

Ethics in Research Publications: Guidance on handling Authorship Issues

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Trends in publishing

- Number of authors per article is increasing
- Salami science (minimal publishable unit)
- Impact factors and citation counts are increasingly important
- Electronic publishing

Trends in publishing contd

- New distribution models (PLOS – Public Library of Science)
- New reviewing models (open review)
- Clinical Trial Registries.
- Article retractions on increase.
- Lots of new journals emerging.....some of them dubious

Recent Publication of Interest.....

Open access

Research

BMJ Open Plagiarism in research: a survey of African medical journals

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ABSTRACT

Objectives To examine whether regional biomedical journals in Africa had policies on plagiarism and procedures to detect it; and to measure the extent of plagiarism in their original research articles and reviews.

Design Cross sectional survey.

Setting and participants We selected journals with an editor-in-chief in Africa, a publisher based in a low or middle income country and with author guidelines in English, and systematically searched the African Journals Online database. From each of the 100 journals identified, we randomly selected five original research articles or reviews published in 2016.

Outcomes For included journals, we examined the presence of plagiarism policies and whether they referred to text matching software. We submitted articles to Turnitin and measured the extent of plagiarism (copying of someone else's work) or redundancy (copying of one's own work) against a set of criteria we had developed and piloted.

Results Of the 100 journals, 26 had a policy on plagiarism and 16 referred to text matching software. Of 495 articles, 313 (63%; 95% CI 58 to 68) had evidence of plagiarism: 17% (83) had at least four linked copied or more than six individual copied sentences; 19% (96) had three to six copied sentences; and the remainder had one or two copied sentences. Plagiarism was more common in the introduction and discussion, and uncommon in the results.

Conclusion Plagiarism is common in biomedical research articles and reviews published in Africa. While wholesale plagiarism was uncommon, moderate text plagiarism was extensive. This could rapidly be eliminated if journal editors implemented screening strategies, including text matching software.

INTRODUCTION

Plagiarism is a serious form of research misconduct when authors copy text, ideas or

Strengths and limitations of this study

- This study is the first to systematically research plagiarism in African biomedical journals.
- We developed a method for reporting the extent of plagiarism beyond the overall similarity index.
- Our analysis was limited to text and excluded images and data.
- The high level of plagiarism we identified could easily be solved by screening all articles with text matching software and automatic rejection of articles showing plagiarism.
- We used an online source, the African Journals Online database, as the sampling frame for our study.

(text recycling), to publishing parts of the same study in more than one paper (salami slicing) and republishing entire papers (duplicate publication), and is also considered poor practice.^{5,6}

The availability of material on the internet facilitates mosaic writing and plagiarism, but the widespread availability of text matching software has improved detection so there is now more awareness of research integrity and research misconduct, including plagiarism. Policies are clearly available through the Committee on Publication Ethics (COPE), encouraging journal editors to screen submitted manuscripts for plagiarism.⁷ Publishing systems and standards have advanced rapidly with online publishing in a global world, and there are some cooperative programmes between the large and local players to help local players keep up with advances. An example of this is the

Authorship issues in African academic institutions

- **Research growth towards intensification**
- **Pressure to publish (or perish).**
 - Performance appraisal requirements
 - Contract renewals
 - Advancement and Promotion criteria
- Publications are the currency for academic success
- Authorship issues not being discussed openly.
- Several disputes and misunderstandings related to authorship arising involving fellow academics or students and their supervisors.

Questions for this session

- Who should be included in a paper as an author?
- Who should not be included in a paper as an author?
- Who should be acknowledged?
- How can authorship disputes be minimized?
- What constitutes publication misconduct?
- What constitutes unacceptable practice in publishing?
- How can we promote responsible authorship within our institutions?

A disclaimer

- Publication practices vary according to discipline
- Rules of authorship are not black and white
- Will use cases from my experience to facilitate discussions.

Authorship controversies

- How many of us have been involved in, or close to, a controversy involving **authorship**?

Authorship and Research Integrity

- Publications serve many purposes:
 - Exchange of information
 - Documentation of being first with new ideas
 - Evidence of productive use of research funds
 - Record by which researchers are judged
- All these lead to significant pressure to publish
- May cause disputes among members of the research team
- Journals have policies for authors
- **What are the authorship** issues in the real world?

