



FEATURE ARTICLE

# Is open access sufficient? A review of the quality of open-access nursing journals

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**ABSTRACT:** *The present study aims to review the quality of open-access nursing journals listed in the Directory of Open Access Journals that published papers in 2013 with a nursing focus, written in English, and were freely accessible. Each journal was reviewed in relation to their publisher, year of commencement, number of papers published in 2013, fee for publication, indexing, impact factor, and evidence of requirements for ethics and disclosure statements. The quality of the journals was assessed by impact factors and the requirements for indexing in PubMed. A total of 552 were published in 2013 in the 19 open-access nursing journals that met the inclusion criteria. No journals had impact factors listed in Web of Knowledge, but three had low Scopus impact factors. Only five journals were indexed with PubMed. The quality of the 19 journals included in the review was evaluated as inferior to most subscription-fee journals. Mental health nursing has some responsibility to the general public, and in particular, consumers of mental health services and their families, for the quality of papers published in open-access journals. The way forward might involve dual-platform publication or a process that enables assessment of how research has improved clinical outcomes.*

**KEY WORDS:** *clinical outcome, journal impact factor, mental health nursing, nursing research, open access.*

## BACKGROUND

Open-access journals have their origins in the early 1990s when the Internet made it possible to create unrestricted online access to papers published in scholarly journals. During the pioneer years (1993–1999) open-access journals were almost exclusively founded by scholarly groups; however, during the period 2000–2004, new business models were established, whereby authors were charged for the publication of their papers (Laakso *et al.* 2011). The number of open-access journals has risen steadily, with 11% of papers published in fully open-access journals in 2011 (vanNoorden 2013).

Prior to the emergence of online open access, scientific papers were published initially in hardcopy journals, later

supplemented by online access, which required either an individual or institutional subscription. The scientific debate and research findings within these journals were limited to those who had paid subscriptions. Wolpert (2013) describes this process: ‘funding agencies and foundations provide funds to conduct research; university and other research organisations host the intellects who conduct the research, maintain the research facilities and educate future researchers; authors with no expectation of monetary compensation write research papers describing their research findings; publishers accept contributed research papers on conditions of copyright transfer, facilitate the editorial process, and manage the production and distribution process needed for disseminating the papers; and libraries use institutional funds to purchase organize and preserve this publisher’s output and make it available to future research and teaching’ (p. 785). At an economic level, this process describes a transfer of mostly public funds (research funders and universities) into a commercial profit for publishing companies who then sell the publications back to the institutions funded by mostly public money (libraries). A

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distribution system, such as this, that constrains access to papers, is an anathema to researchers who seek impact and influence, rather than remuneration (Wolpert 2013). A principal argument in support of open-access publishing rests on the belief that the subscription-based model has produced a crisis of accessibility to the scientific literature (Davis & Walters 2011).

In 2002, the Declaration of the Budapest Open Access Initiative ([Http://www.opensocietyfoundations.org/openaccess/read](http://www.opensocietyfoundations.org/openaccess/read)) was the first formal call to make research more accessible. This was followed in 2003 by the Bethesda Statement on Open Access Publishing ([http://dash.harvard.edu/bitstream/handle/1/4725199/suber\\_bethesda](http://dash.harvard.edu/bitstream/handle/1/4725199/suber_bethesda)) and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities ([http://www.zim.mpg.de/openaccess-berlin/berlin\\_declaration.pdf](http://www.zim.mpg.de/openaccess-berlin/berlin_declaration.pdf)). The central premise was that peer-reviewed research papers, donated for publication by authors with no expectation of compensation, should be available online for free and with the smallest possible number of usage restrictions (Wolpert 2013).

This new market has led to what Beall (2012) has described as 'predatory publishers' that exploit the open-access model in which the author pays. He has suggested that these publishers are dishonest and aim to dupe researchers, especially those inexperienced in scholarly communication. These publishers set up websites that resemble legitimate online publishers, and publish papers of questionable and low quality. These publishers are predatory because their mission is not to promote, preserve, and make available scholarship; instead, their mission is to exploit the author-pays, open-access model for their own profit. These publishers use solicitation techniques by sending out emails to scholarly email lists, with invitations to submit papers and join editorial boards (Haug 2013).

This apparent exploitation of the open-access process has raised issues about the scientific quality of the papers published. With a focus on self-management for consumers of mental health services and the promotion of health literacy, in which consumers are often encouraged to seek out information on their own health, there needs to be some easily-accessible assessment of the quality of that information. This access to criteria for quality also applies to mental health nurses, who are expected practice in a way that incorporates relevant research.

