Open access to nursing journals: an audit of the 2010 ERA journal list

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ABSTRACT

Objective
To determine the proportion of nursing journals that are fully open access or have some elements of openness, and hence are readily accessible by nurses in clinical settings.

Design
A descriptive study, with interpretive analysis of existing data sources.

Setting
Access to online journals from the perspective of a nurse as a consumer.

Subjects
Nursing specific journals from the 2010 Excellence in Research for Australia (ERA) list of publications.

Main outcome measure
The proportion of nursing journals with unrestricted online open access as of October 2011.

Results
Of the 224 journals included in this research, 12% (27/224) had unrestricted open access to all published manuscripts, 39% (88/224) had partial or conditional access and 49% (109/224) had no elements of open access, and required the consumer to have access to a paid subscription.

Conclusion
Approximately half (51%) of nursing journals surveyed have all or some articles that are open access. This is higher than other studies of open access research articles globally. However, barriers at an institutional level may need to be addressed to ensure nurses can be informed in their care of patients.

INTRODUCTION

Codification and quality assurance of the knowledge-base is central to every discipline and profession. In the scientific health care disciplines, including nursing (Oermann et al 2008), this codified knowledge is distributed primarily through journals which offer both discovery and archives (Clarke 2008). The e-revolution since 1995 has enabled the discovery and download of openly-accessible information as never before. However, this has created tensions between the norms of the ePublishing era and the longstanding 'learned publishing' marketplace, along with the traditional practices of professional attainment and privilege. In addition, there has inevitably been some resistance against the breaking down of longstanding barriers that prevented clinician access to researchers' sources, and healthcare consumer access to clinicians' sources. The clinicians' role now is increasingly that of interpreter and consultant, rather than guardian of health knowledge (Willis et al 2008).

This article examines access to information of value to nurses in clinical settings from the viewpoint of the nurse as a consumer. Nurses work in a wide range of settings, with variations in resources, including hardware and software, and in non-patient-load (super-numerary) time for educational and research endeavours. In most settings, uninhibited access to professionally-relevant information is valuable. A scan of lists of open access journals, such as the 'Directory of Open Access Journals' (Lund University Libraries 2012) and 'Online Journals' (Thede and Sewell 2010) shows that many journals that are categorised as openly accessible are not available in English, or are not peer-reviewed. Consequently, it would be valuable to offer an audit of current open access publishing. A tertiary system of collation, such as the Excellence in Research for Australia (ERA) initiative which was instigated by the Australian Research Council and prepared by the academic disciplines, includes venues that contain English-language, peer-reviewed papers categorised by disciplines, and offers a useful existing data source for this kind of audit.

LITERATURE REVIEW

Despite the growing availability of research evidence, nurses have been slow to adopt research into their daily decision-making (O'Leary et al 2012). In what is now dated research, nurses most frequently used experiential knowledge sources ahead of their initial nurse education, workplace sources, physician sources, their intuition, and then research literature (Estabrooks 1998). That study also found that the research literature that nurses did say they used was nursing newsletters reporting on projects, rather than the project publications themselves. More recent findings demonstrate that nurse decision-making is more influenced by their colleagues than research papers (Scott et al 2011) and they favour easily accessed, 'pre-packaged information' such as policies and guidelines over research reports (O'Leary and Mhaolru'Naigh 2012). This may be a concern, as these guidelines may or may not be research-based (Bail et al 2009).

Ease of access to research information is particularly important for clinical nurses, given the increasing gap between university-based academics and clinical nursing environments (Allan et al 2008). Another example of 'pre-packaged information' is the use of open source information such as Wikipedia. One research project identified that 56% of the references cited on the Wikipedia pages reviewed could be clearly identified as originating from reputable sources, suggesting that easy access sites such as Wikipedia could be a useful tool for critical appraisal and literature searching for nurses (Haigh 2011). Citations with a free link to the research article have been found to increase the proportion of psychologists reading the article (Hardisty and Haaga 2008), demonstrating the importance of easy accessibility for clinicians.

Other barriers to research-based practice have been described by Australian nurses as lack of accessibility of the research findings and inadequate organisational support, particularly in relation to providing time

to use and conduct research (Retsas 2000). This has been reinforced more recently, as uncertainty in the work environment, including team relationships, has hindered nurses' utilisation of research (Scott et al 2011). The burgeoning field of methods for translating evidence demonstrates considerable diversity of terminology, and includes 'knowledge transfer' (Pentland et al 2011), 'practice development' (McCormack et al 2004), 'evidence-based practice' (DiCenso 2003), and 'evidence-informed practice' (Ciliska et al 2008). In part this range of nomenclature reflects the changing frameworks for work-based learning. For example, practice development urges clinicians to identify their practice problems, seek relevant information, and work with team members to integrate new practices within current environments (McCormack et al 2004). This acknowledges that research is not simply 'disseminated' into practice, but requires a complex relationship of awareness, initiation, problem solving, team work, leadership, and resources (Wilkinson et al 2011). The 'theory to practice gap' (Duke et al 2008) is increasingly intensified; one recent count measured 75 medical trials and 11 systematic reviews being published daily (Bastian et al 2010).