Should the following persons be listed as authors? (1)

- A competent technician who completes assigned tasks
- The PI in the lab that provided the specimens.
- The PI whose lab you visited to learn an important technique you used in the research.

Should the following be listed as authors (2)

- Your colleague who provided a helpful critical reading of the manuscript?
- Your department or centre head?
- The Head of the Lab?
- **The animal house attendant who provided the rabbits?**

Animal House Attendant Conversation

- **Lab Chief** :*'In this paper where you describe experiments on five rabbits, you have nine authors. ' '*
- **Researcher**: *Yes Sir. This is because each of them helped me in the conduct of my experiments.'*
- **Lab Chief** :*'What is the animal house attendant doing on your scientific paper? The fellow cannot even read English. ' '*
- **Researcher** : *Sir, he got the rabbits for me and helped me in the animal experiments. '*
- **Lab Chief** :*'But that is his job. And why you put my name as a co- author with the animal house attendant? '*
- **Researcher** : *'You allowed me to carry out this research project. '*

Are there uniform standards for authorship?

- **NO!**
- Standards vary according to discipline
- Different type of papers
 - Papers developing ideas or theories
 - Papers reporting empirical data
- Journals have varying criteria.
- Some criteria may also be provided through:
 - Institutional policy
 - Departmental policy
 - Faculty Policy

Guidelines for Publication

- Widely cited guidelines for publication were written by the International Committee of Medical Journal Editors (ICMJE).
- Also known as the Vancouver Group.
- www.icmje.org
- Group that established publication guidelines for medical journals – More than 500 editors.
- Uniform Requirements provide good rules of thumb (or required rules) for understanding authorship.
- ICMJE Guidelines are an attempt to set a higher standard.

ICMJE Authorship Criteria

- **"Authorship** credit should be based on:
 - 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;
 - 2) drafting the article or revising it critically for important intellectual content; and
 - 3) final approval of the version to be published.
- Authors should meet conditions 1, 2, and 3."
- **Do we have any problems with this?**

Criteria for Authorship

- Authors should:
 - Make a substantial contribution to conception and design, acquisition of data, or analysis and interpretation of data
 - Write draft of the article or revise it critically for important intellectual content
 - Provide final approval of the version to be published
 - **Agree to be named as author**
- Many journals go through the ritual of obtaining signatures on the consent form from all the authors.

ICMJE Guidelines (cont.):

- ⑨ All persons designated as authors **should qualify for authorship**, and ***all those who qualify should be listed.***
- “ Each author should have participated sufficiently in the work to take **public responsibility** for appropriate portions of the content.
 - If there is a serious problem with the article what will you say?
 - Responsibility and Contribution - 2 sides of the coin:
- Each element of the article must have at least one author who did the work and takes responsibility.

ICMJE Author Guidelines (cont)

- “Acquisition of funding, collection of data, or supervision of the research, alone, does not justify authorship.
- “All contributors who do not meet the criteria for authorship should be listed in an acknowledgments section.
- “The order of authorship on the byline should be a joint decision of the co-authors.
- “Authors should be prepared to explain the order in which authors are listed.

Issues with ICMJE Standards (1)

- Guidelines were established to safeguard the position of the editors of journals and are concerned primarily with the written version of a scientific paper.
- Guidelines do not consider how the research project was conducted and who collected experimental data.
- Many scientists do not know about these standards.

Issues about ICMJE Guidelines (2)

- The guidelines say nothing about researchers who have contributed to the work but whose names are left out of the paper.
- Some scientists do not agree with the standards.
- Varying disciplines – varying expectations
- They are just guidelines
- These standards are a good starting place for authorship discussions.
- At the end of the day, it is the members who make the final determination.

From 3 to 2 criteria

- Some propose that we can define authorship by examining the extent to which each individual has played a role in the five steps. (conceptualisation, planning, data collection, data analysis, writing)
- They suggest that there should be two criteria for deciding who should be considered an author.
 - An author is an individual who has participated in **at least two** of the five research steps. One of these must be the writing and editing of the paper.
 - The author should have sufficient involvement in the research that he or **she can defend the content of the publication** when questions or criticisms are raised.
- If the individual concerned cannot be defined as an author using these criteria, but has played some role in the research process, their role should be recognised in the acknowledgment section of the paper.

