



Full length article

International authorship in leading world journals on incontinence and pelvic floor disorders: Is it truly international?



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ABSTRACT

Objective: The primary aim of this study is to compare the authorship in the Journal of Neurourology and Urodynamics (NAU) and the International Urogynecology Journal (IUJ) across two categories: country members of the Organization for Economic Co-operation and Development (OECD) and non-members of OECD (non-OECD). The secondary aim is to explore the obstacles in publishing in these two journals. **Study design:** NAU and IUJ articles between June 2014 and June 2018 were manually screened and divided into 2 categories depending on the country of affiliation of the corresponding author: OECD versus non-OECD. They were then divided into seven different types depending on the scope of the article. An online anonymous lime survey was then used to get the opinions of corresponding authors from non-OECD countries regarding obstacles to publishing.

Results: The OECD countries, representing 17.0% of the world population contributed to 85.4% of the 1885 articles evaluated, whereas only 14.6% originated from non-OECD countries. The distribution of the article types was comparable between the 2 groups. Out of 194 corresponding authors from non-OECD countries, 35 (18.7%) returned a completely filled survey that could be included in the analysis. Lack of funding, language barrier, and perceived bias were acknowledged as barriers to research and publishing. The majority of corresponding authors believed that international collaboration can improve the quality of research.

Conclusions: The majority of NAU and IUJ articles originate from countries belonging to the OECD group. The uneven representation could be due to gaps in research activity, to obstacles in submission or both.

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Introduction

The International Continence Society (ICS) and the International Urogynecological Association (IUGA) are the largest global professional organizations that focus on the field of incontinence and pelvic floor disorders. As stated on their respective websites, both organizations thrive to advance knowledge in this field through their annual meetings and through the publication of their official Journals: the Neurourology and Urodynamics Journal (NAU) as the official journal of the ICS and the International

Urogynecology Journal (IUJ) as the official Journal of the IUGA. Although the prevalence of pelvic floor disorders (PFD) in the developing world is arguably comparable to that of the developed world, the impact and the effect on Quality of Life of affected women are expected to be more pronounced due to limited access to health care and paucity of human and financial resources [1]. Consequently, research from such countries is crucial in order to address the often-specific problems in identifying pathology and formulating treatment plans. These should consider the social and psychological peculiarities of the relevant populations, as well as the health care policies in place.

The Organization for Economic Co-operation and Development (OECD) is an intergovernmental economic organization founded in 1961 and currently encompassing 36-member countries [2]. OECD members are high-income countries (HIC) with a very high Human Development Index (HDI) and are regarded as developed countries. As of 2018, the total population of OECD countries comprises only 17.0% of the world population [2,3].

The primary objective of this study is to compare the authorship from the OECD to that of non-OECD countries in NAU and IUJ over

Abbreviations: NAU, Journal of Neurourology and Urodynamics; IUJ, International Urogynecological Journal; OECD, Organization for Economic Co-operation and Development; Non-OECD, non-members of OECD; ICS, International Continence Society; IUGA, International Urogynecological Association; PFD, pelvic floor disorders; HIC, high-income countries; IRB, Institutional Review Board; GDP, Gross Domestic Product; HDI, Human Development Index; LMIC, Low- and Middle-Income Countries.

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the last 4 years. The secondary objective is to solicit the opinion of the corresponding authors from non-OECD countries, regarding perceived obstacles to publishing in these 2 journals.

Materials and methods

All NAU and IUJ articles between June 2014 and June 2018 were manually screened in order to determine the country of origin of the corresponding author of each publication. Articles addressing male urology were excluded. Articles were then arbitrarily classified into one of 7 categories: Clinical Trials, Cohort/Case series, Animal studies and In-vitro studies, Epidemiological studies (including surveys), Reviews/Special contributions, Case reports/Videos/Letters to the editors/Clinical opinion and others.

The articles were then divided into 2 groups depending on the country of affiliation of the corresponding author: OECD countries versus non-OECD countries.

For the secondary objective, the Institutional Review Board (IRB) approval was secured. All corresponding authors from non-OECD countries were sent an email invitation to participate in an anonymous lime survey of 7 questions (Appendix A). LimeSurvey is a leading open source online survey tool written in PHP (Personal Home Page).

Results

A total of 1885 articles that met the criteria were published in both journals between June 2014 and June 2018 (684 articles in NAU and 1201 articles in IUJ).

A total of 56 countries of affiliation of the corresponding authors were noted in these articles. Out of these, 31 countries belonged to the OECD group (out of a total of 36 OECD countries) and contributed to 1609 articles (85.4%) during this period. The remaining 276 articles (14.6%) originated from 25 non-OECD (out of 160) countries.

