

# Can scholarship in nursing/midwifery education result in a successful research career?

In a recent editorial, we examined the research outputs of 150 Australian nursing and midwifery professors (McKenna et al., 2018) identifying publication metrics on par with, and sometimes above those of professors in the UK (Watson, McDonagh, & Thompson, 2017). Because global university rankings are heavily weighted towards research, there has been pressure on universities and on academics to maximize research performance (Nguyen, Rambaldi, & Tang, 2017). Although many Australian universities have increasingly focused on education delivery, and despite the need for a strong evidence base for learning and teaching, academics are often cautioned against focusing too heavily on educational research. As a group of collaborative educational researchers ([www.esscollaborative.org/](http://www.esscollaborative.org/)), this led us to consider whether a focus on educational research may limit or enhance an academic career.

## 1 | BACKGROUND

Internationally professorial appointments are required to have a focus on research and in Australia and in New Zealand (NZ) institutional research profiles are assessed through Excellence in Research for Australia (ERA) and the NZ Performance Based Research Fund (PBRF) respectively. Measures include publication citation impact, research income, esteem measures and translational impact e.g. collaboration, outreach and engagement. The h-index is also used as a measure of impact and productivity and is dependent on the length of an academic career and the field of study (Bornmann & Daniel, 2007). This measure is based on the total number of publications and the number of citations of those works; for example, if a researcher has 20 or more publications and 20 are cited more than 20 times, the h-index will be 20. It should be noted that search engines/databases use different inclusion criteria for publications and Google Scholar, for example, tend to generate a higher h-index than SCOPUS.

In relation to its impact on academic careers, the standing and status of educational research has been challenged, especially from within the physical sciences. There have been some suggestions that educational research should be more “scientific” (Smith, 2014) with greater attention to positivist experimental approaches than to educational issues. However, social scientists are required to understand both pragmatic concerns and real-world practice, hence a postpositivist perspective. As such, there are problems with adopting a purely scientific method for a social process as “education is not a pill we pop” (Cooper et al., 2015; p 55). There have also been calls

for educational researchers to engage more closely with practitioners and policy-makers to enhance research and knowledge uptake (Cherney, Povey, Head, Boreham, and Ferguson (2012).

In nursing and midwifery, questions arise therefore as to the “value” and impact of educational research. In order to begin to answer this question, we developed a “snap shot”, pragmatic and feasible review of publication metrics in order to answer the question “Can scholarship in nursing/midwifery education result in a successful research career?” We defined “success” as the number of publications, citations and the h-index and “scholarship” as the number of education-focused publications.

## 2 | METHODS

### 2.1 | Stage 1

Based on the Australian Nursing and Midwifery Accreditation Council and NZ Nursing Council list of accredited programmes, institutional websites were searched to identify full professors employed in salaried roles in Australia and New Zealand.

### 2.2 | Stage 2

The SCOPUS database was then searched to identify each professor’s total publications, education-focused publications, citations and h-index. SCOPUS was selected as it was the database used in the most recent round of Excellence in Research Australia. Education-focused papers were defined as those published in any field of education: i.e. undergraduate, postgraduate, professional development, midwifery and mental health nursing. Data were collected from institutional websites and SCOPUS in the period from August to October 2017.

To ensure feasibility and to develop operational consensus, publication titles and abstracts for a sample of ten percent of the Australian nursing/midwifery professors were downloaded for two researchers to independently review educational content. Based upon the findings of this pilot, each professor’s lifetime publications listed on Scopus were examined, aiming to identify publication metrics and education-focused papers through title and abstract review. Full papers were examined where there was doubt about the focus. Where there were multiple listings for the same person, the listing with the highest h-index was recorded. If there was confusion relating to an individual’s identity, role/title, institution or department, they were excluded.

### 3 | RESULTS

A total of 156 professors were identified across 32 Australian and four New Zealand universities. All professors were qualified at the level of PhD or equivalent. Most were female—136 (87.2%) vs. males  $N = 20$  (12.8%), with no significant difference in publication performance by gender. There was also no significant difference in any collected variable by country of appointment (Australia-NZ) and therefore the cohort was analysed as a single group.

