

## ORIGINAL PAPER

# Scope for Improvement in the Guidelines Provided to Authors in Biomedical Journals from Assam: A Comparative Analysis with Core Clinical Journals

Saikia Priyam<sup>1</sup>, Thakuria Bandana<sup>2</sup>, Shah Amrita<sup>3</sup>

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## ABSTRACT

**Introduction:** “Instruction to authors” given in journals may play a vital role in creating awareness about various aspects of scholarly communication, more so for naive authors. **Aims:** To find out whether biomedical journals from Assam offer directions to write and report scientific manuscript in a standardized and transparent manner by referring to guidelines endorsed by International Committee of Medical Journal Editors (ICMJE) or similar sources in their instructions given to authors; if not, identify the aspects on which they lack. **Methods:** Biomedical journals published from Assam and Core Clinical Journals were located from the National Science Library, India and National Library of Medicine, USA respectively. The instructions to authors or similar guideline for the included journals were surveyed and data regarding ten pre-specified domains were collected. The domains analysed were whether they provide any instruction to authors, guidelines for manuscript preparation for articles of different formats, word limits; define authorship criteria and misconduct; endorse ethical clearance, declaration of conflict of interest, trial registration, guidelines for research reporting; prohibit duplicate submission. **Results:** Ten biomedical journals from Assam were located and compared with a randomized sample of 10 of the 119 Core Clinical Journals. Compared with the Core Clinical Journals, biomedical journals from Assam were lacking in all the domains analyzed. **Conclusion:** The biomedical journals from Assam have not referred to most of the studied domains in their instructions to authors.

**Keywords:** Authorship criteria, conflict of interest, CONSORT, ethical clearance, International Committee of Medical Journal Editors, instructions to authors, trial registration

## INTRODUCTION

The International Committee of Medical Journal Editors (ICMJE) provides guideline covering all aspects to produce accurate, clear, reproducible and unbiased medical journal articles.<sup>1</sup> Among many domains that are presented in the guideline by ICMJE, strict authorship criteria, declaration of conflict of interest, clinical trial registration and transparent and unbiased reporting of scientific work are necessary to maintain credibility of scientific publication.<sup>1, 2</sup> Guidelines (e.g. CONSORT, STROBE etc.) for reporting various types of study design has been suggested to improve quality and transparency of health research.<sup>1, 2, 3</sup> It is suggested that journals should be more proactive to influence standards of scientific conduct and publication by publishing ethical guidelines for research in their instructions to authors.<sup>4</sup> Editorial policies, available in the instructions provided to authors, on different aspects of manuscript preparation have not been studied systematically worldwide; let alone in journals published from Assam.

Thus, the objective of this study was to find whether the biomedical journals from Assam offer directions to authors to write and report scientific manuscript in a standardized and

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### Address for Correspondence:

<sup>1</sup>Assistant Professor (**Corresponding Author**)

Department of Anaesthesiology and Critical Care  
Gauhati Medical College and Hospital (GMCH), Guwahati,  
Assam, 781032

**Mobile:** +919706067392

**Email:** saikia.priyam80@gmail.com

<sup>2</sup>Demonstrator, Department of Microbiology, Jorhat Medical  
College and Hospital, Jorhat, Assam, 785001

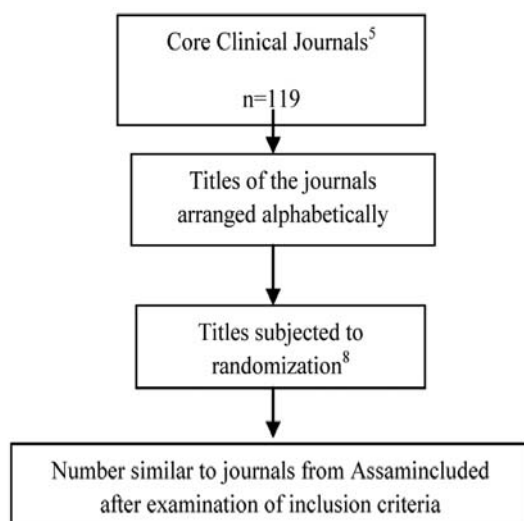
<sup>3</sup>Post Graduate Trainee, Dept. of Anaesthesiology and Critical  
Care, GMCH, Guwahati, Assam-32

transparent manner in their instructions given to authors; if not, identify the aspects in which they lack. We hypothesised that the instructions to authors of these journals sufficiently provide guidance for preparation of a manuscript and are comparable with that of Core Clinical Journals.<sup>5</sup>

## MATERIAL AND METHODS

This is a cross sectional comparative study of the texts included in the ‘Author’s instruction’ or similar documents of biomedical journals published from Assam and a randomised sample of Core Clinical Journals.<sup>5</sup> Journals were eligible to be included if published from Assam or included in the list of Core Clinical Journals, could be accessed online, provides ‘Author’s instruction’ or similar documents either on their respective webpage or as a part of the journal issues available online and publishes exclusively in English. All those journals publishing articles in a single format (e.g. review articles, case reports etc.) or exclusively in translational research or with a broader scope including health sciences were excluded.

