

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Top-Cited Articles in Medical Professionalism: A Bibliometric Analysis versus Altmetric Scores
AUTHORS	Azer, Samy; Azer, Sarah

VERSION 1 - REVIEW

REVIEWER	Arfon G MT Powell Cardiff University, United Kingdom
REVIEW RETURNED	03-Mar-2019

GENERAL COMMENTS	<p>Thank you for the opportunity to review this manuscript. We published a very similar paper in surgery and its nice to see that bibliometrics and AltMetrics have been studied in a different branch of medicine. I have made some comments below that may be of use.</p> <p>Abstract The p-value after "females in authorship" has only two decimal places.</p> <p>Introduction 1. Well written introduction, giving clear insight and critique of the literature.</p> <p>Methods 1. There appears to be a typo on page 5, first paragraph, fourth line... "... and 07 million from..." do the authors intend to include a zero before the 7? 2. The methodology is very comprehensive. Can the authors include information on when they undertook the AltMetric search? If citations and AltMetric scores are being compared then ideally they should be recorded at the same time.</p> <p>Results 1. In the 'characteristic of the Top-Cited Articles' section, the authors use one decimal place for the median but this is not required as all values are x.0. (The authors may wish to retain current reporting styles). I would recommend removing this and also ensure all p-values are reported consistently to 3 decimal places (p=0.15 on line 35 of page 17). 2. All pages are marked as 1 so this formatting issue will need resolved.</p>
-------------------------	---

	<p>3. Twitter was introduced around 10 years ago and we found in our paper that AltMetric scores only correlated with citations in 'newer' papers (those published after 2000). Did the authors look at this?</p> <p>4. Given that only 50 papers were included in the review and a proportion of these will precede Twitter, are the authors confident that their reported citation vs AltMetric score (AS) is not a type 2 error? In particular, a multivariate analysis was performed and on 50 papers, was there sufficient events to make the findings robust? A comment should be included in the methods section on power calculation to support the reliability of the negative results.</p> <p>5. In table 5, AS95% CI is given as a range from negative to positive. For instance -41.2-46.2. Is this typo? As AS is not normally given negative values. This comment applies to other variables in the table.</p> <p>6. Table 5, number of institutes, there is a missing decimal place for 0541.</p> <p>Discussion</p> <p>1. The discussion is well written and fluid.</p> <p>2. The authors have not adequately discussed their finding that AS did not correlate with citations as we found. IF As and citations measure impact then there should be a casual relationship. This is an important omission and is worthy of inclusion.</p> <p>General opinion</p> <p>This is a well written and conducted bibliometric analysis. It includes important findings that are a useful addition to the bibliometric literature. I have made some comments which I hope are of use.</p>
--	--

REVIEWER	S M Pujar Indira Gandhi Institute of Development Research, India
REVIEW RETURNED	06-Mar-2019

GENERAL COMMENTS	<p>Checklist no. 6: Narrative is lengthy, it needs to be precise</p> <p>Checklist no. 7: Table-4 can be withdrawn as it does not specify any purpose or clarity</p> <p>Checklist no. 10: Repetition of statements, it needs a thorough revision</p> <p>Checklist no. 11: Needs revision</p>
-------------------------	---

REVIEWER	Mark MacEachern University of Michigan, United States
REVIEW RETURNED	08-Apr-2019

GENERAL COMMENTS	<p>Dear authors - Thank you for the opportunity to review the manuscript.</p> <p>- The use of Web of Science works. It is Clarivate Analytics now, not Thomson Reuters (I believe). The paragraph that justifies its use is questionable (where did you get those journal numbers?)</p>
-------------------------	---