## METHOD

A list of open-access nursing journals was accessed (13–31 January 2014) from the Directory of Open Access Journals (<http://www.doaj.org/>) using the term 'nursing'. Eighty-nine

journals were categorized as 'nursing' on this site. Each journal was reviewed in relation to these inclusion criteria: freely-accessible online publication in 2013, English language, and nursing content. Of the 89 journals listed, 19 met these inclusion criteria. Each journal's website will be accessed to identify the following details: publisher, number of publications in 2013, content related to mental health nursing practice, date publication commenced, cost of publication, affiliation, indexing in accessible databases (i.e. PubMed), impact factor, ethical and disclosure guidelines, review process, and editorial board (Table 1).

## Assessment of quality

The quality of the open-access journal will be assessed using two standards:

1. Impact factor (Web of Knowledge <http://wokinfo.com> or Scopus <http://www.scopus.com/home>). Traditionally, the quality of nursing journals has been determined by their impact factor(s), which is/are calculated using a formula, in which the numerator is the number of citations in a given year to items published in the previous 2 years, and the denominator, which is the number of substantive papers and reviews published in the same 2-year period.
2. Indexed in PubMed <http://www.scopus.com/home>. Indexing enables papers to be accessed by online searching, and the more reputable the database, the higher the requirement for quality. PubMed is perhaps the most reputable database for health sciences. It is a free database accessing the Medline database of references and abstracts on life science and biomedical topics (including nursing). Journals are included in Medline following an assessment of quality. Selection into the database is based on the recommendations of a panel, the Literature Selection Technical Review Committee, based on scientific scope and quality of a journal (<http://www.nlm.nih.gov/pubs/factsheets/jsel.html>). Scientific merit is based on the validity, importance, originality, and contribution to the field of the overall contents of each title. Editorial merit is assessed based on demonstrable objectivity, credibility, and quality, including the peer-review process, ethical guidelines, and disclosure statements. Medline indexes papers that report original research; clinical observations accompanied by analysis and discussion; analysis of philosophical, ethical, or social aspects of the health professions and biomedical sciences; critical reviews; statistical compilations; descriptions of evaluation methods; and case reports with discussions.

**TABLE 1:** Overview of journals

Journal	Publisher	Year	No. papers 2013	Mental health	Fee	Affiliation	Index PubMed	Impact factor	Disclosure	Ethics
<i>BMC Nursing</i>	Biomed Central	2002	24	0	\$US1520		Yes	0.473 Scopus	Yes	Yes
<i>Online Journal of Issues in Nursing</i>	Kent State School of Nursing	1996	24	0	No	American Nurses Association	Yes	0.298 Scopus	No	Yes
<i>Online Journal of Nursing Informatics</i>	OJNI	1997	9	0	Donations		Yes	0.264 Scopus	No	No
<i>ISRN Nursing</i>	Hindawi Publishing	2011	15	0	\$US500		Yes	No	Yes	Yes
<i>Curations</i>	AOSIS Open Journals	2010	24	0	\$US80	DNOSA	Yes	No	Yes	Yes
<i>Aporia: The Nursing Journal</i>	University of Ottawa	2009	11	0	No	University of Ottawa	No	No	Yes	Yes
<i>Online Journal of Rural Nursing and Health Care</i>	Binghamton University	2000	13	0	Membership	Rural Nurse Organisation	No	No	No	No
<i>Korean Journal of Women Health Nursing</i>	KSWHN	1995	24	0	US\$50 + US\$35/page	KSWHN	No		Yes	Yes
<i>International Journal of Nurse Practitioner Educators</i>	University of North Carolina, Greensboro	2012	10	0	No	University of North Carolina	No	No	No	No
<i>International Practice Development Journal</i>	Foundation of Nursing Studies	2011	12	0	No	IPDC	No	No	Yes	Yes
<i>Nursing Reports</i>	PAGEPress Publications	2011	3	0	\$US260		No	No	Yes	Yes
<i>Nursing Research and Practice</i>	Hindawi Publishing	2010	85	3	\$US 800		No	No	Yes	Yes
<i>Nursing: Research and Reviews</i>	Dove Medical Press	2011	14	1	\$US 1615		No	No	Yes	No
<i>International Journal of Advanced Nursing Studies</i>	Science Publishing†	2012	15	0	\$US 130		No	No	No	Yes
<i>Open Journal of Nursing</i>	Scientific Research Publishing†	2011	30	0	\$US600, 50% discount low income		No	No	No	No
<i>Journal of Nursing Education and Practice</i>	Scienu Press†		171	5	\$US200		No	No	Yes	Yes
<i>Open Nursing Journal</i>	Bentham Open†	2007	21	0	\$US800-900		No	No	Yes	Yes
<i>Journal of Hospital Administration</i>	Scienu Press†	2012	57	0	\$US200		No	No	No	No
<i>Clinical Nursing Studies</i>	Scienu Press†	2013	40	0	\$US200		No	No	No	Yes

†Identified as 'predatory publishers' (<http://scholarlyoa.com>). DNOSA, Democratic Nursing Organisation of South Africa; IPDC, International Practice Development Collaboration; KSWHN, Korean Society Women Health Nursing.

