BRIEF REPORT

Reporting of academic degrees in high-impact medical journals
[version 1; peer review: 1 approved with reservations]

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Abstract
Academic degrees following author names are often included in medical research papers. However, it remains unclear how many journals choose to include academic degrees and whether this is more common in certain types of journals. We examined the 100 highest impact medical journals and found that only 24 medical journals reported academic degrees. Moreover, this was substantially more common in journals based in North America compared with Europe. Further research is required to explore the implications of listing academic degrees on the readers' attitude towards research quality.

Keywords
Academic, degree, impact factor, journals, publication, high-impact

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Introduction
During submission of research papers to medical journals, authors are often asked to include academic degrees, affiliations, and/or job titles. However, journals differ in how they present this information to readers. While some journals include academic degrees following author names, others choose not to list this information on the title page. It is unclear how many journals choose to include academic degrees and whether this is more common in certain types of journals. Among the most influential medical journals, we examined journal factors associated with the inclusion of academic degrees on the title page.

Methods
We identified the hundred highest impact medical journals based on impact factor reported in the Journal Citation Reports published in 2018. Characteristics of each journal in regard to specialty, impact factor, primary journal focus, continent, and open access policy were obtained. Data were collected on the presence of academic degrees following author names in the title page by assessment of multiple original research articles from each journal. Approximately ten articles published in July 2018 and August 2019 were assessed for each journal. If there was any discrepancy between the print and the online version, the print version was used. There were no discrepancies within journals for the two time periods.

Descriptive statistics were used to characterize the journals. Categorical data were compared with the Fisher’s Exact Test and continuous data were compared with the Wilcoxon Rank-Sum Test. The association between journal characteristics and the reporting of academic degrees were estimated using multivariable logistic regression.

Statistical analyses were performed in SAS (version 9.4). A two-tailed p < 0.05 was considered significant.

Results
Of the 100 highest impact medical journals, 24 journals reported academic degrees on the title page (Table 1). We found that 49% of journals were published in Europe and 51% were published in North America. Only 8% of European journals reported academic degrees while 39% of North American journals reported academic degrees. The median impact factor of journals reporting and not reporting academic degrees was 12 (IQR 11–20) and 15 (IQR 10 – 19), respectfully.

Multivariable analysis showed that North America and a clinical journal focus was associated with increased odds of reporting academic degrees (Table 1). No association was found for the other journal characteristics.

Discussion
Among the 100 highest impact medical journals, only 24 journals reported academic degrees following author names on the title page. Reporting of academic degrees was substantially more common in journals based in North America compared with Europe.

Listing author academic degrees is an editorial policy decision but there is little guidance from the International Committee of Medical Journals Editors (ICMJE) or the American Medical Association (AMA) Manual of Style. Specifically,

Table 1. The presence of academic degree(s) according to journal factors in the top 100 high-impact medical journals.

<table>
<thead>
<tr>
<th></th>
<th>Presence of academic degree</th>
<th>Multivariable model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (n = 24)</td>
<td>No (n = 76)</td>
</tr>
<tr>
<td><strong>Primary journal focus</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>17 (71%)</td>
<td>26 (34%)</td>
</tr>
<tr>
<td>Basic science and/or experimental</td>
<td>0 (0%)</td>
<td>21 (28%)</td>
</tr>
<tr>
<td>Combined</td>
<td>7 (29%)</td>
<td>29 (38%)</td>
</tr>
<tr>
<td><strong>Specialty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>6 (25%)</td>
<td>12 (16%)</td>
</tr>
<tr>
<td>Specific</td>
<td>18 (75%)</td>
<td>64 (84%)</td>
</tr>
<tr>
<td><strong>Open access</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2 (8%)</td>
<td>8 (11%)</td>
</tr>
<tr>
<td>Partly</td>
<td>15 (63%)</td>
<td>24 (32%)</td>
</tr>
<tr>
<td>No</td>
<td>7 (29%)</td>
<td>44 (58%)</td>
</tr>
<tr>
<td><strong>Continent</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td>4 (17%)</td>
<td>45 (59%)</td>
</tr>
<tr>
<td>North America</td>
<td>20 (83%)</td>
<td>31 (41%)</td>
</tr>
<tr>
<td><strong>Journal impact</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact factor&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12 (10–19)</td>
<td>15 (11–20)</td>
</tr>
</tbody>
</table>

