

Authorship issues

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ABSTRACT

Authorship is a highly sought attribute, as it is associated with recognition for creativity. In addition, it is associated with multiple benefits such as peer recognition, better evaluation and financial gains. These possibilities spur scientists to author articles, but some take recourse to unethical practice of honorary authorships. Another unethical practice is that of ghostwriting. It is a phenomenon wherein individuals who write the articles are not named as authors and are not even acknowledged to be associated with the manuscript. Reputed and renowned scientists, who have not participated in the conduct of the study or in the manuscript preparation, are enrolled by the industry to allow their names to be mentioned as authors. This phenomenon is harmful not only because it suppresses the contribution of ghost-authors but also because the guest “authors” bestow underserved credibility upon an “industry-written” paper. The readers have no way of knowing the bias that may have crept in. The journal editors, institution, and government agencies need to come together to ensure that these malpractices are curbed by employing various measures such as creating awareness amongst authors, academicians, and administrators; enunciating and implementing policies to dissuade unethical behavior, protecting whistle-blowers, and providing punishments to those indulging in malpractices. All of us should remember that if unchecked, these deviant behaviors have the potential to compromise the credibility of scientific research and scientific publications.

KEY WORDS: Authorship, writing, research

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AUTHORSHIP ISSUES

Authorship of a scientific paper indicates that the authors should be credited with creation of new knowledge, offering new solutions, or providing novel insights. It establishes the link between the new idea or discovery and its originator. This is associated with rewards, material, and beyond. The authors earn credit points in performance appraisals, for promotions in the organization, and for better positions elsewhere. Authorship brings recognition from peers and experts in the field. There are financial benefits to be reaped in the form of patents and grants for new research projects. This way, authorship of a research paper has the potential of offering cascading material

benefits. No wonder, then, that, in the world of scholarship, authorship is very much sought after. The attractiveness of and value attached to authorship spur scientists to plan and execute research projects and publish them in reputed journals. However, the very same factors also entice scientists to indulge in unethical behaviors and crave for authorship even when they do not deserve it. This communication intends to shed some light on some of these behaviors.

WHO IS AN AUTHOR?

An author is defined as the one who begins or creates;^[1] or the one who starts a plan or an idea.^[2] For research publications, an “author” is generally considered to be someone who has made substantive intellectual contributions to a published study.^[3] Providing credit to someone who is not qualified as an author or depriving a deserving scientist of authorship credit are grave ethical issues and have serious implications. In 1985, the International Committee of Medical Journal Editors (ICMJE) first recommended certain criteria for authorship within the Uniform Requirements for Manuscripts

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Submitted to Biomedical Journals. These have been updated in 2009 [Table 1].^[4]

The Council of Scientific Editors (CSE) describes a range of inappropriate authorships including “Guest” authorship, “honorary,” or “gift” authorship, “ghost” authorship and “anonymous” authorship. As authors are expected to take public responsibility for the article and its content; scientists should not publish their scientific reports under pseudonyms or in an anonymous manner. The CSE states that journal editors may allow for anonymous report only when the author fears that revealing the identity could threaten his/her life or lead to loss of livelihood.^[5]

HONORARY AUTHORSHIP

“Gift” authorship or “honorar” authorship is the one that is based on, at best, a tenuous relationship with the manuscript. Many authors include “guest” authorship under “gift” or “honorary” authorship although CSE describes “Guest” authorship as the one that is bestowed upon individuals, who have not worked for it, with the perception that their association with the paper will enhance its prestige and augment chances of acceptance by the Journal. As the difference between “guest” authorship and “honorary” or “gift” authorship is marginal; this communication will include “guest” and “gift” authorship under “honorary” authorship.

