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Gender and Publishing in Nursing: A secondary analysis of h-index ranking tables

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Abstract

Aims: To analyse published ranking tables on academics' h-index scores to establish whether male nursing academics are disproportionately represented in these tables compared with their representation across the whole profession.

Background: Previous studies have identified a disproportionate representation of UK male nursing academics in publishing in comparison with their US counterparts.

Design: Secondary statistical analysis, which involved comparative correlation of proportions.

Methods: Four papers from the UK, Canada, and Australia containing h-index ranking tables and published between 2010–2017, were reanalysed in June 2017 to identify authors' sex. Pearson's chi-squared test was applied to ascertain whether the number of men included in the tables was statistically proportionate to the number of men on the pertinent national professional register.

Findings: There was a disproportionate number of men with high h-index scores in the UK and Canadian data sets, compared with the proportion of men on the pertinent national registers. The number of men in the Australian data set was proportionate with the number of men on the nursing register. There were a disproportionate number of male professors in UK universities.

Conclusion: The influence of men over nursing publishing in the UK and Canada outweighs their representation across the whole profession. Similarly, in the UK, men's representation in the professoriate is disproportionately great. However, the Australian results suggest that gender inequality is not inevitable and that it is possible to create more egalitarian nursing cultures.

KEYWORDS
citations, equality, female nurses, gender, inequality, male nurses, men, sex, women

1 | INTRODUCTION

The publication of the h-indices of all identified UK professors of nursing in the *Journal of Advanced Nursing* (Watson, McDonagh, & Thompson, 2017; first published 2016) caused considerable disquiet, expressed in a "Twitterstorm of protest" (Watson, 2016) and in journal papers (Rolfe, 2016; Rosser, 2017). Responses included methodological critiques of the h-index as a valid and reliable assessment tool; criticism of the devaluation of other criteria, such as teaching and leadership skills, for professorial promotion; and ethical

disquiet about what was considered the insensitive scapegoating of individuals.

I share some of the concerns raised, but here I wish to take a more sociological approach to Watson et al.'s paper. In doing so, I hope to demonstrate that the data it contains can be used to interrogate important issues concerning the state of the nursing academy. Specifically, if reanalysed according to sex, they can provide a clear picture of the gendered division of academic authority. Moreover, when consideration of Watson et al.'s paper is combined with that of previous publications of h-index ranking tables from the UK (Thompson & Watson, 2010), Canada (Hack, Crooks, Plohman, & Kepron, 2010), and Australia (Hunt, Cleary, Jackson, Watson, & Thompson, 2011), an international comparison can be made of that division.

1.1 | Background

Given the personalized nature of the studies that I am analysing, all of which involved the naming of individuals, it is incumbent on me to be transparent about myself. Firstly, notwithstanding my androgynous forename, I am a man. I, therefore, must concede that I may not be entirely immune from the charge of hypocrisy in the interpretation I make of the data. Secondly, I am on the 2017 UK list and am included in all the analytic tables presented here. So, more positively, given that I just manage to squeak in to the elevated company of those with an h-factor of 14 or more, I hope I am immune from the charge of sour grapes.

Finally, I should point out that this is not the first time that I have engaged in such an exercise. Almost a quarter of a century ago, in response to North American literature advocating an increase in the recruitment of men into nursing (Black & Germaine-Walker, 1991; Holleran, 1988; Shiffer, 1989), Sandra Ryan and I published a paper in *Nursing Outlook* which presented comparative data between North American and UK nursing. We argued that the UK, where a considerably larger proportion of men were on the professional register, might provide an indication of the effects on North American nursing if a similar ratio was attained there. We noted that the over-representation of male authors in the UK, along with their over-representation in service and educational management, was far greater than it was in North America. Our conclusion that "if the U.K. experience shows anything, it shows that the entry of men into nursing is largely of benefit to male nurses" (Ryan & Porter, 1993, p. 262) was met with vituperative opprobrium from US male nurses who felt that our analysis was an exercise in antimale sexism (Ciesielski, 1994; Johnson, 1994; Peicheto, 1994; Ryan & Porter, 1994; Tranbarger, 1994). Once more unto the breach . . .