In both OECD and non-OECD groups, the most common article type was Cohort/Case series (32.8% and 25.7% respectively). Clinical trials constituted 13.8% of articles originating from OECD countries and 15.6% of articles originating from non-OECD countries (Table 1).

The top five countries with the highest number of articles during the period studied were USA (27.0%), UK (11.0%), Australia (5.4%), The Netherlands (4.9%), and Brazil (4.0%). All, except for Brazil, are OECD members.

The 276 articles originating from the non-OECD countries had 194 corresponding authors, as many of these were corresponding authors for more than one article. All were sent an email invitation to participate in the survey. Seven out of 194 (3.6%) emails bounced back. Of the remaining 187 authors, 38 (20.3%) agreed to participate in the survey, but only 36 completed the survey in full, giving a complete response rate of 19.3%.

(77.8%) were university-affiliated and 8 (22.2%) were non-university affiliated.

25 authors (69.4%) stated that the journal they submitted to was 'almost always' their first choice when submitting their manuscript for publication. All 25 stated that it is due to the relevance of the journal's subspecialty. However, 3/25 (12.0%) stated that it was 'almost always' their first choice either due to the fair treatment of the editors/reviewers of that journal that isn't usual in other journals or due to the fact that there is a better chance of the manuscript being accepted by that journal. Only one author stated that it is his/her first choice because he/she is on the editorial board.

Eleven corresponding authors (30.6%) stated their submission was rejected by another journal before submitting to the current journal.

Twenty-two (61.1%) believe that it is difficult to publish in high impact journals when the origin of the manuscript is their country of residence. Reasons included scarcity of funding (cited by 16 corresponding authors (72.7%)), bias against manuscripts originating from countries where the English language is non-native (cited by 10 (45.5%)) and bias against manuscripts originating from non-OECD countries (cited by 8 (36.4%)).

When asked about ways to increase the number of publications originating from non-OECD countries in high impact journals, 27 corresponding authors (75.0%) suggested improving the quality of research through international collaboration, while 14 (38.9%) opted for mandating a double-blind review to eliminate bias (Fig. 1).

Discussion

The results of this study confirm the gross uneven authorship in IUJ and NAU between OECD and non-OECD countries. The OECD categorization was used since it classifies countries not only based on Gross Domestic Product (GDP) and income, but also after consideration of the Human Development Index (HDI). Consequently, such categorization is arguably more relevant to evaluate research productivity and authorship of academic publications.

We evaluated the country of residence of the corresponding author alone. While some articles are co-authored by investigators from different countries, we believe that the number of such articles is too small to materially change our results. Although the study covers only the last 4 years, it is reasonable to assume that the underrepresentation of non-OECD countries prior to 2015 was at least of the current magnitude. The inequity of authorship was also present within the non-OECD group itself. While 276 articles originated from 25 non-OECD countries, there was not a single corresponding author from the remaining 135 non-OECD countries.

Our results are almost identical to the distribution of citations of Cochrane Incontinence as 15.1% of citations from inception to 2018 originated from non-OECD countries [4]. Other studies evaluating Cochrane review citations led to comparable results [5,6].

The underrepresentation of authorship from the less privileged countries seems to be a common finding in medical discipline journals. When articles in all English language pharmacology

Table 1
Types of articles published in the IUJ and NAU between June 2014 and June 2018.

	NON-OECD COUNTRIES	OECD COUNTRIES
COHORT/CASE SERIES	71 (25.7%)	527 (32.8%)
CASE REPORTS/VIDEOS/LETTERS TO THE EDITORS/CLINICAL OPINION	48 (17.4%)	282 (17.5%)
CLINICAL TRIALS	43 (15.6%)	222 (13.8%)
EPIDEMIOLOGICAL STUDIES	43 (15.6%)	176 (10.9%)
REVIEWS/SPECIAL CONTRIBUTIONS	37 (13.4%)	225 (14.0%)
ANIMAL STUDIES AND IN-VITRO STUDIES	30 (10.9%)	103 (6.4%)
OTHERS	4 (1.4%)	74 (4.6%)
TOTAL	276 (100%)	1609 (100%)