Over the years, surveys have estimated the prevalence of guest/honorary authorship to be at 11-60%.^[6-12] Articles with over five authors are more likely to have “honorary authors” than those with three or lesser number of authors.^[6] Authorships are more often gifted to colleagues with lower academic rank or to those with fewer publications in last few years, to the departmental head^[13] and to those performing various non-author tasks such as reviewing or approving manuscript before submission, providing care, recruiting study subjects, supervising or recruiting co-authors, and contributing illustrations.^[13] Although gift authorship is generally frowned upon, there is a counter-view as well. Some researchers believe that today, the research groups have complex and tangled structure. When some individuals are working on research and publication, others in the group are carrying out their routine clinical or surgical work (basically non-author tasks), allowing the authors to carry on leisurely with research and writing work. This, they think, should be construed as a “passive contribution” to overall scientific goal and should be rewarded with authorship.^[14] Some also justify authorship being granted to departmental head, with whose munificence the research is conducted.

However, most journals do not buy these arguments and discourage the practice of gifting authorships to those who have not made significant contribution. Medical journals have adopted various measures to discourage the practice of honorary authorship [Table 2].

Table 1: Authorship criteria⁽⁴⁾

Authorship credit should be based on:

- i. Making substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data
- ii. Drafting the article or revising it critically for important intellectual content and
- iii. Providing final approval of the version to be published

An author should satisfy all the three criteria

When a large, multi-center group has conducted the work:

- The group should identify the individuals who accept direct responsibility for the manuscript
- These individuals should fully meet the criteria for authorship defined above and editors will ask these individuals to complete journal-specific author and conflict of interest disclosure forms
- When submitting a group author manuscript, the corresponding author should clearly indicate the preferred citation and should clearly identify all individual authors as well as the group name
- Journals will generally list other members of the group in the Acknowledgments
- The National Library of Medicine indexes the group name and the names of individuals the group has identified as being directly responsible for the manuscript; it also lists the names of collaborators if they are listed in the Acknowledgments
- Acquisition of funding, collection of data, or general supervision of the research group alone does not constitute authorship
- All persons designated as authors should qualify for authorship and all those who qualify for authorship should be listed
- Each author should have participated sufficiently in the work to take public responsibility for appropriate portion of the content

Table 2: Measures taken by various journals to discourage guest authorship

Providing guidance to authors regarding authorship criteria by listing them in “Instructions to authors”

Policy: Subscribing to authorship criteria provided by ICMJE

Requiring individual author to commit that he/ she fulfills authorship criteria

Requiring authors to commit that no one who satisfies authorship criteria has been kept out of the byline and no one who does not qualify as an author has been included

Requiring authors to list their exact contribution to the conduct of research project and in preparation and finalization of the manuscript

Publishing declared contribution of each and every author

Keeping the number of authors permitted to a pre-set number

Limiting the number of authors cited by name to a fixed number (e.g. six)

This practice is believed to be primarily responsible for the over inflation in the number of authors per article in biomedical journals.^[15,16] It is possible that a part of the increase in the number of authors per article could be explained on the basis of complexity of the research in the 21st century requiring collaborations. However, biomedical research has not become more complex than basic science research, which is not witnessing a similar trend.

Before we enumerate policies and actions that would discourage or curb this practice, one has to understand the reasons for which “honorary” authorships are gifted or received. In today’s competitive world, the motto is “publish or perish.” This puts undue pressure on all the scientists to publish as many research papers as possible. The evaluation systems also look for quantity rather than quality of research publications.^[5] No wonder then

that everyone is on the lookout for “earning” as many authorships, as possible. At times, junior researchers are not averse to gifting authorships to senior colleagues so as to oblige them and increase the probability of better assessment scores or just to maintain good relations. They also think that having a senior member of the faculty in the byline enhances the chances of acceptance for publication. At times, there is a “quid pro quo” or “reciprocal” arrangement, under which authorships are gifted to repay favors. Many believe that it is a good way of improving camaraderie among the team members and to motivate them.^[17] It is not uncommon to find departments wherein there is an unwritten rule that the name of the head of the department (or head of the clinical unit) is to be included in every paper, as research is possible only because of his or her benevolence. At times, names of junior colleagues are included to ensure that they get a “boost” early in their career.