The empirical focus of our paper was publication rates by sex over the period 1990–1992. It disaggregated *Journal of Advanced Nursing* authors according to their location—the UK, North America (USA and Canada) and the rest of the world and then identified authors by sex for each location to compare the UK and North American figures. The other journals in the analysis were treated as national-specific: *Nursing Research* as an example of a US journal, *Nurse Education Today* (UK educational), *British Journal of Nursing* (UK clinical), and *Senior Nurse* (UK managerial). No statistical difference was noted in the proportion of male authors between the UK journals and *JAN*'s UK-based authorship, or between *Nursing Research* and *JAN*'s North American-based authorship. However, the differences in proportionality between North American male authors and those from the UK were stark, especially compared with the proportion of men across the whole profession. Constituting 6.5% of North American authors, men's journal representation was twice the proportion of US male Registered Nurses (RNs), which was 3.1%. However, this was dwarfed by the UK proportion of 44.3%, which was five times greater than the proportion of UK RNs (8.8%) and almost seven times greater than the proportion of North American male authors.

Since then, another empirical study of gender and publication in nursing has been published. Shields, Hall, and Mamun (2011) compared the numbers of female and male authors in eight journals. Four were published in the USA (*Nursing Research*, *Research in Nursing & Health*, *Nursing Science Quarterly*, and *Advances in Nursing Science*), three in the UK (*International Journal of Nursing Studies*, *Journal of Advanced Nursing*, and *Journal of Clinical Nursing*) and one in Australia (*Nursing Inquiry*). Data were gathered from four separate years of publication in the period between 1980 and 2009. The study showed a significant difference between the number of men

Why is this study or review needed?

- The research is needed to inform nurses about the representation of men in nursing publishing and academia.
- It will contribute to the debate about the publication of h-index ranking tables.

What are the key findings?

- There was a disproportionate number of men with high h-index scores in the UK and Canada.
- There was a proportionate number of men with high h-index scores in Australia.
- There was a disproportionate number of male professors in UK universities.

How should the findings be used to influence policy/practice/research/education?

- The identification of disproportionalities of male representation in UK and Canadian h-index ranking tables should inform nursing academics and higher educational policymakers that there is a problem that requires to be dealt with.
- The finding that there was no evidence of this disproportionality in the Australian h-index ranking table should be used by nursing academics and higher educational policymakers as a starting point for identifying mechanisms that promote gender equality in nursing academia.

publishing in UK and USA journals, with the number of UK male first authors being considerably greater. While the paper did not include a formal analysis of whether or not there was a statistically significant difference between the actual number of male authors and the projected number derived from the proportion of men on the professional registers, the figures looked sufficiently stark for the authors to comment that:

> *in the USA, the proportion of males who are first authors is in line with the male population of the nursing workforce, whereas in the UK, the proportion of men who publish is disproportionately higher than the men whose careers are in nursing. This may signify a gender bias there. (Shields et al., 2011: 460).*

1.2 | Literature review

Four papers containing h-index ranking tables of nursing authors have been published since 2010. Each of them used different methodologies in their selection of academics and in their choice of metrics.

Thompson and Watson's (2010) UK study confined the selection of nursing academics to those who had been appointed to prestigious research positions (Research Assessment Exercise (RAE) unit of assessment panel members or National Institute of Health Research (NIHR) Senior Investigators). This yielded 16 academics for analysis. The sole metric Thompson and Watson analysed was the h-index (inclusive of self-citations).

Hack et al.'s (2010) Canadian study selected the top 20 cited authors, as measured by a multiplicity of metrics—total career citations, career citations for first-authored papers, most highly cited first-authored papers, h-index for all published papers (inclusive of self-citations) and h-index of first-authored papers.