<sup>a</sup> Not able to be estimated as no journal in this category reported academic degrees
<sup>b</sup> Median with quartiles
the ICMJE states “Each author’s highest academic degrees should be listed, although some journals do not publish these,” and the AMA Manual of Style writes “Journals should establish their own policies on the inclusion of authors’ degrees.”.
Neither provides a rationale for providing academic degrees and it remains unclear why some journals do and others do not. The marked difference between journals published in North America compared with Europe cannot be explained by the current study but may be a reflection of cultural differences in attitude towards degrees and titles. Further research is needed to explore the implications of listing academic degrees on the readers’ attitude towards research quality.

Limitations of the current study include that we only evaluated high-impact medical journals. Furthermore, we only assessed some journal characteristics. We evaluated only recent issues of these journals and are therefore unable to comment on trends in the use of author academic degrees.

Data availability
Underlying data
Harvard Dataverse: Replication Data for: Reporting of academic degrees in high-impact medical journals, https://doi.org/10.7910/DVN/KTWS6C

This project contains the following underlying data:
- CSV file with the titles of the medical journals investigated

Data are available under the terms of the Creative Commons Zero “No rights reserved” data waiver (CC0 1.0 Public domain dedication).

The Journal Citation Report from Clarivate Analytics can only be accessed through an individual or institutional account.

In conclusion, we found that academic degrees are reported in about one fourth of medical journals and that this practice is more common in North America.

Stankovic, Nikola, 2019, “Replication Data for: Reporting of academic degrees in high-impact medical journals”, https://doi.org/10.7910/DVN/KTWS6C, Harvard Dataverse, V1
Open Peer Review

Current Peer Review Status: ?

Version 1

Reviewer Report 08 November 2019

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Stankovic et al assessed the factors associated with mentioning academic degrees on the journal’s title page. The current study is interesting and sheds a light on an important topic, although the authors chose a restricted sample to analyze (i.e. high impact medical journals). I believe that the current report can be improved by clarifying some points within its methods section, as follows.

In the methods section, the authors did not define “academic degrees”. In the data associated with this study, they included columns on “Academic degrees”, “job titles”, and “fellowship designations”. In medicine, reporting of fellowships might be more important than the academic degree, especially if the researcher is a clinician working in a non-academic institution. The authors should clearly define what they mean by “academic degree” that they used in their analysis.

In the methods section, the authors categorized journals according to specialty as general or specific. The authors should detail the basis of this classification. Moreover, the authors categorized open access status into yes, no, or partly, where “partly” is not a common word used to describe the open access status (examples of common, well-defined words include green open access, hybrid access and so on). By going back to the data, I observed several non-open access journals categorized as “partly”, so I would suggest adopting strict criteria for categorization, such as the one suggested by Scopus: “Open Access Journals are indicated as Open Access if the journal is listed in the Directory of Open Access Journals (DOAJ) and/or the Directory of Open Access Scholarly Resources (ROAD)”.

In the discussion section, the authors should include studies that discussed the impact of an academic degree in publishing, which would complement the points raised by the authors in the present report.

Is the work clearly and accurately presented and does it cite the current literature?
Partly

Is the study design appropriate and is the work technically sound?
Yes
Are sufficient details of methods and analysis provided to allow replication by others? 
Partly

If applicable, is the statistical analysis and its interpretation appropriate? 
Yes

Are all the source data underlying the results available to ensure full reproducibility? 
Yes

Are the conclusions drawn adequately supported by the results? 
Yes

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Medicine, bibliometrics, ophthalmology.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

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