response rate (18/20) reduces (although does not eliminate) the risk of significant self-selection bias, for example, by those who may not have found the consultation to be of any value. However, as this study uses qualitative survey data, any inferences in relation to the quality and effectiveness of the research projects are based on the perception of the individual researchers, and therefore not necessarily objective assessments of the impact.

The provision of one-to-one support is extremely resource intensive compared to teaching larger groups. However, in such a complex area as systematic reviews, the ability to tailor and customise support specifically to the individual's needs and research question presents a potential opportunity for increased impact. Indeed, it is of note that ten of the eighteen respondents used the word 'personal' or 'personalised' at some point in their responses, clearly articulating the value of individualised and tailored support over more generic channels such as group workshops. For example, one researcher highlighted how the librarian 'made the consultation so personal and relevant to me'. However demonstrating the impact of such services often remains the challenge for librarians, and in this context collecting evidence through post-consultation feedback, case studies and other means may play a key role in helping to justify the time commitment involved in delivering highly tailored support on a one-to-one basis. Such evidence could also be supplemented by a more quantitative approach as utilised by Sikora et al. (2019) through pre- and post-testing.

In many cases respondents perceived that their skills had increased (e.g. 'use search strategies more effectively' or 'find materials quicker') and this highlights the important contribution that the librarian can make in helping researchers deal with the challenge presented by relatively unfamiliar territory. This finding adds resonance to Watts and Mahfood's (2015) evidence that 'several students remarked that they felt like they had become more efficient in their ability to locate and evaluate professional literature as to its applicability to their research topic' (p.82). While researchers are experienced domain experts within their chosen field, they may be new to the process and method of systematic review, and thus suddenly find themselves unsure of how to search and navigate the information landscape in a comprehensive and robust way. Increasing the confidence levels of researchers is also important in this respect. Eight respondents specifically referred to this aspect, mirroring the finding of Sikora et al. (2019) that there was a statistically significant increase in confidence levels from attending individual research consultations between pre- and post-tests. Removing or minimising potential obstacles in terms of either skill or confidence gaps can allow researchers to move forward with their project and concentrate on areas where their own expertise can flourish and have maximum impact.

It is clear however, that the awareness of the librarian's role in supporting systematic reviews remains low, or incipient at best. While the librarian has become embedded within the health sciences domain, it seems that this has yet to occur in social sciences in any meaningful way, and libraries and librarians must increase the marketing and promotion of such supports to help increase awareness among users and avoid the 'I wish I had known earlier' problem so often encountered.

A further extension of this, is the need to work collaboratively and form partnerships with teaching staff to provide support in a structured way, which is also evident in the literature. Watts and Mahfood (2015) found that 'students agreed that more deliberate planning should occur to systematically embed work with the librarian across their academic program' (p.80). This kind of formal planning may also help to spread the consultation workload out more smoothly for library staff and help to avoid unmanageable pinch points, which can be a concern with this level of support. Indeed Lee's (2004) case study on the use of research consultations also advises of the need to have a formal process in place with clear guidelines in order to

manage expectations and demand - for example, users are required to book at least 24 hours in advance. Without well-defined procedures in place, such a service may become a victim of its own success and library staff may struggle to keep up with the volume of consultations, ultimately leading to a deterioration in the quality of the service provided. Monitoring and managing this risk on an ongoing basis remains crucial.

6. Conclusion

The use of systematic review as a research method is a growing area across the social sciences and provides an opportunity for both libraries and librarians to position themselves as a key resource. While large and small group teaching through workshops or similar formats may present a more efficient way to deliver support, one-to-one consultations may ultimately yield greater impact given the complexity and detail involved in undertaking a systematic review. The increased personalisation and tailored approach provides an opportunity for meaningful engagement and connection with the librarian, helping researchers to develop new skills and increase their confidence within the specific context of their own research process.

This type of bespoke service may pose significant challenges in terms of sustainability and scalability however, and so clear structures and guidelines should be put in place and communicated in relation to the level of support and expectations surrounding it. Capturing and demonstrating the value of such support remains an ongoing challenge, especially with the risk that a lot of such activity may be less visible to teaching staff than more traditional classroom-based LIS support, or may even go unrecorded altogether. In this context, marketing, advocacy and liaison skills are essential to ensure that the service is promoted and embedded effectively across the academic community, and to allow researchers to avail of support at the most effective and appropriate time for maximum benefit and impact.

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