Hunt et al.'s (2011) Australian study selected those authors with an h-index (inclusive of self-citations) of 10 or more. However, they also included data on these authors concerning number of publications, total number of citations, h-index (exclusive of self-citations) and c-index.

Watson et al.'s (2017) UK study was by far the largest, including all professors identified in the Royal College of Nursing's list of nursing professors in the UK. In addition to h-index (inclusive of self-citations), they included total citations, highest number of citations for a single paper and whether or not the academic had a public Google Scholar web page.

2 | THE STUDY

2.1 | Aims

The aim of the study was to analyse published ranking tables of academics' h-index scores to establish whether male nursing academics were disproportionately represented in these tables in comparison to their representation across the whole profession.

2.2 | Design

Secondary statistical analysis, which involved comparative correlation of proportions.

2.3 | Samples

The samples of four previously published data sets consisting of h-index ranking tables (Hack et al., 2010; Hunt et al., 2011; Thompson & Watson, 2010; Watson et al., 2017) were reanalysed in June 2017. The criteria for selecting the samples differed between the data sets. While the Canadian and Australian studies both selected and ranked academics on the grounds of their h-index performance, the UK studies used other selection criteria that related to status attributes and only used publication performance for evaluation purposes.

2.4 | Ethical considerations

As all data considered were already in the public domain, no ethical permissions were required.

2.5 | Data analysis

The data contained in the four ranking tables were subjected to secondary analysis to establish the sex of those listed in the tables. The sex of academics with obviously gender-specific forenames was identified by a sight test of the data sets. For those with ambiguous or unfamiliar forenames, academic institution websites were searched. The sex of all included academics was identified, with the codicil that this binary reduction may be a blunt instrument of gender identification (Eliason, 2017).

The different selection criteria for inclusion in the different ranking tables created some methodological problems relating to the commensurability of the data. To address these problems, four separate sets of analysis were performed—two to examine the gendered distribution of h-index performance, one to examine the gendered distribution of status and one to connect status with h-index performance.

In the first three analyses, previously published data sets were retabulated to show the number of male academics included in them, the total number of academics and men's percentage proportion of that total. The total number of male RNs, the total number of RNs and the percentage proportion of male registrants of the pertinent national register were also identified. The number of male academics that would be in the data sets if their proportion were equal to the national proportion of male registrants was calculated. The fourth analysis was confined to the internal characteristics of a single data set, so did not require the registrant comparator.

The first two analyses involved the comparison of all four data sets. To ensure commensurability, analysis was restricted to consideration of h-indices (inclusive of self-citations), the only metric that was common to all ranking tables.

To further ensure commensurability, these analyses used the minimum thresholds of the two studies (Hack et al., 2010 and Hunt et al., 2011) that used h-index scores as their inclusion criteria. The first analysis used the minimum h-index threshold in the Australian 2011 study, which was 10. All academics in the other data sets with an h-index <10 were excluded.

The second analysis used the minimum h-index threshold in the Canadian 2010 study, which was 14. All academics in the other data sets with an h-index <14 were excluded.

In both analyses, Pearson's chi-squared test was performed to test the null hypothesis that the number of men with an h-index on or above the threshold was statistically proportionate to the number of men on the register.

The first analysis also included a comparison across data sets. Pearson's chi-squared test was used to test the null hypothesis that there was no statistically significant difference between the proportion of men in with h-indices ≥10 in the UK 2017 data set and the proportion of men with h-indices ≥10 in each of the other data sets.

The third analysis involved the two UK studies (Thompson & Watson, 2010 and Watson et al., 2017), which used status attributes rather than h-index scores as their selection criteria. Secondary statistical analysis was performed on all academics in the data sets, irrespective of their h-index score, to establish the number and proportion of men they contained. Pearson's chi-squared test was performed to test the null hypothesis that the number of men in identified high-status academic positions was statistically proportionate to the number of men on the register.

The fourth analysis was confined to the UK 2017 data set (Watson et al., 2017). It compared the number of male professors with h-indices ≥10 with the number of male professors with h-indices <10. It tested the null hypothesis that the number of male professors with h-indices <10 was statistically proportionate to the number with h-indices ≥10.