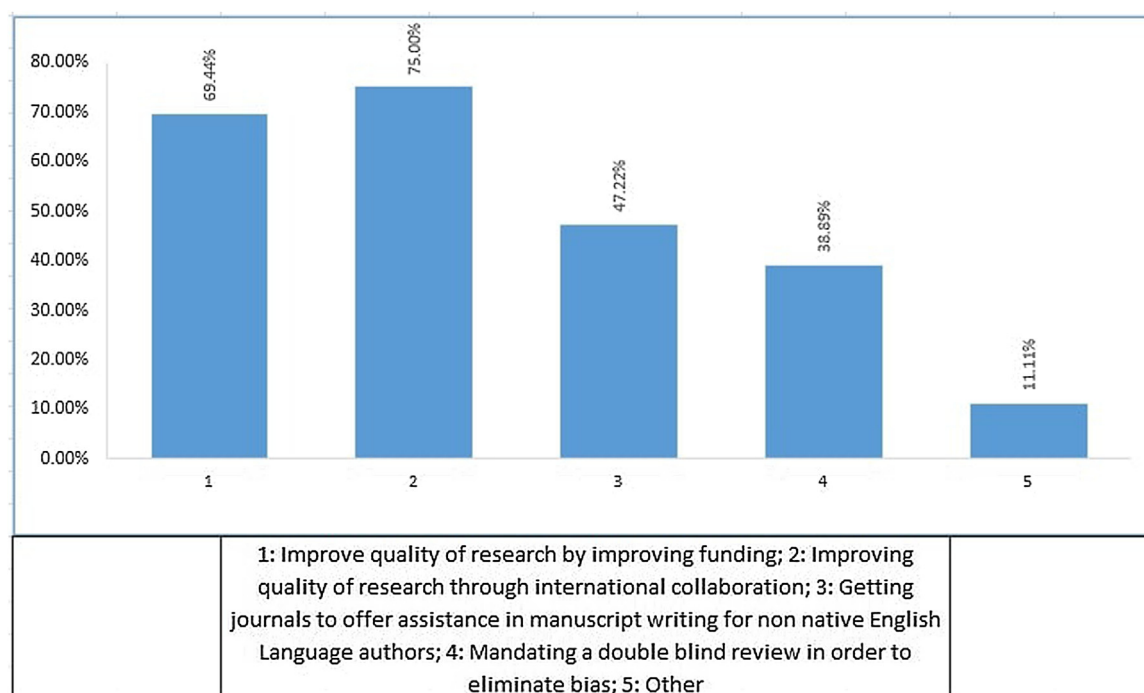


Fig. 1. Answers to Question 7 of the Survey (Appendix 1). **1:** Improving the quality of research by improving funding; **2:** Improving the quality of research through international collaboration; **3:** Getting journals to offer assistance in manuscript writing for non-native English Language authors; **4:** Mandating a double-blind review in order to eliminate bias; **5:** Other.

journals were reviewed in a single issue in 2010, 30.4% of articles originated from "less developed" countries [7]. A sharply lower representation was encountered in four influential English language orthopedic journals surveyed between 2007 and 2010, as only 7% of authors belonged to the developing world [8].

The significance of discrepancy in authorship -and arguably in research- between OECD and non-OECD countries cannot be overemphasized, specifically in the field of incontinence and pelvic floor disorders. A 2015 survey of IUGA physicians about the diagnosis and management of incontinence and pelvic organ prolapse revealed significant variability in different world regions that were not always influenced by university affiliation of the practicing IUGA surgeons [9]. Notwithstanding the heterogeneity of the health care financial systems across the globe, we stipulate that the variability in practice patterns may reflect a non-uniform patient population due to ethnic and genetic factors, a differential in the priority of patients' goals and in the cultural backgrounds of both patients and caregivers. Consequently, there is a need for geography specific research that can address these issues and provide a rationale behind this variability. Importantly, the outcome of such research may influence practice patterns in all the world regions in view of frequent human mobility and migration.

It is noteworthy that the distribution of article types is grossly comparable between OECD and non-OECD countries, including clinical trials and animal and in-vitro studies (Table 1). This finding suggests that hardship in non-OECD countries is not only encountered in actual research activity but may also extend to manuscript writing and publishing.

Surveying the corresponding authors from non-OECD countries allows some insight into the analysis of our results, despite the low response rate.

The possible effect of Language as a barrier cannot be ignored, as both NAU and IUJ accept submissions exclusively in English. In fact, half of our respondents suggested that assistance in manuscript writing for non-native English Language authors is

expected to improve the odds of publication in high impact journals. While some researchers believe that the dominance of English in academic publications has accentuated the inequity of authorship [10], others have criticized the overemphasis of "linguistic injustice" in academic publications [11]. The significance and contribution of research published in local language and in local journals in non-OECD countries cannot be easily determined.