For journals published from Assam, the “List of Assigned ISSN” (1986- 2014) and the “List of recently Assigned ISSN” (January 2015 onwards) was downloaded from National Science Library (NSL), India via Google Chrome and the first two authors independently searched for ‘titles’ of the ‘serials’ suggesting a biomedical journal. ‘The titles and the site of publication were noted. National Library of Medicine (NLM) Catalogue, IndMed, Embase, DOAJ were also searched to retrieve any additional journal titles published from Assam. For a representative sample for comparison, a list of “Core Clinical journals” was obtained from NLM, USA.<sup>5</sup> This group of journals are considered, although many may argue its validity in this millennium, to be of immediate interest to practicing physicians.<sup>7</sup> The flow chart documenting the process of selection of the comparison group is available in **Figure 1**.



**Figure 1** Selection process of the sampled Core Clinical Journals<sup>5</sup>

From all the included journals, the first two authors independently collected data whether the journal-

- I. Provides instruction to authors or similar guidelines
- II. Provides guidelines for preparation of manuscript of different formats

- III. Provides guidelines for word limits for all types of articles
- IV. Describes the criteria of authorship or refers to ICMJE authorship criteria
- V. Mentions about scientific misconduct or refers any other source for such information
- VI. Prohibits duplicate submission of manuscripts Further, we accessed if there is mention of
- VII. Declaration of conflict of interest
- VIII. Clearance by Ethical Committee or similar authoritative body for studies involving humans or animals
- IX. Trial registration
- X. Guidelines for research reporting (e.g. CONSORT)

For these information we had three rating options. The rating “information recommended” was applied to words such as “should”, “we recommend that...” or “we encourage.....”. The rating “information required” was applied to more stronger wording like “authors must...”, “we expect authors to...” or “we require authors to...”.<sup>2</sup> We also noted if there was no mention.

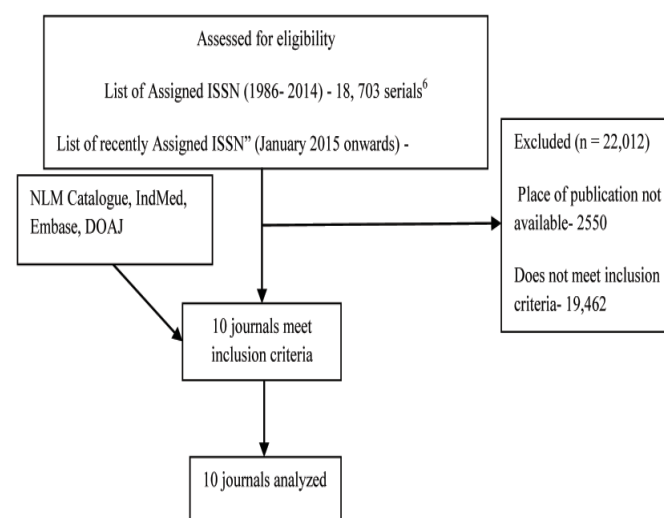
In case of any discrepancy between the first two authors, the third author was consulted and the decision of the majority was recorded. All data was retrieved during the period 27/8/2016 to 29/8/2016.

## STATISTICAL ANALYSIS

Data are presented as percentage. For hypothesis testing, Fisher’s Exact Test was used. The level of statistical significance was set at  $P < 0.05$ . All statistics were performed with GraphPad Software, GraphPad Software, Inc, USA.

## OBSERVATION AND RESULTS

Ten journals published from Assam met inclusion criteria (**Figure 2**).



**Figure 2** Process used to locate biomedical journals published from Assam

A random sample of 10 Core Clinical Journals was chosen.<sup>5, 8</sup> The name of the journals included for this study is available in **Table 1**.