2.6 | Validity, reliability, and rigour

Pearson's chi-squared test is a valid test to evaluate how likely it is that any observed difference between categorical data sets was the result of chance. However, when the expected frequencies are low, as is the case with some of the data sets included in this study, caution about the results of chi-squared testing needs to be applied.

3 | RESULTS

3.1 | Sex of authors and h-index scores ≥10

Table 1 shows the number of male authors with an h-index ≥10, the total number of authors with an h-index ≥10 and the male proportion of nursing authors with an h-index ≥10 in each of the four data sets. It also shows the number of male RNs, the total number of RNs and the percentage of male nurses on the pertinent national register during the period when the data about authors were gathered, along with a calculation of the number of male authors with an h-index ≥10 that would be expected if their proportion were equal to the proportion of male RNs.

TABLE 1 Sex of authors and h-index scores ≥10

	UK 2010[a]	Canada 2010[b]	Australia 2011[c]	UK 2017[d]
N male authors	3	5	3	42
N total authors	7	20	24	170
Male % of authors	42.9	25	12.5	24.7
N male RNs	66,465	17,163[e]	20,384	70,550
N total RNs	604,229[f]	268,512[e]	232,045[g]	618,863[h]
Male % of RNs	11.0[i]	6.4[e]	10.2[g]	11.4[j]
Expected *n* male authors	0.77	1.28	2.45	19.38

Note. [a]Thompson and Watson (2010); [b]Hack et al. (2010); [c]Hunt et al. (2011); [d]Watson et al. (2017); [e]Canadian Nurses Association (2012) (2010 data); [f]NMC (2017) (2010–11 data); [g]Australian Institute of Health and Welfare (2012) (2011 data); [h]NMC 2017 (2016–17 data); [i]Williams (2017) (2011 data); [j]Williams (2017) (2016 data).

There was no significant difference between the number of male nursing authors with an h-index ≥10 and the expected number based on the national proportion of male RNs in the Australian 2011 data set ($p = 0.689$). Significant differences were identified in the UK 2010 ($p = 0.014$), Canadian 2010 ($p < 0.003$) and UK 2017 ($p < 0.001$) data sets, which showed that the proportion of male nursing authors with an h-index ≥10 was significantly higher than expected.

Comparing the data sets, there was no significant difference between the proportion of men in the UK 2017 data set and the proportion of men in the Canadian 2010 data set ($p = 0.988$). There was a significant difference between the UK 2017 and UK 2010 data sets, which showed that the proportion of men in the UK 2010 set was significantly higher ($p < 0.001$). There was also a significant difference between the UK 2017 and the Australian 2011 data sets, which showed that the proportion of men in the Australian 2011 set was significantly lower ($p < 0.001$).

3.2 | Sex of authors and h-index scores ≥14

Table 2 shows the number of male authors with an h-index ≥14, the total number of authors with an h-index ≥14 and the male proportion of nursing authors with an h-index ≥14 in each of the four data sets. It also shows the number of male RNs, the total number of RNs and the percentage of male nurses on the pertinent national register during the period when the data about authors were gathered, along with a calculation of the number of male authors with an h-index ≥14 that would be expected if their proportion were equal to the proportion of male RNs.

There was no significant difference between the number of male nursing authors with an h-index ≥14 and the expected number based on the national proportion of male RNs in the Australian 2011 data set ($p = 0.374$). Significant differences were identified in the UK 2010 ($p = 0.014$), Canadian 2010 ($p < 0.003$) and UK 2017

TABLE 2 Sex of authors and h-index scores ≥14

	UK 2010	Canada 2010	Australia 2011	UK 2017
N male authors	3	5	0	26
N total authors	7	20	8	102
Male % of authors	42.9	25	0	25.5
N male RNs	66,465	17,163	20,384	70,550
N total RNs	604,229	268,512	232,045	618,863
Male % of RNs	11.0	6.4	10.2	11.4
Expected *n* male authors	0.77	1.28	0.82	11.63

($p < 0.001$) data sets, which showed that the proportion of male nursing authors with an h-index ≥14 was significantly higher than expected.

