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Original Article

Wishing away Plagiarism in Scientific Publications! Will it work? A situational analysis of Plagiarism policy of journals in PubMed

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ABSTRACT

Background: Plagiarism remains a scourge for the modern academia. There are inconsistencies in the plagiarism policy scientific journals. The aims of this study was to analyze types of published articles on 'Plagiarism' available on PubMed over last two decades against a backdrop of the plagiarism policy of the journals publishing such articles.

Methods: A literature search on PubMed (<https://www.ncbi.nlm.nih.gov/pubmed>) was made using the search term "plagiarism" from 01 January 1997 till 29 March 17. All publications having 'plagiarism' in the title formed the study group. The following were noted: types of articles published, ethical and plagiarism policy of the journal as available in the Instructions to authors and or in the journal home page.

Results: A total of 582 publications from 320 journals were studied. Editorials (165, 28.3%) and Letters to the Editor (159, 27.3%) formed the bulk. Research articles (56, 9.6%), Review articles (51, 8.7%) and Commentaries (47, 8%) formed the remainder. Detailed ethical guidelines were present in 221 (69%). Outline ethical guidelines only were present in 15 (4.7%) journals. 49 (15.3%) journals did not have any ethical guidelines. Detailed description of the policy on plagiarism was found in 80 (25%) journals. Only an outline description was found in 29 (9%) journals while a plagiarism policy/statement was totally absent in 176 (55%) journals.

Conclusion: There is a need to have a well defined plagiarism policy/statement for all scholarly journals easily visible on their home pages on the internet and also in their Instructions to Authors.

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Introduction

Healthcare research and scientific publications emerging therefrom, are evocative of the development and progress of medical knowledge for the benefit of humankind over the past two centuries. Integrity in conduct of research and ethical practices in publication of the outcomes of such research, have aided in the propagation of knowledge and the adoption of newer modalities of medical management of myriad diseases by medical practitioners across the globe. In the past, anecdotal instances of scientific misconduct rarely came to light, however now, disturbingly; more scientific misdemeanour is being uncovered. Blaming it simplistically on the all pervasive internet and its tools, and the constant harsh scrutiny in the public domain, would be avoiding reality.

To “plagiarize” means²:

- to steal and pass off (the ideas or words of another) as one's own
- to use (another's production) without crediting the source
- to commit literary theft
- to present as new and original an idea or product derived from an existing source

The groves of academia are being thronged it may seem, by many researchers who are wont to be obsessed with the maxim of 'Publish or Perish', leading to proliferation of journals of unknown and unascertainable repute and standards. A simple guide to researchers to insulate themselves from this risk is given at <http://thinkchecksubmit.org/> Increasing instances of research and publication misconduct are being reported on a regular basis across not just medical literature but even the popular mass media, as these impact populations globally, such as the recent expose on the HPV vaccine trials.¹ While unethical research is at one end of the spectrum of misconduct, plagiarism is rearing its ugly Hydra head, in its various forms constituting a major threat to the sanctity of the printed/published word. Seemingly, all stakeholders in the scientific publication arena are aware and concerned about the scourge of plagiarism in medical literature. There is a growing number of Editorials, Research/Review articles, Commentaries and Letters to the Editor, focussing on various aspects of plagiarism. For journal editors, although emphasizing on relevant issues of plagiarism from time to time would be essential, it is imperative for an unambiguous policy on plagiarism to be promulgated and uniformly implemented, to serve as an effective deterrent for those who indulge in the scientific sin of plagiarism.

Our study is aimed at analysing the types of published articles on 'Plagiarism' available on PubMed over the last twenty years against a backdrop of the plagiarism policy of the journals publishing such articles, in the public domain.

Materials and methods

We undertook a literature search on PubMed (<https://www.ncbi.nlm.nih.gov/pubmed>) using the search term “plagiarism” with a specified time frame from 01 January 1997 till 29 March 17. Articles containing the term 'plagiarism' in the title formed the study group. We further categorized the type of such articles published on plagiarism from the search data and explored the publishing Journal websites to determine the Ethics and Plagiarism policy of these Journals as available in the public domain. Information on the subject was obtained from the 'Instruction to Authors' and/or any other link on the webpage containing the journal policy on ethics and plagiarism.

In our cross sectional observational study we further graded the search findings as follows: **Ethical guidelines** were graded as (a) **Not Available (NA)** (i.e. the page/link containing relevant Instructions to Authors could not be found after a detailed search on the Journal website), (b) **No** (Ethical guidelines were absent in the Instructions to Authors), (c) **Negligible** (Only a brief or cursory mention about ethical guidelines without any details), (d) **Yes** (Detailed description of ethical guidelines available). The policy towards plagiarism, of each journal was assessed similarly (as for Ethical guidelines). The data obtained was tabulated and analyzed using Microsoft Excel.