More fundamentally, however, the primary barriers to nurses accessing current research are organisational support for computer use, including access to computers, information technology (IT) and librarian support (Nkosi et al 2011). The lack of computers, or lack of computers in clinical environments, is more marked in rural and aged care settings (Hegney et al 2007). Additionally, many nurses find that workloads prohibit the use of computers for professional development while at work, with more than half of those surveyed using their home computers instead (Hegney et al 2007). Consequently there is a mismatch in nursing duties, with an expectation that nurses work with current evidence (Australian Nursing and Midwifery Council 2005), but with limited ability to access or integrate research during clinical practice.

To overcome the 'evidence to practice' gaps and enhance knowledge transfer, published research should be presented in plain language and in accessible formats (Sudsawad 2007). "The Internet has brought with it both means to disseminate and access content, and an enhanced expectation that content will generally be readily accessible" (Clarke and Kingsley 2009, p.1). Catalysts for the open access movement include national policy mandates, university policies, and increased emphasis on self-archiving in institutional repositories (Cryer and Collins 2011). However, these types of 'opening up' of information threaten entrenched for-profit activities, which are based on closed approaches to publishing, facilitated by copyright laws (Clarke and Kingsley 2009). Open access supporters argue that the only constraint on reproduction and distribution of research information should be the provision to authors of "control over the integrity of their work and the right to be properly acknowledged and cited" (Budapest Open Access Initiative, 2002 p.1). The enthusiasm of academics to have access to research articles has led to considerable improvements during the last decade. This paper shifts the debate from access by academics to access by professionals, because "access to health research publications is an essential requirement in securing the chain of communication from the researcher to the front-line health worker" (Chan et al 2009 p.1).

There are few publications on open access in the nursing literature (but see Morris-Docker et al 2004; Lyons 2010). Consequently, knowing more about what evidence is easily available to nurses in clinical environments would be valuable in further understanding current barriers to evidence-informed clinical practice, for the benefit of patient care.

METHOD

Aim
The aim of this research was to determine the proportion of refereed nursing journals that are open access or have some elements of openness from the perspective of a clinical nurse.

Design

This study was 'simple descriptive' in design (Kermode and Roberts 2006), comprising analysis and interpretation of publically available data. This article reports on the first part of a larger study that aims to explore and describe the openness of journals across a number of disciplines including midwifery, exercise science, psychology, education, government, and nutrition in Australia. The process described below outlines the method used for the nursing sub-study.

Population

The population for this study was defined as being those journals listed on the Excellence in Research for Australia, Australian Research Council (ARC) website (ARC 2010). This information was available in a downloadable Microsoft Excel format, and included details such as the journal name, and up to three Field of Research (FOR) codes. In total, this list included 20,712 Australian and international journals.

Sample

The sub-population examined for this study included all journals that had a primary FOR code of 1110. This FOR code relates to journals classified as having the largest component of research from, or being most relevant to, the nursing discipline (Australian Bureau of Statistics 2008). This included 232 journals. Journals with an FOR of 1110 as either their secondary or tertiary field were excluded (n=31) from this study.

Data collection

Data relevant to elements of openness was collected from the official website of each listed journal during September 2011, and entered into a Microsoft Excel spread sheet. Determination of these elements was through discussion and agreement by the multidisciplinary team of academics, so that the elements of openness were consistent with each discipline's approach in regards to access and format. Open *access* for the purposes of this study refers to materials that are openly accessible online without restriction. Open *format* refers to materials that use standard and readily-interpreted formats such as HTML, ODF, and Ogg. PDF was coded as a partially open format. This was appropriate for both the broader project and nurses in disadvantaged settings, such as those in rural areas, because they may not have software packages to enable reading of specific formats. Each journal was coded against these two elements as either being completely, partially or not open. Data collection was undertaken without taking advantage of subscription access to journals or publishers. For each journal that was completely or partially accessible, format was then assessed.

The data collection process was subject to a number of limitations. Data collection was undertaken purely from the manuscript consumer's perspective. A journal was *not* explored from the perspective of the publishing author, and hence this research does not take into considerations of openness from an author's perspective, such as the need for an author to pay to publish their work.

Data analysis

Microsoft Excel was used to determine descriptive frequencies of open access and format, which are reported in figure 1.

FINDINGS

In total, 232 journals were identified as being within the sub-population of journals most relevant to nursing (FOR code 1110). Of these, eight journals were removed, because they had ceased publishing, were unable to be located on the internet or on inspection were found to be not nursing-related. Hence 224 journals were included for analysis (figure 1). Of the 224, 12% were found to be completely open access, and 39% partially open access, whilst 109 (49%) had no elements of open access. Of the 51% that had complete or partial open access, the majority (78%, 90/115) had completely open and transferrable format types.