3.3 | Sex of authors and high-status attributes

Table 3 shows the number of men included in the UK 2010 and UK 2017 studies based on their status attributes. The UK 2010 data set included those who had been chosen to sit on a panel of the 2008 RAE, or had been appointed as a NIHR Senior Investigator. The UK 2017 data set included all UK nursing professors. The table shows the number of men with status attributes, the total number with status attributes and the male proportion of those with status attributes. It also shows the number of male RNs, the total number of RNs and the percentage of male nurses on the pertinent national register during the period when the data about authors were gathered, along with a calculation of the number of men with status attributes that would be expected if their proportion were equal to the proportion of male RNs.

There was a significant difference between the number of men in the UK 2010 ranking table and the expected number based on the national proportion of male RNs ($p = 0.017$), which showed that the proportion of male appointees was significantly higher.

There was a significant difference between the number of male professors in the UK 2017 ranking table and the expected number based on the national proportion of male RNs in the UK ($p < 0.001$), which showed that the proportion of male professors was significantly higher.

TABLE 3 Sex of authors and high-status attributes

	UK 2010 (RAE + NIHR)	UK 2017 (Professors)
N males	5	71
N total	16	260
Male %	31.3	27.3
N male RNs	66,465	70,550
N total RNs	604,229	618,863
Male % of RNs	11.0	11.4
Expected *n* male high status	1.76	29.64

3.4 | Sex of authors, h-index scores, and professorial status

Table 4 shows the number of male professors in the UK 2017 data set with an h-index ≥10, the total number of professors with an h-index ≥10 and the male proportion of that total. It also shows the number of male professors with an h-index <10, the total number of professors with an h-index <10 and the male proportion of that total.

There was a significant difference between the number of male professors with an h-index score <10 and the expected number based on the proportion of male professors with an h-index score ≥10 ($p < 0.001$). The proportion of men scoring ≥10 was significantly lower than the proportion of men scoring <10.

4 | DISCUSSION

4.1 | The existence of gender inequality

The first two analyses of high h-index scorers come out with very similar results, indicating male advantage (and therefore female disadvantage) in the UK and Canada but not in Australia. The picture of gender inequality in the UK is reinforced by the third analysis, which showed that men stood a far better chance of high-status appointments than women. That impression was copper-fastened by the findings of the fourth analysis that showed not only that those men enjoyed a disproportionately large representation in the nursing professoriate, but also that male professors tended to have lower h-impact scores than female professors. It would seem that there is an overdetermination of gender inequality in the UK, whereby proportionally more men than women tend to attain high h-index scores, while men also tend to require lower h-index scores than women to become professors.

4.2 | The causes of gender inequality

The first thing to note is that, given the ubiquitous application of blinded journal reviewing, the cause of gender inequality in nursing publishing is very unlikely to be direct discrimination. However, it is also not easy to explain these results solely in terms of the generalized gender biases that exist in Western societies. While biases such as the inflexible nature of the workplace that pressurizes women to

TABLE 4 Sex of authors, h-index scores, and professorial status

	UK 2017 h-index <10	UK 2017 h-index ≥10
N male professors	29	42
N total professors	90	170
Male % of professors	32.22	24.71

choose between career success and family caring commitments have significant effects (Lindhardt & Berthelsen, 2017), that does not explain why their impact on female academics' career trajectories is different in different countries.

The most perplexing result is that of Canada, where male representation is as disproportionate as that of the UK 2017. It will be remembered that Shields et al. (2011) did not find over-representation of men in USA journals. This raises the question of what it is about Canadian society and nursing culture that is so different to that of the USA that it leads to such a greater advantage for male nursing academics in Canada. Or, put another way, what is it about the USA that promotes equality?

