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Measuring Nursing Faculty Impact: Web of Science versus Scopus

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Introduction

Web of Science has long been the forerunner for publication analysis and citation tracking. In recent decades, Scopus joined the scene, offering a choice for citation tracking of scholarly publications. However, the high cost of these two databases, in comparison to other library resources, precludes many institutions from maintaining access to both products. This poster looks at how our library addressed the growing interest in SCOPUS and validated the utility of acquiring both tools.

For several years the Woodruff Health Sciences Center Library has offered a Web of Science-based service for annual reporting to health sciences schools and departments. These reports include publication counts, citation analysis, faculty h-index, and annual journal metrics.

While appreciative of the service, the School of Nursing voiced concerns that their publications and related impact were not being fully captured by the Web of Science-based service. In the summer of 2013, several campus libraries trialed Scopus in part to address this perceived gap in coverage. The timing presented us with the opportunity to use the 2012 School of Nursing citation report as a case study to compare the Web of Science and Scopus databases.

Study Questions

- Which database offers the widest **Journal Coverage** in the field of **Nursing**?
- Which database offers the widest coverage for **Emory Nursing Faculty** publications?
- How does nursing faculty **h-index** compare between the two databases?
- Which database reflects the greatest **Impact** of nursing faculty publications?

Database Overview

Web of Science

- Science Citation Index Expanded (1900-present)
- Social Sciences Citation Index (1900-present)
- Arts & Humanities Citation Index (1975-present)
- Conference Proceedings Citation Index- Science (1991-present)
- Book Citation Index- Science (2005-present)
- Book Citation Index- Social Sciences & Humanities (2005-present)
- Current Chemical Reactions (1986-present)
- Index Chemicus (1996-present)

Scopus

- Content includes:
 - peer-review journals
 - trade publications
 - book series
 - conference papers
 - scientific indexed webpages
 - patents
- 45% post-1996 records include references
- 57% records post-1996
- Remainder of records data as far back as 1823
- Scopus coverage update in April 2013

Methods

Two independent searchers collected faculty publication records and citation count data from each database. Data was exported into a citation manager program for analysis. Data were collected in May 2013.

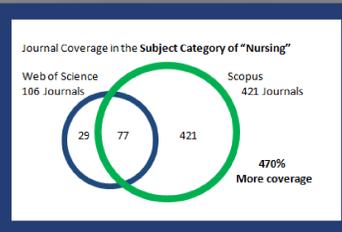
Web of Science data were collected using the database's basic search feature. Scopus data was collected using the author search feature. Affiliations and available author identifiers were used to limit results.

Relevant journal coverage and quality was compared between the two databases. Journal impact was determined by SCImago Journal Rank (SJR). Current inclusion in MEDLINE® and a refereed status in *Ulrich's Periodical Directory* were consulted as measures of journal quality.

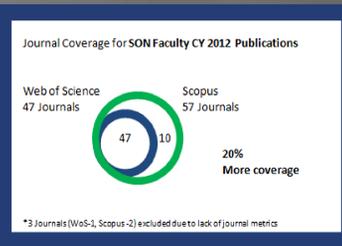
Inclusion/Exclusion Criteria

Results were limited to articles, proceedings or conference papers, and reviews. When article types were inconsistent between the two databases, Web of Science designations were used. Online profiles and available curriculum vitae (CV) were consulted for inclusion determinations only. Publications were included for journal impact analysis only when SJR and Scope/Subject Category data was available.