Examples of elements that qualified a journal as partially open access are listed in table 1.

Figure 1: Surveyed nursing journals with open access and format
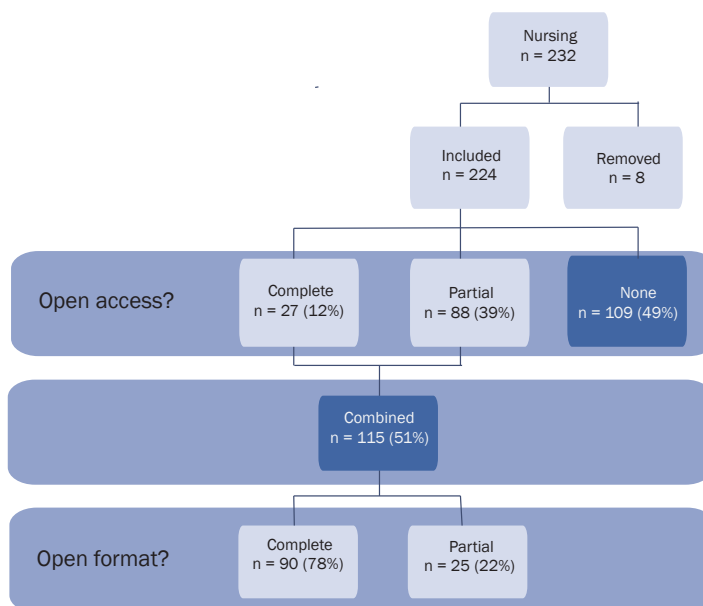
Table 1: Elements of partially open access

Open access restricted to:

Current or most recent issue

Trial issue

Sample copy

Five most downloaded articles

Editors' choice

DISCUSSION

Comparable level of open access

We examined 224 nursing journals and found 12% had complete open access, and more than 51% had complete or partial open access [see table 1]. Research across disciplines generally has recently reported an open access rate of 10% (Munch 2011). With 12% complete and 39% partial open access, nursing journals can be seen to have at least as high a rate of open access articles as the global average. This finding suggests that investigations into barriers for evidence/practice integration need to focus on institutional and clinical factors, and not only on the open access status of relevant journals.

Benefit for clinicians and patients

In clinical settings, removing barriers against access to information is important for knowledge transfer and enhancing patient outcomes. Arguably, this access is particularly important for nurses working in marginalised environments, such as rural, remote or third-world settings, where other kinds of access to knowledge and education may be limited (Hegney et al 2007), but patients nevertheless deserve safe clinical practice informed by up-to-date research (Chan et al 2009). Better access to peer-reviewed resources is only one of the pre-conditions for the incorporation of research evidence into practice.

However, Hardisty and Haaga (2008) found that whilst open access increases the incidence of clinical nurses downloading and reading research articles, it does not necessarily influence clinical practice (Davies et al 2011). Crucial factors in improving evidence utilisation for nurses appear to be clinical leadership in integrating research with practice, and revision of organisational guidelines to incorporate research outcomes (Allan et

al 2008, O'Leary and Mhaolru'Naigh 2012). The study reported on in the present paper demonstrates that some of the relevant information is available to nurses on the internet.

Open access to the internet in the workplace is a useful but unrefined tool for encouraging the retrieval of information for practice (Morris-Docker et al 2004). Currently, some workplaces have restrictions on the use of the internet within the clinical environment (Hegney et al 2007). If not carefully implemented, these restrictions can block access by clinicians to appropriate and necessary information. This study has indicated that access to journals for nurses is reasonably good, so investigating barriers at the institutional level would be valuable.

Limitations

This study only looked at the ERA list, and only at journals whose primary focus was nursing, so these findings may not necessarily be generalisable to all nursing journals. This was a study undertaken in October 2011, and such timings should also be considered. While not the focus of this study, it was apparent during analysis, that the partially open access journals tended to only provide access to one free issue or sample, so the difference between completely open and partially open is a significant one.

Research implications

It would be beneficial to repeat this research every one or two years, in order to longitudinally track the trends in journal openness. Further research into the practices of journals in relation to partial access would offer important information about article distribution – for example, whether the most up-to-date articles are most openly available (Crawford 2010). However, it would also be important to investigate relationships between open access, editorial boards, and publishing companies' policies and practices. Additionally, factors that influence authors to publish work in open access journals, and not to do so, should be explored. Such factors may include the need to pay a fee to publish in some open journals, or the requirement of their profession or institution. This is particularly relevant for the science disciplines, which tend to focus on citation impact, reputation, and accessibility to a specialised readership rather than the breadth of readership, copyright, or access status (Munch 2011).

CONCLUSION

This is the first study to explore the open access status of nursing journals. The study found that nursing journals have at least as high a level of open access as the average for disciplines generally. However, barriers at an institutional level, such as computer/internet access and a supportive professional-development environment, may need to be addressed to ensure nurses can benefit from the open access of nursing journals to inform their care of patients.

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