Junior colleagues, given their inexperience and vulnerable position, are at a distinct disadvantage while negotiating authorship issues (“gift” authorship for a senior colleague or order of authorship). The senior colleagues’ greed and insincerity often sabotage efforts towards having an honest and authentic author list. Many senior colleagues who are intelligent, greedy, and ambitious, but are too lazy to put in the hard work and are unable to distinguish moral right from wrong (Kwok calls them “white bulls”)^[18] have several tricks up their sleeves for extracting benefits from their juniors. They do not depend on power asymmetry and coercive methods, alone. They also know that simple fraud and scientific dishonesty are easy to detect and difficult to justify. They also realize that total disregard for the ICMJE guidelines would be too risky and open to exposure.^[18] Hence, they demonstrate a public involvement in one or more of the authorship criteria by discussing study design and enrollment plans, reviewing study progress, and agreeing to provide inputs for the manuscript drafts at faculty meetings. At all stages, they put in only a token effort; but if challenged, it is difficult to prove that it did not amount to “significant” contribution. They also interfere with the order in the author list. The position of the first author is “most valued”; as it is generally believed that the first author is the one who has done the maximum work on the project. The “white bulls” try to usurp this position by pressurizing junior colleagues to surrender the first author position. If this is difficult to achieve, they employ another ploy of shifting their name to the end of the author list but assume the role of “guarantor” or “corresponding author”; thereby giving the impression that he needs to be accorded the maximum credit for the work.^[18] Juniors help them by not protesting and institutions help them by trying to keep these matters under the wraps. Many a times, whistleblowers who unmask scientific fraud get discredited, while the senior colleagues involved in the fraud go unpunished. This discourages ethical researchers to protest against or expose frauds.

While on the topic of “first authorship,” the dilemma of

post-graduate teachers is worth mentioning. In Indian setting, the post-graduate teacher (guide) usually provides the idea for dissertation for post-graduate studies and designs the research study. The data collection is usually done by the post-graduate student and the teacher plays an important role in amending and finalizing the dissertation draft. The question of “who should be the first author” comes up when the dissertation is to be published. The matter gets more complicated when the student does not show any inclination to write it up as a research article.^[19] It has been suggested that in such an eventuality, the guide should provide a reasonable time period for preparing the first draft of the manuscript.^[20] Under all circumstances, it is logical to suggest that the sequence of authors should be determined by their relative overall contributions to the research study and publication^[20] and that all authorship disputes should be resolved before the manuscript is submitted to a journal and that the authors cannot expect the editor to get embroiled with these issues.^[21]

When a senior colleague requests for authorship in a research article, where he played no role; how should a junior colleague handle it? Daniel Sokol^[22] suggests a way out. He says that it would be prudent to refuse the request explaining that the journal requires him to sign a form stating that all authors satisfy authorship criteria. It is best to avoid giving a detailed justification for refusing to oblige invoking words such as honesty, trust, fairness, professionalism, and academic integrity. That would highlight the inappropriateness of the initial request and make the colleague feel morally attacked.^[22] In addition, such a rebut will sound obnoxiously self-righteous.^[22] This way, the junior will be able to avoid participating in an unethical practice without harming relationships with colleagues.^[22] Following the enunciation of ICMJE criteria for authorship, several journals have taken various steps [Table 2] to ensure compliance with these criteria. They ensure that authors are made aware of the criteria, so that lack of information^[6,13,23] would not be the reason for non-compliance.

Despite the presence of guidelines on authorship, it is not uncommon to find that these are often breached^[17] and that the number of authors per article has not shown a decline in the post-ICMJE period.^[24-29] We have to wait for more evidence before we make a definitive statement regarding the effectiveness of the ICMJE initiative, but the reasons for limited effect are not far to seek. The guidelines have their limitations. For example, it is not totally objective. How is one supposed to measure “*substantial contributions to conception and design...*” or “*revising it critically for important intellectual content*”? The Code does not provide any guidance regarding order of authorships. It also suffers from the inherent limitation of being “voluntary” in nature. It is highly dependent on values and ethics of individuals or groups involved. It has been drafted assuming that free will, reason, and integrity prevail.^[18] The Code is unlikely to be effective in curbing unethical practices, if the victims choose to acquiesce and institutions and journals