Are there other ways to decide authorship?

- **Authorship Scoring System** Nature 18 July 1991
 - *Point for specific contributions*
 - *Each potential author is awarded the highest realistic score in each category (Total Max =100).*
- **Nature Author Contributions Audit**
http://blogs.nature.com/nautilus/2007/11/post_12.html
 - S.H.C. designed and performed experiments, analysed data and wrote the paper; N.C., M.T. and J.M.G. designed and performed experiments; D.R. and M.B.G. developed analytical tools; and C.I.B. designed experiments, analysed data and wrote the paper.

Authorship realities

- It's all well and good to have guidelines.
- What happens in the real world of Depts, Labs and researchers at different stages of training and with a multitude of expectations and obligations?
- Academic enemies and friends
- Competition for promotion
- Pressure to fulfill advancement criteria

Authorship Disputes

- Authorship order
- Missing authors
- Extra authors
- Some authorship disputes are not “research misconduct”.
- Allegations of plagiarism, fabrication or misappropriation of data/information are “research misconduct”

Scenarios for discussion

Scenario 1- Timing of discussion

- You are a PI with your first student who is within a couple years of graduating.
- When should you begin discussing your expectations regarding publications?
- What will be your expectations?

Scenario 2 – PhD Supervisor

- You were a supervisor to a PhD student who has just graduated.
- The student is not interested in publishing.
- You are under a lot of pressure to publish as you are due for promotion.
- You decide to go ahead with a publication anyway.
- Please comment.

Scenario 3 – co-supervisor

- You are a graduate student with a main and co-supervisor.
- The co-supervisor suggests writing of a manuscript wholly based on the dissertation.
- You and the co-supervisor prepare the manuscript and the main supervisor is too busy to provide inputs but gives the go ahead for submission of the manuscript. Manuscript is a summary of dissertation.
- What is your opinion on the inclusion of the main supervisor as an author and why?

Scenario 4 – Other people's contribution

- You have been working as a team in developing a research proposal.
- The proposal is not funded and you decide to abandon the idea.
- Prof X, one of the team members decides to write a paper which is partly based on the original proposal.
- She invites the other members to participate in the paper write up and they do not respond.
- How should Prof X Proceed?

Scenario 5 – Student assignments

- As a lecturer you have given students some assignments.
- Some of the students write some very nice papers.
- After four years, you decide to publish these materials and list yourself as the sole author.

Scenario 6 – Providing research idea

- A supervisor for a Masters student, provided the topic for research, and supervised the student as he collected and analysed data and wrote the dissertation.
- The supervisor proceeds to publish a paper as the sole author.

Maintaining Fairness

- All persons designated as authors should qualify for authorship
- All persons who qualify for authorship should be designated as authors
- Different members of the team may make assumptions about their roles
- Consult on the criteria for authorship that suits the specific research taking into account the personal needs and aspirations of all concerned.
- Need to reach an explicit agreement based on discussions

Flexibility.....is important

- Where necessary, give-and-take so that all sides can satisfy their needs and aspirations.
- This discussion is most effective when conducted during the first two steps (conceptualisation and planning) of the research process.
- When new people join a research team, there will be a new set of relationships, roles and responsibilities, involving the newcomer and existing staff.
- Ensure that newcomers are brought into the consultation process.

No Basis for Authorship

- Acquisition of funding
- Collection of data
- Supervision of the research
- Senior people who may have contributed little to the research process, sometimes insist that their names appear as coauthors – Politics.
- **WARNING** :If, at a later date, the paper is found to have serious failures or errors, the reputation of **all** named authors could be seriously damaged.

Important questions to ask

- What do you gain by excluding someone who has contributed significantly?
- What do you gain by including someone who has contributed very little or nothing?

Order of Authors - Flexibility

- Order of authorship matters too!
- Selecting the first author involves cordial consultation and flexibility.
- In projects involving several persons, it is often feasible to plan for multiple but related papers so that each researcher has a chance to take the lead role.
- Otherwise, the first author must be the person who has taken the lead role in each of the five steps of the research process.