#### 3.1 | Number of publications

The professors' total publications average was 81.1 ( $SD = 57.8$ ) with a range of 2–442. The mean number of education-focused publications identified was 6.5 (median 3), ranging from 0 to 84. In terms of percentiles, 25% of professors had 0–1 education-focused publications, 50% had up to three publications and the remainder had seven or more. From a total of 12,645 publications for the 156 professors, 1,006 were education-focussed publications, amounting to 8% of their overall publications output. In summary, the majority of professors rarely published in the education field.

#### 3.2 | Citations

In relation to the number of citations for papers identified as noneducation publications, each paper received on average 12.3 (143,340 citations for 11,639 papers). The education-focussed publications had a comparable citation rate averaging 10.8 citations (10,913 citations for 1,006 papers). The top 10 researchers by education-focussed citations are listed in Table 1 and the top 10 researchers by noneducation-focussed citations are listed in Table 2.

#### 3.3 | H-Index

The median h-index of professors was 15 (range 1–35) with quartile scores of 11 for the 25th percentile, 15 for the 50th percentile and

20 for the 75th percentile. There was a positive correlation between h-index and the number of published papers as the calculation is based on the number of papers/citations. For example, there was a strong correlation between h-index and the total number of publications ( $r = .840$ ,  $p < 0.001$ ), and to a lesser extent with the number of education papers ( $r = .340$ ,  $p < 0.001$ ).

The top ten noneducation-focussed professors did achieve a higher mean h-index (29) compared to “education-focussed” professors (23) although this was nonsignificant ( $z = -1.902$ ,  $p = 0.063$ ) (Tables 1 & 2). However, the top 10 professors according to the number of education-focused citations (Table 1) do have a significantly higher h-index (a mean of 21) compared to all the remaining professors' mean of 14.8 ( $z = -3.32$ ,  $p = 0.008$ ).

### 4 | DISCUSSION AND CONCLUSION

Based on our sample of nursing/midwifery professors in Australia and New Zealand, and contrary to some views, publishing in the scholarship of learning and teaching does have an impact and we are not significantly disadvantaged by publishing in this field.

As others have identified professors should be publishing (Watson et al., 2017) but as in the UK we identified a broad range of 2–442 publications and h-indices of 1–35. In Australia and NZ, few professors currently publish in the education field. Those who did so achieved similar citation levels for their papers with an average of 11 compared to 12 citations for noneducation papers. However, the top 10 professors, based on their “noneducation-focussed” citations, did achieve a higher mean h-index (29) and mean citation rate (3322) compared to those with an “education focus”—an h-index of 23 and a mean citation rate of 500. Of course, the best strategy may be to publish in both fields as Professors Happell and Creedy demonstrate (Tables 1 & 2).

The results from this study may be useful for defining standards in the nursing and midwifery academic disciplines and for the

**TABLE 1** Education-focussed citations: the top 10 ANZ Professors

Top 10 by education citations	Education citations	Total citations	Percent education citations	h-index
Brenda Happell	1,325	5,147	25.7	35
Simon Cooper	952	1,930	49.3	22
Tracy Levett-Jones	942	1,859	50.7	26
Debra Creedy	390	3,167	12.3	30
Marie Cooke	299	993	30.1	16
Patrick Crookes	282	571	49.4	14
Kim Usher	211	1,352	15.6	19
Sally Chan	201	2,012	9.9	24
Esther Chang	201	1,796	11.2	25
Dianne Wynaden	193	871	22.2	17
Mean Total	500	1,970	27.6	22.8