Of course, we have to be cautious about the results, given the small numbers included in Hack et al.'s study (although it should also be noted that they describe the full population of authors with the top 20 h-indices, rather than a sample) and the fact that Hack et al. and Shields et al. were measuring different things (h-indices vs. first authorship). Nonetheless, they raise important questions about the degree to which gender biases that lead to women's disadvantage in nursing academic publishing are mediated by national characteristics. The reason why these questions are important is that, if the mediating factors that reduce inequalities in those countries that display greater gender equality can be identified, this information can be used to inform debate about how to go about reducing inequalities in those countries where they are at higher levels.

Australia provides an exemplar of effective mediation. So once again, notwithstanding the caveat of the small population included in Hunt et al.'s (2011) study, the question needs to be asked about the characteristics of Australian society in general, and nursing academia in particular, that lead to greater gender equality in nursing publishing.

However, disarticulating the different levels of causation is not easy. So, for example, if we address general social biases, there are some indications that national trends in nursing academia are running counter to national trends in other sectors. Thus, for example, the 2016 Global Board Diversity Analysis (Egon Zehnder, 2017) shows that while Canada and the UK have achieved the critical mass of more than 2.5 women per company board, Australia and the USA have yet to reach that point. This indicates that at least part of the problem in nursing is specific to the occupation.

Conversely, taking an institutional level of analysis, the sparsity of female nursing academics in the UK professoriate may not be due to the specificities of their professional attachment, but to women's place in academia in general. Thus, for example, the proportion of male professors in the UK compared to all male academic staff in 2013/14 was approximately twice that of female professors to all female academic staff (HESA, 2015).

However, the data do indicate that we can lay one causative hypothesis to rest with reasonable confidence. The fact that Australia has a relatively high proportion of male RNs, roughly equal to that of the UK, while the proportion in Canada is just over half that of these countries, contradicts previous speculation by Sandra Ryan and me (Ryan & Porter, 1993) that there might be an association between the number of male nurses on a national register and the disproportionality of their influence. That in turn puts to rest any arguments against the recruitment of men into nursing on the grounds that an increase in their numbers will have a deleterious effect on gender equality in the profession.

4.3 | The consequences of gender inequality

Thus far, I have discussed the need to identify the causes of gender inequality in publishing success. It is also important to look at the consequences of that inequality. One is that it entails female nursing academics having fewer life chances (Weber, 1992) than their male counterparts, in that they are less likely to reap the benefits that a high-profile publication record can bring in terms of professional status and career advancement.

Nor is this just a matter of the publication impact. It will be remembered that, while the participants in the Australian and Canadian ranking tables were selected because of their high h-index scores, this was not the case for the two UK ranking tables. The selection criteria for the 2010 UK list consisted of membership of a REF Unit of Assessment panel, or an NIHR Senior Investigator appointment. The first of these criteria is of special significance, in that RAE panel members are tasked with assessing the publication performance of their peers in the discipline and, more generally, deciding what constitutes high quality nursing research and what does not. The 2017 UK ranking table consisted of all identified nursing professors. Not only does this group consist of an honorific elite; it also contains those in the most powerful positions in nursing education and research. The disproportionately large presence of men in this group is an indication of the disempowerment of women in UK nursing academia.

A far more nebulous question concerns whether the consequences of gender imbalance has had any effect on the nature of nursing discourse. Because of the complexities involved, it would take a considerably more extensive examination than is possible here to come to any firm conclusion on this issue. Accepting that, at best, correlations rather than causal relations between gender balance and the nature of nursing research can be identified and also that many other causal mechanisms than gender are at play, only a very speculative discussion is possible.