**Table 1** Name of journals published from Assam and the sampled Core Clinical Journals<sup>5</sup>

| Biomedical journals published from Assam                           | Core Clinical Journals <sup>5</sup>               |
|--|---|
| Assam Journal of Internal Medicine                                 | Anesthesia and Analgesia                          |
| Eastern Journal of Psychiatry                                      | Archives of Disease in Childhood                  |
| International Journal of Health Research and Medico Legal Practice | Archives of Physical Medicine and Rehabilitation  |
| Journal of Association of Surgeons of Assam                        | Clinical Toxicology (Philadelphia, Pa.)           |
| Open Journal of Psychiatry & Allied Sciences                       | JAMA Ophthalmology                                |
| The New Indian Journal of OBGYN                                    | JAMA Paediatrics                                  |
| SAS Journal of Medicine  | Journal of Clinical Pathology                     |
| SAS Journal of Surgery   | Journal of the Academy of Nutrition and Dietetics |
| Scholars Journal of Dental Sciences                                | The Journal of Clinical Investigation             |
| Scholars Journal of Applied Medical Sciences                       | The Journal of Infectious Diseases                |

Data about the pre specified domains along with the results of hypothesis testing are mentioned in **Table 2**. Among the relevant categories, wherever the rating “required” is applicable, it is mentioned as percentage (number of journals endorsing it being the denominator) in bracket.

**Table 2** Comparison of variables under study among bio medical journals published from Assam and sampled Core Clinical Journals<sup>5</sup>

| Parameters   | Biomedical journals from Assam (n= 10) | Core Clinical Journals <sup>5</sup> (n= 10) | P value (*represents statistical significance) |
|--|--|---|--|
| Instruction to authors or similar guidelines   | 90%                                    | 100%  | 1.000  |
| Guidelines for preparation of manuscript of different formats  | 60%                                    | 100%  | 0.0867   |
| Guidelines for word limits for different types of articles   | 70%                                    | 100%  | 0.2105   |
| Criteria of authorship   | 30%<br>(33% “required”)                | 90%<br>(44% “required”)                     | 0.0198*  |
| Clearance by Ethical Committee or similar authoritative body for studies that involves human and animals | 90%<br>(11% “required”)                | 100%<br>(90% “required”)                    | 1.000  |
| Misconduct   | 30%                                    | 70%   | 0.1789   |
| Declaration of conflict of interest  | 50%                                    | 100%  | 0.0325*  |
| Trial registration   | 0                                      | 90%<br>(100% “required”)                    | 0.0001*  |
| Guidelines for research reporting  | 0                                      | 90%<br>(66% “required”)                     | 0.0001*  |
| Prohibition of duplicate submission  | 60%                                    | 90%   | 0.0143*  |

**DISCUSSION**

We observed that biomedical journals from Assam were not at par with their comparison group for all the variables evaluated. Domains with significant statistical difference were- description of authorship criteria, declaration of conflict of interest, prohibition of duplicate submission, mention of guidelines for reporting research and registration of clinical trials. The last two domains were not endorsed by any of the biomedical journals from Assam.

No study could be retrieved that examined the guidelines given to authors for manuscript preparation. Only a small number of studies have evaluated some of these domains and mainly ethical issues have been the subject of research. Most of these studies were done on a cohort of specialty journals, for e.g. psychiatry, anaesthesia, dental, urology, paediatric, and traditional medicine.<sup>2,9, 10, 11, 12, 13, 14, 15</sup>. Apart from specialty journals, several domains

under evaluation in our present study, has also been evaluated in journals published from various specific geographical locations, e.g. Korea, India, China, Caribbean and Latin American and Croatia.<sup>15, 16, 17, 18, 19</sup> A comparison of these studies with results obtained from our study is available in **Table 3**.