Less than 40% of our respondents believe there could be a bias against manuscripts originating from their countries that could be overcome by mandating double-blind reviews. In a larger survey including 332 corresponding authors from "less developed" countries publishing in leading Pharmacology Journals, 64.8% had a perception of bias from Editors and reviewers [7].

Whether such bias exists has not been evaluated. The suggestion that the appointment of "globally balanced" Editorial Boards could remedy this problem [12] has never been proven.

A well-designed study during a computer science research conference concluded that, compared to double-blind reviewers, single-blind reviewers are significantly more likely to accept papers from well-known authors, top universities, and top companies [13]. As of the writing of this manuscript, NAU has a double-blind review system in place, while IUJ does not. However, discussing the many advantages and disadvantages of double-blind review [14] is beyond the scope of this manuscript.

Adequate funding is well established as the main driving engine behind research. Most of our respondents believe that inadequate funding is a major obstacle to research in non-OECD countries that could qualify for publication in high impact journals. However, while countries with struggling economies may not prioritize research in their budget plans, financial allocation to research as a percentage of GDP is far from constant when comparing different countries.

For instance, most studies referenced by many Cochrane reviews do not originate from the most economically robust countries after adjusting for population size. Instead, Scandinavian

countries, Australia, UK and New Zealand have consistently been among the top countries with the highest published medical research, after adjustment for population size [4,5].

It is noteworthy that the most common suggestion by our respondents to improve publishing in high impact journals is "improving quality of research through international collaboration". Despite a recent trend of international collaboration, the "ownership" of data by researchers from low and middle-income countries (LMIC) continues to be limited, even in domains of particular importance to the developing world, such as tropical medicine, pediatrics and maternal interventional health care [15,16]. The positive impact of international collaboration is not limited to "exporting" knowledge and expertise but is also manifested in helping to secure funds that can be more readily provided by HIC to research conducted in the developing world. Evaluation of authorship of pediatric research conducted in LMIC over a span of 10 years revealed that 51% of funded studies that included authors from HIC were supported by high-income governments or private foundations. In contrast, when authors were exclusively from LMIC, only 13.3% of funded studies were supported by high-income governments and foundations [17].

The main strength of our study lies in the complete evaluation of all corresponding authorship during 4 years in 2 journals that are the official journals of the 2 largest international organizations which address pelvic floor disorders. It is the first to address this issue in a subspecialty of the discipline of Obstetrics and Gynecology. Evaluation of article types (Table 1) represents another strength as it adds dimension and color in achieving the primary aim of the study.

The main weakness in the study is in the low response rate in exploring the opinions of the corresponding authors (the secondary aim). Our 20% response rate is lower than rates achieved in comparable surveys. This could represent an inherent bias that is difficult to quantify. Nevertheless, the participants' answers do allow some insight into perceived obstacles to publish. Finally, it is noteworthy that the results of our study do not allow to draw any conclusions about research originating from non-OECD countries in non-English languages.

Conclusions

The vast majority of NAU and IUJ articles originate from 31 countries belonging to the OECD group. The distribution of article types is comparable in OECD and non-OECD countries. The uneven representation could be due to a large differential in research activity, to barriers in submission, or both.

Declaration of Competing Interest

This manuscript poses no conflict of interest.

Appendix A

1. You are?

- a University-affiliated
- b Non-university affiliated

2. Is the journal you submitted to "almost always" your first choice when submitting a manuscript for publication?

- Yes
- No (If No, please go to question 4)

3. If yes, is it because:

- a Of the relevance of the subspecialty journal
- b There is fair treatment by the Editors/reviewers of this journal, not usually in other journals
- c There is a better chance of manuscript being accepted.
- d I am on the Editorial Board

4. Have you had your submission rejected by another journal before submitting to the current journal?

How many journals: 1 or more than 1?

5. Do you believe it is difficult to publish in high impact journals if the origin of the manuscript is your country of residence?

- Yes
- No (If No please go to question 7)

6. If yes, the reason is:

- a It is hard to compete for space in such journals which usually publish very high research quality
- b Scarcity of funding to support good quality research in my country
- c Editors and reviewers are biased against manuscripts originating from countries where the English language is non-native
- d Editors and reviewers are biased against manuscripts originating from non-OECD countries

7. What would increase the number of publications originating from non-OECD countries in high impact journals:

- a Improving the quality of research by improving funding
- b Improving the quality of research through international collaboration
- c Getting journals to offer assistance in manuscript writing for non-native English Language authors
- d Mandating a double-blind review in order to eliminate bias
- e Other, please explain

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