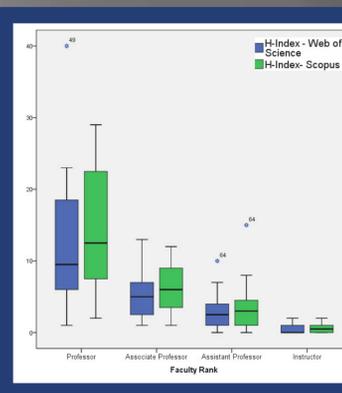
Study Objective A



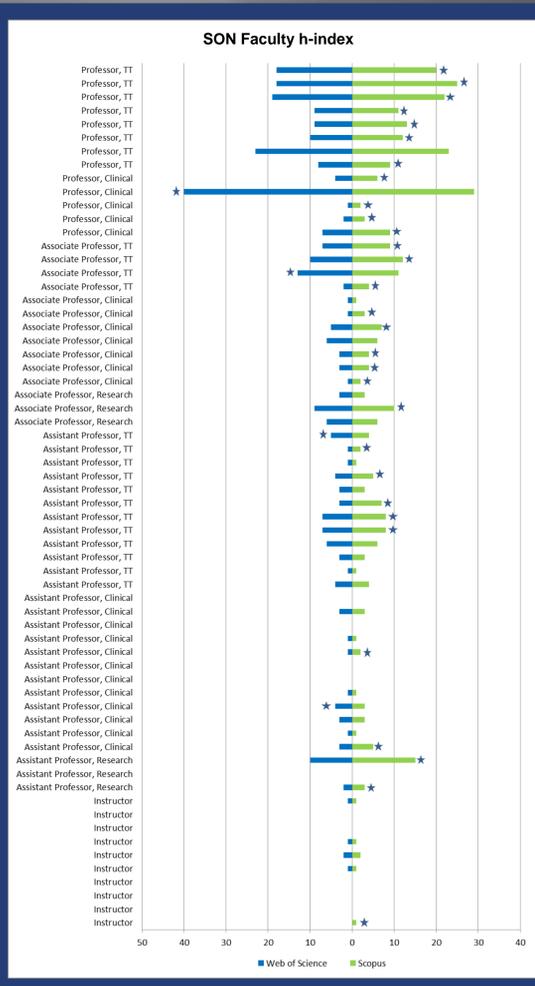
Study Objective B



Study Objective C continued



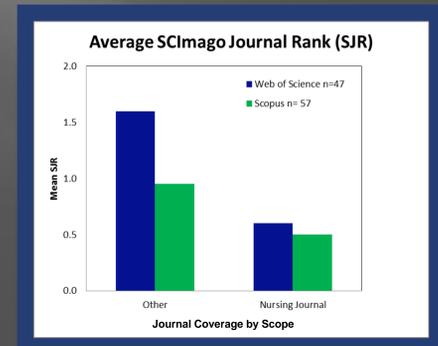
Study Objective C



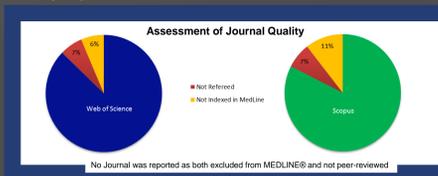
Study Objective C Continued

		Faculty Rank			
		Instructor	Assistant Professor	Associate Professor	Professor
Professional Track	Clinical	10	14	8	4
	Research	0	3	3	0
	Tenure	0	11	4	8

Study Objective D



Study Objective D continued



Summary of Findings

- Scopus showed the widest coverage in the field of Nursing and in the journals in which Emory Nursing faculty were publishing.
- Scopus indicated a larger faculty h-index when compared to Web of Science data.
 - 46% of the Nursing faculty had a higher h-index using Scopus data.
 - 49% showed no change in h-index between the two databases.
 - 6% had a higher h-index when using Web of Science data.
 - Each of these authors published in the late 1980s or early 1990s.
 - Citation counts are available in Scopus only from 1996-present.
- For 2012 faculty publications, Web of Science journals had significantly higher SCImago Journal Rankings.
 - By expanding coverage, overall journal impact decreased.
 - The 2012 SJR for the (57) Scopus journals: mean (1.11)/ median (0.77)
 - The 2012 SJR for the (47) WoS journals: mean (1.26)/ median (0.92)
- For 2012 faculty publications, Web of Science journals had a higher inclusion in MEDLINE®.
 - Approximately 11% of the reported publications in Scopus were not indexed in MEDLINE®.
 - Approximately 6% of Web of Science identified publications were not indexed in MEDLINE®.
- For 2012 faculty publications, Web of Science reported journals were more likely to be peer-reviewed*
 - Approximately 7% of Scopus journals were not refereed.
 - Approximately 6% of Web of Science reported journals were not refereed.

Note: Ulrich's Periodical Directory was used to provide a standard, third party status designation for peer-review. All included journals self-report to be peer-reviewed.

Conclusions and Final Decision

These data were presented to administrators in the School of Nursing to demonstrate annual reporting comparisons between the two databases. They were shown that Scopus offered increased journal coverage in both the general subject area of nursing, as well as in specific publication titles in which faculty were publishing. Scopus reported increases in h-index were highlighted as well as those specific cases where the reported h-index would be higher using Web of Science. Particular attention was given to the use of SJR as a measure of journal impact. Faculty familiarity with the alternative Impact Factor led to some concern, as did the overall decrease in perceived journal quality of publications reported by Scopus.

After these discussions, the decision was made by the School of Nursing to continue annual reporting using Web of Science.

The perceived journal quality was a major influence in this decision. The School of Nursing was understandably hesitant to move to the SJR based metrics when other campus reporting bodies used the Impact Factor.

For now, Emory Libraries continue to fund access to both databases. Future explorations will expand to other subject domains and departmental reports. Performing similar case reports for other fields, departments, and campus centers may highlight additional strengths and weaknesses between the two databases. As campus-wide interest in impact reporting continues to grow, it will be important for the library to be prepared to answer bibliometric inquiries and provide relevant expertise and analysis.

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