

Research Ethics: Authorship and Publication

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Research is taking up a challenge to achieve something new. It can provide breakthroughs for untreatable diseases by discovering new therapies and technology. As research is a team work the participants learn to work in harmony and to provide deserved justice to the co-researchers.

Once a research project has been completed it has to be published. It is an obligation to let others know your results which add to the pool of prevailing knowledge. Also if not published all the efforts are considered wasted. Preparing the manuscript with the research results for publication is a joint responsibility of all the researchers involved in a particular project. This calls for authorship and its responsibilities.

An author is broadly defined as "the person who originated or gave existence to anything" and whose authorship determines responsibility for what was created. Narrowly defined, an author is the originator of any written work.¹ Simply an author is the "one that originates or creates."²

In early days, research was simple and usually performed by one or two scientists. With the complexity now involved, colleagues from different fields have to join hands before the work can be completed, the data analysed and compared to other studies. Subsequently, questions arise within the team as to who then deserves to be an author. Furthermore, what the order of authors should be. Also, the efforts put in by those who do not reach this authorship level cannot be taken for granted.

To bring about easy and ethical solutions, The International Committee of Medical Journal Editors (ICMJE), Vancouver Group worked on these issues and have established formal guidelines for authorship. These have been revised periodically with the last revision being made in August, 2013.³ There are now four items necessary, opposed to the previous three:

Authorship requires:

- ◆ Substantial contributions to: the conception or design

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of the work; or the acquisition, analysis, or interpretation of data for the work; AND

- ◆ Drafting the work or revising it critically for important intellectual content; AND
- ◆ Final approval of the version to be published; AND
- ◆ Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Once the consensus on authors' contribution has been made the team members fulfilling the above mentioned criteria are authors in a particular project. The question then arises on the sequence of the names of author. Controversies have been encountered on deciding these issues and at times there have been disagreement after publication of the article. Assigning authorship order has to be fair and agreed upon by all co-authors. Authororder is an easy to use tool to allocate the order of authors for a publication.⁴ It is available free on its website and provides all the steps for deciding it.

Two steps from Authororder are shown here:

1. Prepare a blank table with names of all co-authors as shown in Table-1.
2. Weighted importance of each author is given according to the efforts they put in a particular project. This is shown in Table-2.

Author order is then listed in descending order of percentage contributions. In this example, the author order on the manuscript would be Les (57.5%), John (14.25%), Carl (11%), Peta (10%), Mary (7.25%).

Who are the true authors?

All the scientists who first conceived the original idea of the research and then worked on it through each step, are the deserving and true authors. They have the responsibility of getting the research approved, conducting it, analyzing the data, writing the manuscript and performing the literature search for other similar publications.

"All authors should understand that each one has an

Manuscript content	Authors (% for item)					Category	Relative Weighting
	Les	John	Carl	Mary	Peta		
% of TOTAL							

Table-1: Blank authororder® table.

Manuscript content	Authors (% for item)					Category	Relative Weighting
	Les	John	Carl	Mary	Peta		
Survey design	70			10	20	A	15
Focus group design	25	25	50			B	10
Quantitative data analysis	70			10	20	A	15
Qualitative data analysis	50	50				B	10
Table 1	70			10	20	C	5
Literature review	60	15	20	5		A	15
Manuscript writing	60	10	10	10	10	A	15
Concepts	50	20	10	10	10	A	15
% of TOTAL	100%	100%	100%	100%	100%		100%

Table-2: Weighted importance of each author's contribution.

equal responsibility and accountability towards the research", (ICMJE).³

"By accepting authorship of a paper, an author accepts that any problem related to that paper is, by definition, his or her problem. Given the specialized and myriad tasks frequently involved in research, most authors cannot participate directly in every aspect of the work. Still, ICMJE holds that each author remains accountable for the work as a whole by knowing who did what, by refraining from collaborations with co-authors whose integrity or quality of work raises concerns, and by helping to resolve questions or concerns if they arise." (ICMJE).³

If rules are followed rigidly and honestly, no concerns would arise on the integrity of any manuscript. With a larger number of authors especially in multicenter studies, there would be no doubts on the contribution when the disclosures are stated clearly.

Responsibility of authors

All authors have a moral and ethical responsibility towards conducting research and finally writing it for publication. This requires the knowledge of ethics and the policy of the institution. It is essential to have a clear vision on conflict of interest, safety of subjects studied with a transparent informed consent and the approval of the ethics committee of the institution.

Each author should be aware of the statistical analysis and its interpretation, should have participated in writing the article and all should have read the final version before it is submitted.

Who do not qualify for Authorship?

Those who acquired financial support for the research or provided technical services as typing the manuscript. Subjects hired for collecting data of patients or subjects or from laboratory material should be acknowledged and cannot be taken as authors.

Where does doubt arise?

An experienced editor can always spot a name of an undeserved author. Various types of authorships have been identified. These falls in the category of Guest-Gift or Honorary authorship. It is authorship granted in appreciation, respect, or a big name which can increase the credibility and likelihood of acceptance of the article.^{5,6}

GIFT Authorship is offered as an obligation or tribute. Many a times it can be coercion or due to lack of authority on following the rules.^{5,6}

GHOST Authorship is utilising the services of a professional writer who may not necessary be a clinician and has been hired purely for the purpose of writing research. This is in cases where investigators do not have the time or skill to write. This person is paid for the services and is not acknowledged.^{5,6}

There are some disadvantages for this mode of writing research. The Ghost writer lacks in-depth understanding of the research and relevant points may be missed and mistakes are made. The question also arises that employing a ghost author is going to deprive the junior researchers from being trained.

How can authorship disputes be prevented?

Research teams should discuss authorship issues frankly at the start of the work. Responsibilities can be assigned after mutual discussion early in the course of their work together. The ethics of authorship should be known to all performing the research. Every institution should have

laid down policies for research and authorship. It should be a part of the ethics curriculum and well known to the faculty members.⁷ Every journal and publication house should have strict rules for authorship criteria. These are recommended by authorities such as ICMJE and Committee on Publication Ethics (COPE). All instructions should be strictly enforced.

Authorship disputes have been encountered from immemorial times. Progress in research writing has now provided tools to overcome these amicably. Let each contributor have their fair credit.

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