Order of authorship (2)

- Last author often the senior author
- Submitting author
- Custom varies across disciplines and cultures (scientific and otherwise)
- Consider:
 - The contributions of each member
 - How important is the paper?
 - Discuss order with co-authors

Encouraging young researchers

- Senior researchers can voluntarily back off from first authorship in order to give the up and coming a chance.
- This encourages the development of young professionals.
- Flexibility is important

Acknowledgements

- Contributors who do not meet criteria for authorship should be listed in acknowledgements section
 - Person providing technical help
 - Person providing writing assistance
 - Department Chair who provided only general support
- Readers may infer endorsement of the data and conclusions
- All persons should give written permission to be acknowledged

APA Ethical Practices Re: Authorship

- Take responsibility and credit only for work that a researcher actually performed or to which he/she substantially contributed
- Appropriately acknowledge those who made minor contributions to research or written publication
- Mere possession of institutional position does not justify authorship, i.e. Dept chair

Student Authorship

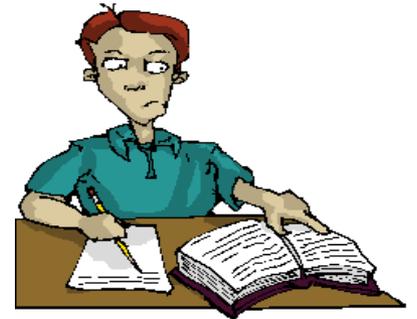
- Decide early on how authorship decisions will be made.
- Except under exceptional circumstances, student should be listed as first author on publication based on dissertation.
- Students should be given room to control publications from their dissertation.
- Students working in PI's Project have to work with the PI.

Misconduct relating to authorship

- Include serious violations of journal guidelines and accepted norms
- **Gift authorship**
 - Including an author whose contribution to the work was far below **authorship** criterion
 - May be wanted and unwanted gift
- **Ghost authorship**
 - Similar to gift **authorship** but "expert" "consulting" scientists appear as lead authors to add credibility to the work
 - Those who actually did the work take no or minor credit
 - Practice sometimes used in industry

Plagiarism

- Intentional use of someone else's words, thoughts, or ideas, as though they are your own
- Also includes “self-plagiarism” – author using his/her own published material in another work without citation



How to Avoid Authorship Disputes

- Discuss expectations early on in the project
 - Avoid authorship disputes by discussing plans and criteria for authorship at the outset of collaboration
- Authorship contracts or agreements (prenups)
 - Accept an individual's request not to be an author
- Refer to professional society's ethical code
- Check specific journal requirements
- Check with others before making accusations

Solutions to authorship disputes

- Negotiation or Mediation : first, within the research group, then external to the group (especially advisory committees!)
- Department heads and deans may ultimately become involved.
- Ultimately institutional involvement – Ethics Committee
- The discussion should be focused on contribution & responsibility: who is willing to defend the data if there ever were allegations of misconduct?

Other Authorship Responsibilities

- Submit to only one journal at a time
- Disclose all potential conflicts of interest as required.
 - ▶ Placing work in context & accurate citations
 - ▶ Publishing negative results
 - ▶ Acknowledging sponsorship
 - ▶ Clinical Trial Registry Requirements
 - ▶ Preventing duplicative publication (self-plagiarism)
 - ▶ Preventing fragmentary publication
 - ▶ Protecting intellectual property rights

Errors & authorship

▶ **Honest Errors**

- ▶ Unintentional, minor errors should be sent to the journal as “Erratum” by the corresponding author
- ▶ If the errors compromise part of the conclusions, the authors should issue a “Correction”
- ▶ Inadvertent errors that invalidate the study should be sent in as a “retraction”
- ▶ Intentional falsification, fabrication or plagiarism should be investigated as research misconduct

Summary

- Keep standards high with respect to assigning **authorship**
- If you are going to publish with others, get that straight before writing the first draft
- Exercise preventative ethics:
 - Anticipate potential **authorship** conflicts before they occur
 - Have **authorship** conversations early and often
- Authorship disputes damage professionalism and professional relationships.
- Conscience and your common sense can help.