**Table 3**Endorsement of parameters under evaluation in different studies

| Authors<br>(number of journals included) | Year of publication                      | Percentage of journals that endorse |                                |                                     |                    |         |
|--|--|-------------------------------------|--------------------------------|-------------------------------------|--------------------|---------|
|  |  | Criteria of authorship              | Clearance by Ethical Committee | Declaration of conflict of interest | Trial registration | CONSORT |
| Asai T et al (11) <sup>9</sup>           | 1999                                     | 100                                 | 90.9                           | 63.63                               | -                  | -       |
| Meerpohl JJ et al (69) <sup>15</sup>     | 2010                                     | -                                   | -                              | 78                                  | 23                 | 20      |
| Navaneetha C (126) <sup>10</sup>         | 2011                                     | -                                   | 45.23                          | -                                   | -                  | -       |
| Meerpohl JJ et al (41) <sup>14</sup>     | 2011                                     | -                                   | -                              | 61                                  | 32                 | 29      |
| Kunath F et al (55) <sup>12</sup>        | 2012                                     | -                                   | -                              | -                                   | -                  | 23.6    |
| Li XQ et al (195) <sup>17</sup>          | 2012                                     | -                                   | -                              | -                                   | 2.5                | 3.08    |
| Knüppel H et al (123) <sup>7</sup>       | 2013                                     | -                                   | -                              | -                                   | 34                 | 23      |
| Mathur VP et al (37) <sup>11</sup>       | 2013                                     | 91.1                                | 73                             | 91.1                                | -                  | -       |
| Reveiz L et al (56) <sup>18</sup>        | 2013                                     | -                                   | -                              | -                                   | 36                 | 13      |
| Bhaumik S et al (30) <sup>16</sup>       | 2013                                     | -                                   | -                              | -                                   | 30                 | 53.3    |
| Choi J et al (36) <sup>15</sup>          | 2014                                     | -                                   | -                              | -                                   | -                  | 2.8     |
| Stojanovski J et al (38) <sup>19</sup>   | 2015                                     | 28.9                                | 21                             | 31.5                                | 7.8                | -       |
| Shamseer L et al (168) <sup>20</sup>     | 2016                                     | -                                   | -                              | -                                   | 63                 | 63      |
| Our study                                | Assam (10)<br>Core Clinical Journal (10) | 2016<br>30<br>90                    | 90<br>100                      | 50<br>100                           | 0<br>90            | 0<br>90 |

In all these studies,endorsement of these domains was at best moderate and was not uniform, except for Core Clinical Journals.

Among many barriers, inadequate skills and understanding of the process of writing is a major factor behind ineffective scripting of scientific articles.<sup>21</sup> ‘Writing’ of a manuscript has been found to be an important factor, though being amongst the least ones, in editorial decision making of one of the most prolific journal in the history of biomedical scholastic publication.<sup>22</sup> Although various methodologies for scientific writing are available and evaluated, we strongly believe that training in those methodologies is lacking generally for authors from Assam.<sup>23</sup> Thus, instructions that are given to the authors prior to submission of manuscript have the potential to improve their quality.

Journals have the liberty to endorse their own set of editorial policy and there are no universally acceptable instructions, encompassing all the necessary points and satisfying specific requirements of each discipline.<sup>24</sup> But it must be noted that the journals are at unique position and they can definitely enforce provisions that will ensure transparent and standardized reporting of research.<sup>24</sup> Thus, the barriers preventing incorporation of these domains need to be systematically evaluated.

There are limitations to our study. We may have missed journals as only titles included in NSL,whose name suggest being of biomedical stream, was included in our study. To mitigate this bias, though we searched other databases, it may be possible that they are not abstracted/ indexed in those electronic databases. We also could not determine if these domains are evaluated after submission of manuscript during editorial evaluation or peer review, as we limited our research only to analysis of the texts available in the instruction to authors.

**CONCLUSION**

The biomedical journals from Assam have not referred to most of the studied domains in their instruction to authors and are noticeably lagging behind the Core Clinical Journals. Lack of guidelines in regards to textual style of manuscripts definitely puts the novice author in a precarious situation.



We firmly believe that if these domains are mentioned and implemented, it would not only help naive authors in their future publication processes but also improve the acceptability as well as popularity of these journals.

**Conflict of interest:** None declared.

**Ethical clearance:** Institutional Ethical Committee clearance was not sought for as it is an audit of texts available in public domain and there was no contact with humans or animals.

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**Authors Contribution:** (i) **1<sup>st</sup> Author:** Conceived the research question; retrieved and analyzed literature; designed the methodology; collected, analyzed and interpreted data; wrote the manuscript. **2<sup>nd</sup> Author:** Retrieved and analyzed literature; collected, analyzed and interpreted data, wrote the manuscript. **3<sup>rd</sup> Author:** Retrieved literature and analyzed literature; analyzed and interpreted data; wrote the manuscript. We would like to declare that this manuscript does not infringe any copyright or violate any other right of any third parties. The authors would like to mention that views expressed in the submitted article are his or her own and not an official position of the institution. (2) Findings of this research were presented during ‘competition paper session’ of North East Zone Indian Society of Anaesthesiologists Conference 2016 held at Dibrugarh and won second prize. The article has not been published (whole or in part) elsewhere, and is not being considered for publication elsewhere in any form, except as provided herein; (3) All author(s) have contributed sufficiently in the Article to take public responsibility for this manuscript. (4) All author(s) have reviewed the final version of the above manuscript and approve it for publication.

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