	<p>What makes you say it's more extensive than Scopus?). With that said, Web of Science is appropriate for this research question</p> <ul style="list-style-type: none"> - End of page 8 - fix the paragraph - Methods - I don't think the methods need 5 pages to explain. The search terms, journals, date of search, inclusion criteria -- all should be there (much appreciated), but it should (in my opinion) be more readable, concise. - re: Altmetrics -- Newer studies are going to fare better with altmetric scores. I'm not sure there's much value in comparing scores from most of the years under consideration here. - re: author gender section -- Is this necessary? It seems poor design to judge gender based on google searches and expect to get some meaningful conclusion from it. - I am not commenting on the statistical analysis. - re: Table 3 -- comparing the impact factor of a general medicine journal (JAMA) to a medical education journal does not have value. I would get rid of it. With that said, that 9 medical professionalism papers were published in JAMA is interesting. - The final sentence is probably correct, but is it a fair way to answer the question? Citation rates are naturally higher for older studies, while newer social measures are not. Perhaps one years worth of data (say, studies published in 2016), would more effectively balance these differences
--	---

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr Arfon G MT Powell

Cardiff University, United Kingdom

We thank the reviewer for his valuable comments and constructive feedback

Abstract

The p-value after “females in authorship” has now two decimal places.

Introduction

We thank the reviewer for his positive comments. No changes have been requested.

Methods

1. The typo on page 5, the first paragraph, the fourth line has been corrected.
2. Yes, both searches were carried out at the same time, a statement has been added.

Results

1. The decimal places for the median have been omitted as requested. The p-value $p=0.15$ has been corrected to $p=0.150$.
2. The page numbers have been adjusted.
3. We take the point raised by the reviewer. Further analysis of data demonstrated a correlation between the number of citations and altmetric scores for articles published in 2007 and after. No correlation was found for those published earlier to 2007. A statement has been added in the abstract, results, discussion and conclusion. A new reference has been added.
4. We take the point raised by the reviewer. A note has been added at the bottom of table 5 about the power of calculation.
5. As stated in point 4, a statement has been added.
6. Table 5, the missed decimal has been corrected to 0.541

Discussion

1. We thank the reviewer for his positive comments about the discussion.
2. A statement has been added to discussion and conclusion reflecting the new finding of a correlation between citation counts and altmetric scores for articles published in 2007 and after.

General opinion

We thank the reviewer for his constructive feedback.

Reviewer: 2

Dr S M Pujar

Indra Gandhi Institute of Development Research, India

We thank the reviewer for the valuable comments and constructive feedback

Checklist no. 6: The narrative has been shortened and focused.

Checklist no. 7: table no. 4 summarizes authors and coauthors who have authored two or more articles. We believe this is important to the bibliometric analysis and informative to the readers of the manuscript.

Checklist no. 10: The repetitive statements have been omitted and a revision has been carried out.

Checklist no. 11: A revision has been carried out.

Reviewer: 3

Dr Mark MacEachern

The University of Michigan, The United States.

We thank the reviewer for his valuable comments and constructive feedback.

-We take the point raised by the reviewer and “Thomas Reuters” have been replaced with “Clarivate Analytics”. The source for the figures given are from the Web of Science website, the statement that Web of Science is more extensive than Scopus is arguable and has been omitted because of recent changes introduced to Scopus.

-End of page 8- The paragraph has been fixed.

-Methods – The method section has been reviewed and shortened.

-re: Altmetrics- as suggested by the first reviewer, we have conducted further analysis of data to see any correlation for articles published after the year 2000, we found a correlation between the number of citations and altmetric scores for articles published in 2007 and after. No correlation was found for those published earlier to 2007. A statement has been added in the abstract, results, discussion and conclusion.

-re: author gender section – we take the point raised by the reviewer, however, we prefer to keep this part as it adds to other parameters of bibliometric analysis.

-re: Table 3 – The table shows that top-cited articles on professionalism were not necessarily published in medical education journals or journals on ethics, they were published in journals in general medicine particularly those with high journal impact factors indicating the significance of medical professionalism in clinical practice. A statement has been added.

-The final sentence in the conclusion has been amended.