No assessment of quality was conducted on individual papers, but the Scholarly Open Access website (<http://scholarlyoa.com/publishers/>) was accessed to identify publishers listed as 'predatory'.

## RESULTS

### Overview

A total of 552 papers were published in the 19 open-access nursing journals in 2013. Half of these journals had begun their operations in 2010–2013. Four of the journals have track records going back to 1995–1997. Most journals were commercial publications, although five were published by nursing organizations (American Nurses Association, Rural Nurses Organisation, International Practice Development Collaboration, Korean Women Health Society, and Democratic Nursing Organisation of South Africa), and two were published by universities (University of Ottawa and University of North Carolina). The number of publications per journal ranged from three to 171. *Journal of Nursing Education and Practice* published the most papers ( $n = 171$ ).

There were 11 papers published that had a mental health nursing focus; approximately 2% of the total. Topics included nurse therapists, workplace resilience, mood disorders, patient satisfaction, methadone treatment, and medication adherence. *Journal of Nursing Education and Practice* published the most papers with a mental health focus ( $n = 5$ ).

The cost of publishing in open-access nursing journals (converted to \$US, as this was most common currency) ranged from no cost to \$US1615. Those journals that did not charge for publication were managed by nursing organizations or a university. Some journals offered reductions of <50% for authors from low-income countries.

### Quality assessment

Five of the journals were indexed in PubMed, although others also made this claim. No journals had impact factors listed in the Web of Knowledge Journal Citation Reports (2012), but three had impact factors listed in Scopus Journal Impact Factor (2012). Only 11 journals listed disclosure requirements in their guidelines for authors, and 13 outlined the ethical guidelines required. Five journals had no statements in their author guidelines that related to either disclosure or ethics.

Editors of the journals were mostly professors of nursing in academic positions; however, some journals had no identified editor (although there was an editorial board); for example, *ISRN Nursing*, *Open Journal of*

*Nursing*, and *Nursing Research and Practice*. One journal was edited by a medical practitioner (*Journal of Hospital Administration*), another had a non-nursing executive editor (*BMC Nursing*), but did have a nursing editorial board, and one journal had no nurses identified in their editorial team (*Nursing Reports*). All journals claim to have a peer-review process, although the rigour of this was unable to be assessed.

### Examples of content

The two journals that charged over \$US1500 to publish papers were examined in more detail, because this processing price was at least double what all other journals charged. *BMC Nursing* published 24 papers in 2013. The authors came from a range of countries, but these were predominantly Canada, the UK, Australia, and Sweden. There were similar numbers of studies using qualitative ( $n = 12$ ) and quantitative ( $n = 9$ ) methodologies. Topics were predominantly nurse focused, exploring the role of the nurse in different clinical situations and examining nurses' perceptions and roles, although there were six papers measuring patient outcomes. The journal was indexed in PubMed. It did not have a Web of Knowledge impact factor, but had a Scopus impact factor of 0.316. The Web of Knowledge Journal Citation Report provides the impact factor for 99 nursing journals, ranging from 0.066 to 2.509. Impact factors are generally equivalent across both Web of Knowledge and Scopus.

*Nursing: Research and Reviews* was the other journal that charged over \$US1500 in processing costs. It had 14 publications in 2013. Most authors were from the USA. There were five review papers and seven quantitative studies. Most papers focused on nursing interventions or perceptions, but no papers reported improvement in clinical outcomes for patients. The quantitative papers were all surveys. One paper that had a mental health nursing focus was published. This paper was a review of five studies that presented the results of interventions to improve mental health clinicians' knowledge of interventions to improve non-adherence (Bessington *et al.* 2013). Although this journal was indexed in the Directory of Open Access Journals, it was not indexed in PubMed. It had no impact factor in either Web of Knowledge or Scopus.

## DISCUSSION

The 19 open-access journals reviewed reflects a 42% increase in open-access nursing journals since 2011 (Watson *et al.* 2012). A total of 602 papers were published

in the 19 open-access nursing journals in 2013. Four of these journals did not charge to publish a total of 44 papers (7%), and the other journals charged between \$US80 and \$US1615 to publish the remainder. Three journals had impact factors, two of which did not charge a fee, *Online Journal of Issues in Nursing* (0.165) and *Online Journal of Nursing Informatics* (0.248), and one that did charge a fee, *BMC Nursing* (0.316). Six of the journals are published by companies listed as 'predatory publishers' in Scholarly Open Access (<http://scholarlyoa.com/publishers/>) (Science Publishing, Scientific Research Publications, Sciedu, Internet Scientific Publications, and Bentham Open). These journals (*International Journal of Advanced Nursing Studies*, *Clinical Nursing Studies*, *Open Journal of Nursing*, *Journal of Nursing Education and Practice*, *Open Nursing Journal*, and *Journal of Hospital Administration*) published 55% of papers ( $n = 334$ ).