Results

A total of 1289 documents were obtained in the PubMed search for the 20-year period. Year wise publication trends have been shown in Fig. 1. Publications on 'plagiarism' showed an upward trend from 2001 onwards with a peak in 2012. After 2012, there has been a slight decline in the number of such publications till date. From 320 journals (including 25 journals from India), 582 publications contained the term 'plagiarism' in the title of the publication and formed our 'study group'. We took only those articles which had the term plagiarism in the title as available in PubMed. Types of publications as mentioned in the PubMed search result and/or in the article itself have been shown in Table 1. The bulk of these publications were Editorials (165, 28.3%) and Letters to the Editor (159, 27.3%). Research articles (56, 9.6%), Review articles (51, 8.7%) and Commentaries (47, 8%) formed the remainder of the article types published. Interestingly, 32 (20%) of the 159 Letters to Editor were written by an author (a few as co-author) from Thailand. Number of publications on plagiarism per journal over the last twenty years is shown in Table 2. There was only one publication on plagiarism in 216 Journals available in PubMed over the last 20 years and only four journals had published more than 10 articles. These journals included Nature (32), Sci Eng Ethics (23), BMJ (20) and Science (12). Interestingly, >90% of such publications in Nature, BMJ and Science were either Letters to Editor or News reports. To put things in perspective, Letters to the Editor constituted 35% of the publications in Sci Eng Ethics.

Detailed ethical guidelines were present in 221 (69%) Journals in their Instructions to Authors. Outline ethical

Fig. 1 – Publication trend in PubMed in last 20 years on plagiarism. The red curve denotes all articles having mention about plagiarism in the text but not in the title. The blue curve denotes all articles having mention about plagiarism in the title as well as text.

Table 1 – Distribution of category of articles published in PubMed on plagiarism in last two decades.

Type of article	No.	%
Editorial	165	28.4
Commentary	47	8.1
Biography/historical	13	2.2
Case study	5	0.8
Letter	159	27.3
News	36	6.2
Research	56	9.6
Retraction notice	22	3.8
Review	51	8.8
Not available	25	4.3
Misc	3	0.5
Total number	582	100

Table 2 – Number of publications per journal in PubMed on plagiarism in last two decades.

No. of journals	No. of publications	Total counts
216	1	216
68	2	136
13	3	39
7	4	28
5	5	25
3	6	18
3	8	24
1	9	9
1	12	12
1	20	20
1	23	23
1	32	32
Total journals: 320	Total publications: 582	

guidelines only were present in 15 (4.7%) journals. 49 (15.3%) journals did not have any ethical guidelines while in 33(10.3%) cases the Instructions to Authors could not be traced out. The journal webpage could not be opened in 2 (0.6%) cases (Table 3).

Detailed description of the policy against plagiarism was found in 80 (25%) journals in their Instructions to Authors. Only an outline description was found in 29 (9%) journals, with a plagiarism policy/statement being totally absent in 176 (55%) journals.

Discussion

In the modern era, journal editors would continue to face the challenge of preventing, minimizing and eventually eradicating the menace of plagiarism in scholarly publications. Reasons, recognition and remedies for plagiarism at various stakeholder levels have been described.³ Conscious awareness of the need to adhere to integrity and honesty at all levels remains a key factor in limiting the propagation of this scientific misdemeanour. The vexatious issues of plagiarism are an important component of an annual scientific writing workshop that is conducted by Medical Journal Armed Forces India at the Armed Forces Medical College, Pune, India, focusing on capacity building of writers and reviewers. Though this is a modest foray into awareness creation, it is imperative for the scientific community to incorporate ethics and values throughout a medical education career, and in all continuing medical education programmes, which would also perforce include awareness creation and sensitization about plagiarism and its prevention at the individual and institutional level.

Medical Journals need to be explicit in depicting their policies on ethical issues including plagiarism. The sheer

Table 3 – Details of Ethical and Plagiarism policies of journals publishing articles on Plagiarism in PubMed in last two decades.