decide to look the other way. Many criticize the Code for being out of touch with the realities of modern research, perceive them to be irrelevant and unable to withstand the prevalent power equations and pressure to publish.^[17] Taking these objects into consideration, some researchers have suggested certain modifications. For example, Paneth^[30] suggested that the authorship tasks be divided into four sub-tasks: (a) concept and design, (b) research resources and data, (c) analysis and interpretation, and (d) writing. Based on this, there could be authors (who satisfy all the authorship criteria), contributing authors (who have helped in writing the manuscript and in “research resource and data” or “analysis and interpretation”), and acknowledged contributors (participation in any one of the four tasks listed above). Nevertheless, the ICMJE authorship criteria provide a tool in the hands of researchers to judge for themselves, if they or their co-workers qualify for authorship.

GHOST AUTHORSHIP

Ghost authors are those who participate in research, data analysis, and/or writing of a manuscript but are not named or disclosed in the author byline or acknowledgments.^[21] One form of ghost authorship is suppression of the contribution of a junior colleague (usually postgraduate student, postdoctoral fellow or junior researcher), who is not included in the author list despite having carried out the research and provided a draft manuscript. Another form of ghost authorship is the one wherein an individual not connected with the research study writes the first draft, works as the author’s personal editor, and provides a better-quality manuscript and saves “author’s” time. The third type is the most dangerous form. In this, a medical writer appointed by a pharmaceutical or device company writes the draft, which is approved by the company. The company then approaches a reputed scientist for allowing his name to be cited as the author of this piece. This “author” who plays a very minor (if any) role in the preparation of the

manuscript, at times approves the proposal even without checking the manuscript content. The last example is the most sinister one, which is of gravest consequence for the society. The medical writer’s contribution is not listed (neither in author byline nor in acknowledgements), thereby giving the impression that the expert whose name appears in the byline has carried out the research and written the manuscript.

Ghostwriting, which was a “dirty little secret” of the medical literature, has now grown to be a full-fledged industry.^[31] Gøtzsche *et al.*^[32] found that 75% of industry-sponsored trials were ghost-written, as they did not include the names of individuals who wrote the protocol, analyzed the study findings, or wrote the manuscript, in the list of authors or study group or writing committee members or in “acknowledgements.” Industry has used ghost authorship to market several drugs.^[31,33] The risk with ghost-written manuscripts is that the listed author may not have even read the manuscript or may not know what goes under his name. The company uses the reputation and the standing of renowned scientists to push its drugs for a fee, without the readers, editor, and reviewers coming to know of it. This is outright breach of trust. These actions will ultimately erode the public trust in clinical research, in journals that report research and in medicine, in general.^[34]

World Association of Medical Editors (WAME) considers the phenomenon of ghostwriting as dishonest and unacceptable.^[35] It bestows undeserved credibility to the paper that has been ghost written by a person employed by a pharmaceutical company. The readers perceive it as an unbiased article written by an academician. This deception in author list does not allow the discerning readers to assess the impact of bias in published research,^[31] when in actual reality, it is a manuscript written by the sponsor.

The other ethical issue is that the journals publish articles with the understanding that authors mentioned in the

Table 3: Steps to curb ghost-writing^[31,35,36]

Stakeholder	Action
Academic institutions	Institutions should have well-publicized policies dissuading faculty members from indulging in or supporting ‘ghostwriting’ Ghostwriting should be viewed as serious misconduct and should be punished accordingly Institutions should insist on faculty declaring outside income. Concealing such income should be made punishable
Government agencies	Government agencies should not provide research funds for institutions that do not formulate and implement strict policies dissuading ghost writing
Journals	Clearly state policy regarding ghost-writing in ‘Instructions to authors’ Accept papers for review only if the article is written, endorsed and proffered for publication by the authors identified in the byline Make authors attest that they take full responsibility for the content. Make authors declare if a paid writer has participated in the writing of the article and identify the nature of that assistance in the acknowledgment. They should explicitly state the source of support for that writer. Do not accept the article if the support for the ghost writer comes directly or indirectly from a party with a commercial interest in the content, and if the hired writer has had the primary responsibility for writing and submitting the paper, but is not identified as an author. List company employee as an author if he has participated in designing and executing a clinical trial and in the writing of a paper Refuse to correspond with hired writers who are not recorded as authors If a manuscript is found to be ghost-written: Publish a notice that a manuscript has been ghost-written, providing the name of the authors, institution, supporting company’s name in the journal Alert the authors’ academic institutions, identifying the commercial companies; Provide specific information, if contacted by the popular media or government organizations