**TABLE 2** Noneducation-focussed citations: the top 10 ANZ Professors

Top 10 by citations excluding-education citations	Total noneducation citations	h-index
Alison Kitson	4,844	26
Brenda Happell	3,822	35
Jane Koziol-McLain	3,499	23
Wendy Chaboyer	3,336	33
Christine Duffield	3,275	30
Gillian Harvey	3,230	23
Elizabeth Manias	3,162	31
Debra Creedy	2,777	30
Patsy Yates	2,769	33
Virginia Schmeid	2,510	27
Mean total	3,322	29.1

purposes of employment and promotion applications. For promotion to professor in Australia and NZ, the reasonable expectation would be an h-index of 15 with approximately 11 or more citations per paper. However, if impact is measured more widely, say for example by research income, it may be that funding flows less freely to educational research in the health disciplines. This may be so particularly in Australia where the federal Office of Teaching & Learning (and its predecessor organizations), which was a dedicated source of funding for educational research, was abolished in 2015.

This study has some limitations. We were not able to identify all professors as institutional websites were sometimes out of date and publications were often not collated correctly in SCOPUS. Further, we made the pragmatic assumption that a defined group of publication metrics (De Groote & Raszewski, 2012) could be considered as an indicator of a successful career in education research; clearly there are many other factors that influence career development that we did not address.

In conclusion, institutions and individuals do need to improve their research output listings, and publication metrics should be considered in appointments to senior positions. However, the key take-home messages from this study are that (a) a career in the scholarship of nursing and midwifery education appears not to significantly disadvantage career progression; and (b) early career academics should not be dissuaded from engaging in educational research and publications.

#### AVAILABILITY OF DATA AND MATERIALS

Not applicable in this study.

#### AUTHORS' CONTRIBUTIONS

All authors made substantial contributions to each of the following:

- The conception and design of the study, or acquisition of data, or analysis and interpretation of data,
- Drafting the article or revising it critically for important intellectual content,
- Final approval of the version to be submitted.

#### ETHICS APPROVAL

The study involved a secondary analysis of literature and did not require Ethics approval.

#### COMPETING INTERESTS

The authors declare that they have no competing interests.

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#### REFERENCES

- Bormann, L., & Daniel, H. D. (2007). What do we know about the *h* index? *Journal of the American Society for Information Science and Technology*, 58, 1381–1385.
- Cherney, A., Povey, J., Head, B., Boreham, P., & Ferguson, M. (2012). What influences the utilisation of educational research by policy-makers and practitioners?: The perspectives of academic educational researchers. *International Journal of Educational Research*, 56, 23–34.
- Cooper, S. (2015). Simulation versus lecture? Measuring Clinical impact: Considerations for best practice. Commentary on: "Stayt LC, Merriam C, Ricketts B, et al. Recognizing and managing a deteriorating patient: a randomized controlled trial investigating the effectiveness of clinical simulation in improving clinical performance in undergraduate nursing students. *J Adv Nurs*. Jul 6. Evid Based Nurs <https://doi.org/10.1136/eb-2015-102221> 2016, 16. 19 page 55. <http://ebn.bmj.com/content/19/2/55.full.pdf+html>
- De Groote, S. L., & Raszewski, R. (2012). Coverage of Google Scholar, Scopus, and Web of Science: A case study of the h-index in nursing. *Nursing Outlook*, 60, 391–400. <https://doi.org/10.1016/j.outlook.2012.04.007>get rights and content
- McKenna, L., Cooper, S., Cant, R., & Bogossian, F. (2018). Research publication performance of Australian Professors of Nursing and Midwifery. *Journal of Advanced Nursing*, 74, 495–497. <https://doi.org/10.1111/jan.13338>
- Nguyen, T., Rambaldi, A., & Tang, K. (2017). *Research funding of Australian universities: Are there increasing concentration*. Retrieved from The University of Queensland website: <http://www.uq.edu.au/economics/abstract/578.pdf>.
- Smith, R. (2014). Educational research and the light of science. In A. Reid, E. Hart, & M. Peters (Eds.), *A companion to research in education*. Dordrecht: Springer.
- Watson, R., McDonagh, R., & Thompson, D. R. (2017). h-indices: An update on the performance of professors in nursing in the UK. *Journal of Advanced Nursing*, 73, 999–1001. <https://doi.org/10.1111/jan.12924>