All journals claimed to use a peer-review process, but this could not be verified. Bohannon (2013) sent a paper reporting the results of an obviously flawed experiment to 304 open-access journals that claimed to have a peer-review process. More than half of these journals accepted the paper. There did not appear to be any peer-review process in 60% of the journals to which the paper was submitted. This suggests that the issue of quality is not confined to nursing. In a review of psychiatric open-access journals, Hunt *et al.* (2013) found that some of these journals also have highly-questionable practices.

As open access continues to grow, the key concern has to be the integrity of the publishing process and highly-questionable practices of some of the journals (Hunt *et al.* 2013). Watson *et al.* (2012) identified that, although the claims by online open-access publishers about rapid publication, peer review, and free access to content are evident, the claim to higher citations is hard to substantiate.

The highest impact factor for all nursing journals, according to Web of Knowledge impact factors in 2012, was 2.926 (*Birth: Issues in Perinatal Care*). The highest impact factor for the open-access nursing journals was 0.473 (*BMC Nursing*), which would rank this journal at approximately 92 out of 106 nursing journals. Another measure of quality was whether a journal was indexed in PubMed. Most of the open-access nursing journals ( $n = 14$ ) are not indexed in PubMed. The journal that charges the highest fees for publication is not listed in PubMed (*Nursing: Research and Reviews*).

Indexing in PubMed also requires journals to adhere to ethical and disclosure requirements. The absence of statements in the author guidelines regarding disclosure and

ethical guidelines in nearly half the journals was concerning, but even more concerning was the use of statements by some journals on their website regarding their adherence to the guidelines from the International Committee of Medical Journal Editors. This website does outline the ethical and disclosure requirements; however, in briefly reviewing the contents of the journals purporting to adhere to these standards, it was apparent that many papers failed to make reference to either. There is a requirement for quality to facilitate access indexing in credible databases, such as PubMed. If quality is measured by PubMed standards, and if impact factor is an indication of quality based on citation rates, then approximately 75% of the open-access nursing journals are of doubtful quality.

Many open-access journals publish download numbers on their websites, but Davis (2011) identified that while papers placed in open access receive significantly more downloads, they were cited no more frequently or earlier than subscription-access control papers. He found that while open access might mean more viewings for a paper, it does not translate to more PDF downloads, suggesting that people are more able to scan these papers before deciding on their utility. There has been little research into whether open access is making a difference in non-research contexts and to the public in general (Davis & Walters 2011). The need to evaluate this social impact of research has been highlighted by Bornmann (2012), who identified that whether scientists like it or not, the societal impact of their research is an increasingly important factor in attracting public funding and support. It is common for applications for funding to ask for evidence of consultation with mental health consumers and statements of how the research will impact on current practice.

It is difficult to tell whether the anticipated surge in open-access publication has had any impact on the publication of nursing papers or mental health nursing papers. Between 2012 and 2013, there was an increase of 105 nursing papers published in open-access journals. However one journal (*Journal of Nursing Education and Practice*), published by a company described as 'predatory' (Sciedu), accounted for 94% of this increase. If this journal was excluded, there were only seven more open-access nursing papers published in 2013, despite the emergence of two new open-access journals.

## CONCLUSION

While open-access publication appears to hold only limited interest to mental health nurse authors, the issues associated with this mode of publication are relevant to mental health nurses, consumers, and their families. If the

intent of open access is to make information and research into mental health issues freely available to everyone, then it needs to be accompanied by processes for ensuring quality. While the principle of universal accessibility is laudable, this review has highlighted issues related to the quality of such papers and the commercial strategies of some publishers.

As a profession, we have some responsibility to both nursing and the general public for the quality and the credibility of papers within these journals that define themselves as 'nursing'. Perhaps the answer lies in dual platforms, such as the one being proposed by Wiley & Sons, who publish *International Journal of Mental Health Nursing*, the highest-ranked mental health nursing journal according to World of Knowledge, and two other well-read mental health nursing journals. One model for this involves authors being offered two options for publishing their research: (i) open access, in which the author pays a fee of approximately \$US2500; or (ii) subscription, where papers are made available to subscribers, as well as developing countries and patient groups, through access programmes. This might be one way to maintain quality, as evident in the journal impact factor, and provide the benefits of open access.

Given the critique of impact factor (Jackson *et al.* 2009) and the lack of effective alternative standards for measuring quality, perhaps it is timely for mental health nursing to identify strategies to identify how published nursing research improves clinical outcomes and consumer care. This might involve an emphasis on what Weiss (2007) describes as the societal good embedded in research.

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