list have written the article and take responsibility for its content. This understanding is breached when the article is ghost-written and there is no way finding out to what extent the listed authors are aware of its contents, leave aside taking responsibility for the content.

Merely identifying the ghost author in the “acknowledgement” section does not recognize his role in toto; and worse, the tenuous link between the article and the guest author continues to be exaggerated with undue prestige being accorded to the article.

Medical ghostwriting is a threat to public health which currently takes place only due to the cooperation of researchers employed at academic medical centers. Hence, the primary responsibility of preventing this practice rests with the institutions although journals can also play an important role. It is worth noting that Lacasse and Leo^[31] found that only a minority of the top-50 academic institutions in the US banned ghostwriting explicitly. The institutions, journal editors, and funding agencies should initiate actions to discourage this pernicious practice [Table 3].

Authorship of a medical paper is a matter of pride that has to be deserved and earned, and declared.^[33] It is necessary for researchers to imbibe this principle. Journal editors and institutions should formulate and implement policies that will discourage any manipulation of authorship. If left unchecked, such unethical practices could lead to loss of credibility for everyone: researchers, pharmaceutical industry, journals, and funding agencies. Medical fraternity and general public will cease to have any faith in the manner any research is conducted. This is in no one's interest.

REFERENCES

- Cambridge dictionaries online. Available from URL: <http://dictionary.cambridge.org/dictionary/british> [accessed on 17 May 2011].
- Longman Dictionary of Contemporary English. Available from URL: http://www.ldoceonline.com/dictionary/author_1 [accessed on 17 May 2011].
- Davidoff F. CSE Task Force on Authorship. Who's the author? Problems with biomedical authorship, and some possible solutions. *Sci Editor* 2000;23:111-9.
- International Committee of Medical Journal Editors (ICMJE). Uniform Requirements for Manuscripts submitted to biomedical journals: Ethical Considerations in the Conduct and Reporting of Research: Authorship and Contributorship. Available from URL: http://www.icmje.org/ethical_1author.html [accessed on 17 May 2011].
- Psooy K. Underserved authorship: too much of a good thing. *CUAJ* 2010;4:391-2.
- Slone RM. Coauthors' contributions to major papers published in the *AJR*: frequency of undeserved coauthorship. *AJR Am J Roentgenol* 1996;167:571-9.
- Flanagin A, Carey LA, Fontanarosa PB, Phillips SG, Pace BP, Lundberg GD, et al. Prevalence of articles with honorary authors and ghost authors in peer-reviewed medical journals. *JAMA* 1998;280:222-4.
- Shapiro DW, Wenger NS, Shapiro MF. The contributions of authors to multiauthored biomedical research papers. *JAMA* 1994;271:438-42.
- Hwang SS, Song HH, Baik JH, Jung SL, Park SH, Choi KH, et al. Researcher contributions and fulfillment of ICMJE authorship criteria: analysis of author contribution lists in research articles with multiple authors published in *Radiology*. *Radiology* 2003;226:16-23.
- Goodman NW. Survey of fulfillment of criteria for authorship in published medical research. *BMJ* 1994;309:1482.
- Kressel HY, Dixon AK. Where is the Honor in Honorary Authorship? *Radiology* 2011;259:324-7.
- Bates T, Anić A, Marusić M, Marusić A. Authorship criteria and disclosure of contributions: comparison of 3 general medical journals with different author contribution forms. *JAMA* 2004;292:86-8.