That said, we might ask whether there is any connection between male influence and the increasing concentration of nursing literature on the empirical to the cost of the other three fundamental patterns of knowing in nursing identified by Carper (1978) (Porter, 2010; Porter, O'Halloran, & Morrow, 2011) an issue of current contention in the USA (Grace, Willis, Roy, & Jones, 2016; Henly et al., 2015). Certainly, the three UK journals (*International Journal of Nursing Studies*, *Journal of Advanced Nursing* and *Journal of Clinical Nursing*) identified by Shields et al. (2011) are heavily clinical and empirical in their focus, while papers in *Nursing Inquiry*, a journal founded in Australia, tend to be far more socio-cultural and discursive. The situation in the USA is more divided, with two of the four journals identified by Shields et al. (*Nursing Research*, *Research in*

Nursing & Health), being primarily empirical and two (*Nursing Science Quarterly*, *Advances in Nursing Science*) tending to be more discursive. These foci map neatly onto the national gendered proportions identified here and in previous research (Ryan & Porter, 1993; Shields et al., 2011). However, it should be noted that this analysis is somewhat confounded by the move of *Nursing Inquiry*'s editorial office from Australia to Canada since the publication of Shields et al.'s paper.

To take a slightly different approach to male influence over nursing discourse, we might consider a suggestive example close at hand —Watson et al.'s (2017) ranking table of professorial h-indices. It does not require a great deal of speculative imagination to situate this public outing of "winners" and "losers" in the impact stakes as a classic exercise in male competitiveness (Niederle & Vesterlund, 2011). Notwithstanding the fact that one of the authors of Watson et al.'s paper is a woman, when looked at in this light, it is hard to resist the temptation to resort to the metaphor concerning boyish tournaments of micturitional altitude. However, there is a serious question to be asked here about whether or not the significant presence of male authors has tended to make nursing publishing in the UK a harsher environment than it might otherwise be. If this is the case, then the ethic of care that is so frequently identified as being at the core of our profession has been undermined.

4.4 | Limitations

Axiomatically, secondary analyses are constrained by the parameters of the primary data they are reanalysing. Thus, for example, secondary analysis of Watson et al.'s (2017) findings does not include nonregistrant professors who are members of nursing departments or engaged in nursing research.

With the exception of the UK 2017 data set, the ranking tables examined contained small numbers, ranging from 16 (UK 2010) to 24 (Australia 2011). The size of these data sets means that caution should be applied to extrapolations about the overall characteristics of nursing academic populations.

The complexity of the dynamics of the occupation of nursing, to say nothing of the societies where nursing is embedded, means that explanations about the reasons for and consequences of, the disproportionate influence and status of male academics in some countries should be treated as tentative rather than definitive.

5 | CONCLUSION

The evidence presented here indicates that the influence of men over nursing publications in the UK and Canada far outweighs their representation across the whole profession. The converse of this state of affairs is that female nurses and nursing academics enjoy proportionately less influence than their male counterparts. It may also be the case that this level of male representation is having an effect on the nature of nursing discourse. For those who adhere to the principle of gender equality, these observations must at least be a cause for concern.

This is the bad news, but the good news is that in some countries, such as Australia and the USA, female academics are less disadvantaged. The Australian data analysed here suggests that gendered inequality in publishing is not inevitable and that it is possible to create a nursing culture that enables women to participate equally in the generation of knowledge. Useful lessons can be learned from examining those countries that have succeeded in promoting gender equality in nursing academia. This indicates the need for comparative research designed to uncover similarities and differences in social structure through examination of gender-related legislation and of the regulations and policies of universities and nursing departments, combined with demographic analysis of men and women's career progress. It also indicates the need for comparative qualitative research to uncover the culture and experiences of male and female nursing academics.

It is time that the nursing cultures that generate unequal patterns of occupational success are subjected to close scrutiny to identify the mechanisms that lead to disadvantage and to put in place positive strategies to encourage and facilitate female nursing scholars to have their voices better heard.

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CONFLICTS OF INTEREST

No conflict of interest has been declared by the author.

AUTHOR CONTRIBUTIONS

All authors have agreed on the final version and meet at least one of the following criteria (recommended by the ICMJE [http://www.icmje.org/recommendations/]):

- substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
- drafting the article or revising it critically for important intellectual content.

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