Types of guidelines/policy	Status	No. of journals	%
Ethical guidelines	Detailed ethical guidelines present in the Instructions to authors	221	69
	Negligible ethical guidelines found	15	4.7
	Ethical guidelines altogether absent	49	15.3
	Instructions to Authors page not available in the journal web page	33	10.3
	Journal web page not found	2	0.6
	Total journals	320	
Plagiarism policy	Detailed plagiarism policy/statement present in the Instructions to authors	80	25
	Sketchy plagiarism policy found	29	9
	Plagiarism policy/statement altogether absent	176	55
	Instructions to Authors page not available in the journal web page	33	10.3
	Journal web page not found	2	0.6
	Total journals	320	

number of editorials, commentaries and letters published on plagiarism in last two decades are a testimony to the fact that not only journal editors but also the environment is aware and concerned about the dismal state of affairs in scholarly publications. There is possibly no ambiguity that the menace of plagiarism needs to be contained first and then eradicated. The present study in an effort to analyze the plagiarism policy of various journals who have published articles on plagiarism over the last two decades has uncovered the lacunae that need to be addressed.

It is interesting to note that the number of publications on plagiarism available in PubMed per year have shown a slow but upward trend since 2001 with a peak during 2012. The subsequent years till date have seen a declining trend of publications on plagiarism rather than an expected rise in the figure, as if the horse had been flogged enough. The cause for this declining trend in the number of publications in last 4–5 years while not being inexplicable, may be attributed to other issues of emerging concern such as research fraud and unethical research, or even that plagiarism may now be an isolated phenomenon in the 'Western world' due to the penetrance of internet based plagiarism detection tools and also due to the discouragement of plagiarism right from school. While in developing countries, it is possible that there is a high level of awareness about plagiarism only at the apex of the medical research pyramid, with our schooling system and medical education system not yet being geared towards actively discouraging plagiarism with 're-search' being the norm. A welcome start has been made with some Universities in India now making electronic submission of research theses and dissertations compulsory, to be made available online after plagiarism checks.

However, whatever may the cause, the proliferation of the publishing industry, driven by the need for publications, and increasing instances of plagiarism, is certainly not a healthy sign for academia. Editorials and Letters being dominant amongst all categories of publications on plagiarism, it may be inferred that concerned editors as well as erudite readership of scientific journals would be doing something about plagiarism in their own circles of influence. However, it is a matter of concern that 216 (67.5%) journals have published only one article on plagiarism over the last two decades. Rhetorically,

can it be expected of journal editors or readers themselves to set the house in order? Is it the task of these to police writers and researchers?

Detailed ethical guidelines were found in the Instructions to Authors of 69% of Journals which may give hope, however it is a cause for concern that though the Journals in our study group were all available in PubMed (which in itself is a rigorous process), that nearly 15% of these journals that did not have any ethical guidelines easily available on their website. This is despite such journals having published articles on plagiarism over the course of the last 20 years! In contrast to ethical guidelines, a detailed plagiarism policy/statement was found in only 25% of the journals. Negligible mention of plagiarism was found in 9% of the journals, while 55% of the journals did not have any plagiarism policy/statement whatsoever, although all these journals published articles on plagiarism over the past twenty years.

Outline Guidelines for Authors for Ethics in publishing and Plagiarism Prevention^{4,5}

- Read about Ethics in publishing
- Obtain ethical approval for study
- Obtain Informed consent
- Decide on Authorship and Changes to Authorship
- Implement plagiarism prevention measures while writing manuscript.
- Align manuscript with Journal policy³
- Understand and declare Conflict of Interest
- Submission declarations as per checklist

Resources:

www.publicationethics.org
<http://www.plagiarism.org/article/preventing-plagiarism-when-writing>

We opine that all scholarly journals must have a well defined and comprehensive ethical policy including a plagiarism policy/statement with suitable links to web based resources for author education similar to the ICMJE⁶ and COPE⁷ guidelines and also linking to ethical scientific writing

and publication tutorials.⁸ If, we as a society are determined to combat the menace of unethical publication and to firmly deal with scientific misconduct such as plagiarism, we need to take action! We need to commence discussing plagiarism at all levels of the medical education system, engage all participants and stake holders, and adopt multiple approaches eventually targeting the individual researcher. Simultaneously, we need to have a transparent implementable system of sanctions to strongly dissuade violations of scientific norms.

Limitations of the study

The present study is limited by the fact that only those articles available in PubMed were studied. Therefore, the findings may not be extrapolated for other repository/archives.

Conclusion

There is a need to have a well defined plagiarism policy/statement for all scholarly journals easily visible on their home pages on the internet and also in their Instructions to Authors. There must be linkages with author education resources and plagiarism prevention tutorials too, which can be standardized and need not necessarily be journal specific. We infer from our study, that the downward trend of publications on plagiarism over the last five years, is indicative of a decline in academic interest in the topic. Editors must assume a proactive role in minimizing the scourge of plagiarism by encouraging publication of articles which focus on guidelines and advisories.

Conflicts of interest

The authors have none to declare.

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