- Eisenberg RL, Ngo L, Boiselle PM, Bankier AA. Honorary authorship in radiologic research articles: frequency and associated factors. *Radiology* 2011;259:479-86.
- Athanasoulis CA. Authors need to be educated on authorship principles. *Radiology* 2000;217:598-9.
- Weeks WB, Wallace AE, Kimberley BC. Changes in authorship patterns in prestigious US medical journals. *Soc Sci Med* 2004;59:1949-54.
- Borry P, Schotsmans P, Dierickx K. Author, contributor or just a signer? A quantitative analysis of authorship trends in the field of bioethics. *Bioethics* 2006;20:213-20.
- Bhopal R, Rankin J, McColl E, Thomas L, Kaner E, Stacy R, et al. The vexed question of authorship: Views of researchers in a British medical faculty. *BMJ* 1997;314:1009-12.
- Kwok LS. The While Bull Effect: abusive coauthorship and publication parasitism. *J Med Ethics* 2005;31:554-6.
- Mohta A. Authorship issues continued. *Indian J Plastic Surg* 2010;43:232-3.
- Bhattacharya S. Authorship issue explained. *Indian J Plastic Surg* 2010;43:233-4.
- Scott-Lichter D. Editorial Policy Committee, Council of Science Editors. CSE's White Paper on Promoting Integrity in Scientific Journal Publications, 2009 Update. Reston, Va: 2009 Available from URL: http://www.councilscienceeditors.org/files/public/entire_whitepaper.pdf [accessed on 2 June 2011].
- Sokol DK. The dilemma of authorship. *BMJ* 2008;336:478.
- Dhaliwal U, Singh N, Bhatia A. Awareness of authorship criteria and conflict: Survey in a medical institution in India. *Med Gen Med* 2006;8:52.
- Levsky ME, Rosin A, Coon TP, Enslow WL, Miller MA. A descriptive analysis of authorship within medical journals, 1995-2005. *South Med J* 2007;100:371-5.
- McDonald RJ, Neff KL, Rethlefsen ML, Kallmes DF. Effects of author contribution disclosures and numeric limitations on authorship trends. *Mayo Clin Proc* 2010;85:920-7.
- Baerlocher MO, Gautam T, Newton M, Tomlinson G. Changing author counts in five major general medicine journals: effect of author contribution forms. *J Clin Epidemiol* 2009;62:875-7.
- Rahman L, Muirhead-Allwood SK. How many orthopedic surgeons does it take to write a research article? 50 years of authorship proliferation in and internationalization of the orthopedic surgery literature. *Orthopedics* 2010;33:478.
- Marusić M, Bozиков J, Katavić V, Hren D, Kljaković-Gaspić M, Marusić A. Authorship in a small medical journal: A study of contributorship statements by corresponding authors. *Sci Eng Ethics* 2004;10:493-502.
- Glynn RW, Kerin MJ, Sweeney KJ. Authorship trends in the surgical literature. *Br J Surg* 2010;97:1304-8.
- Paneth N. Separating authorship responsibility and authorship credit: A proposal for biomedical journals. *Am J Pub Health* 1998;88:824-6.
- Lacasse JR, Leo J. Ghostwriting at elite academic medical centers in the United States. *PLoS Med* 2010;7:e1000230.
- Götzsche PC, Hróbjartsson A, Johansen HK, Haahr MT, Altman DG, Chan A-W. Ghost authorship in industry-initiated randomised trials. *PLoS Med* 2007;4:e19.
- Barbour V. How ghost-writing threatens the credibility of medical knowledge and medical journals. *Hematologica* 2010;95:1-2.
- Kamerow D. Who wrote that article? The latest revelations about ghost authorship of journal articles are truly frightening. *BMJ* 2008;336:989.
- World Association of Medical Editors. Policy Statements Prepared by the WAME Editorial Policy Committee. Available from URL: <http://www.wame.org/resources/policies> [accessed 17 May 2011].
- Chabner BA. Ghost writers in the sky. *Oncologist* 2009;14:199-200.

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