

Introduction

Prior to the adoption of the National Health and Medical Research Council (NHMRC) Open Access (OA) Policy from 1 July 2012, the Council of Australian University Librarians (CAUL) promoted the institutional repository (IR) model to the NHMRC, which embraced the model owing to its flexibility. While responsibility for OA compliance lay with the Chief Investigator A (CIA) of NHMRC grants, university libraries and IR staff were charged with promoting self-archiving (green OA) and adding metadata and OA versions to IRs.

Methods

The study was conducted using bibliometric research methods. NHMRC-funded journal articles published during the first two full years of the NHMRC OA Policy formed the primary data and the population was collected from Web of Science. Information relating to metadata and the OA version in Australian IRs was drawn from Google Scholar and Trove and quantified. As time prevented the analysis of the entire population of publications, the analysis was undertaken on a randomised sample of 25 percent. Descriptive statistics were used to determine the frequency with which metadata and OA versions appeared in IRs. A list of journal titles was compiled from the sample and these were ranked according to the frequency of NHMRC funded articles. The *Directory of Open Access Journal* (DOAJ) and SHERPA/RoMEO database were then used to categorise journal titles into OA and hybrid OA journals.

Findings

A significant finding was that while almost three-quarters of the articles in the sample had metadata in Australian IRs, less than a quarter had accepted or published OA versions attached. This was despite three-fifths of the publications being published OA or with OA versions in PubMed Central (PMC), the largest OA subject repository of medical journal literature. While the top ranked journal title in the study was the OA journal *PLOS ONE*, it was found that most NHMRC grant recipients published in subscription journals offering hybrid OA. The range of hybrid OA self-archiving agreements and embargo periods was found to be extremely complex, an explanation for the few statements in IRs regarding the OA status of articles. Another finding concerned the comprehensiveness of the metadata in IRs which varied considerably as did the number of access points. Less than a quarter of the IRs cited the NHMRC grant ID with the PMID seldom cited.

Recommendations: Research Informing Practice

While it is the CIA's responsibility to deposit OA versions in an IR, practitioners can make important changes to the quality of metadata in IRs with dynamic linking and a more holistic approach to discoverability across library collections. Collaboration among institutions would not only improve metadata quality in repositories, but also bolster their value and sustainability in promoting research outputs and recording OA policy compliance. Reflected in the National Library of Australia's Trove platform, enhanced metadata would support a central point for the analysis of OA mandated publications as well as provide valuable empirical data on publishing trends to organisations such as CAUL.

Limitations

Owing to the large size of the population, a randomised sample of 25% was used in this study.