Publication among academic staff and students: an analysis from the ethical perspective

María Teresa Urrutia Soto[1]

Publication among Academic Staff and Students: an Analysis from the Ethical Perspective

This article analyzes, from the ethical perspective, the authorship of particles carried out among students and professors and their potential conflicts. After the literature review, it has been found that the Vancouver criteria that should be fulfilled for the attribution of authorship of an article are not popularly known by students and academic staff. Many problems are posed in this area, among which the following are highlighted: ghost writer, honorary author, and incorrect assignment in the order authors should appear. The professor-student relationship brings with it implicit risks that could lead to conflict, against which it is the academician who should be cautious to curtail any ethical fault when assigning the authors. The measures recommended to avoid conflicts of authorship among students and academic staff are: early assignment of the authors, reflection among academicians, education to students/academic staff, and external control conducted by journal editors. Conclusion is that lack of awareness of the criteria of authorship by academicians and students is the principal problem in the attribution of authorships. It is indispensable to improve this knowledge and look after the application of said criteria in practice.

Key words: authorship; ethics; students.

Publicación entre académicos y alumnos: un análisis desde la perspectiva ética

En este artículo se analiza, desde la perspectiva ética, la autoría de artículos realizados entre alumnos y profesores y sus potenciales conflictos. Tras la revisión de la literatura, se encuentra que los criterios de Vancouver, los cuales deben cumplirse para la atribución de la autoría de un artículo, no son conocidos popoluarmente por alumnos y académicos. Son múltiples los problemas que se plantean en este ámbito, entre los que se destacan: la autoría fantasma, el autor honorífico y la incorrecta asignación del orden de los autores. La relación profesor-alumno trae implícita riesgos que pudieran llevar a conflicto, ante lo cual es el académico quien debería cautelar para que no ocurra una

1 Nurse, PhD. Professor, Pontificia Universidad Católica de Chile. email: murrutis@uc.cl

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falla ética al momento de asignar los autores. Las medidas recomendadas para evitar los conflictos de autoría entre alumnos y académicos son: la asignación temprana de los autores, la reflexión entre académicos, educación a estudiantes/académicos y el control externo realizado por los editores de revistas. Como conclusión, el desconocimiento de los criterios de autoría tanto en académicos como estudiantes es el principal problema en la atribución de autorías. Es indispensable, entonces, conocerlos, apropiarse de ellos y velar por su aplicación en la práctica.

Palabras clave: autoría, ética, estudiantes.

Publicação entre acadêmicos e alunos: uma análise desde a perspectiva ética

Neste artigo se analisa desde a perspectiva ética a autoria de artigos realizados entre alunos e professores e seus potenciais conflitos. Depois da revisão da literatura se encontra que os critérios de Vancouver que devem cumprir-se para a atribuição a autoria de um artigo não são popularmente conhecidos por alunos e acadêmicos. Múltiplos são os problemas que propõem neste âmbito, entre os que se destacam: a autoria fantasma, o autor honorífico e a incorreta atribuição do ordem dos autores. A relação professor-aluno traz implícita riscos que pudessem levar a conflito, ante o qual é o acadêmico quem devesse cautelar para que não ocorra uma falha ética ao momento de atribuir os autores. As medidas recomendadas para evitar os conflitos de autoria entre alunos e acadêmicos são: a atribuição temporã dos autores, a reflexão entre acadêmicos, educação a estudantes/acadêmicos e o controle externo realizado pelos editores de revistas. A conclusão é que o desconhecimento dos critérios de autoria tanto em acadêmicos como estudantes é o principal problema na atribuição de autorias. É indispensável melhorar este conhecimento e velar pela aplicação de ditos critérios na prática

Palavras chave: autoria, ética; estudantes.

Introduction

The Royal Academy of the Spanish Language defines author has that individual who has created some scientific, literary, or artistic work.[1] Such definition is easy to understand; however, its application may result complex when dealing with the student-professor relationship. Being the author of an article provides recognition and prestige to researchers, in addition to tangible benefits like better job offers, promotions, awards, and a better curriculum vitae to apply for grant funds, among others.[2-4] The authorship of a publication entails accepting responsibility and, hence, the credits regarding the intellectual work being published.[3] Among the responsibilities to which authors must respond to those involving ethical implications like the assignment of the article's authorship. Said assignment is not exempt from conflict,[2] generating stress within the team, especially among young researchers and students,[5] given their "contractual" relationship with the professors involved or most experienced researchers. This article seeks to analyze, from the ethical perspective, existing literature regarding the authorship of articles among students and professors and their potential conflicts. The purpose is to contribute to the reflection on a theme not currently exempt from difficulties and particularly to mitigate the responsibility academicians and researchers have in relationship to this topic.

To carry out this article, a search was conducted in the Medline bibliographic database by using the descriptors "authorship", "students", "academicians", and "ethics" and their different combinations. After reading the abstracts found after the search and the possibility of having access to the complete text, 23 articles were

selected of which 14 were included in this review. Book chapters and webpages related to the theme were also analyzed.

General aspects of authorship

The international committee of medical journal editors[6] establishes for criteria for being author of an article: 1) having made a substantial contribution to the conception of the work or in the acquisition, analysis, and interpretation of the data; 2) having elaborated the draft of the article or its critical revision; 3) approval of the manuscript's final version; and 4) agreed to being responsible for all the aspects of the work ensuring that those aspects related to the accuracy and integrity of the work are properly investigated and solved. Said criteria, in most journals, are supported by the declaration each author must sign, establishing the personal contribution made to the work.[2,7] Notwithstanding the publication of these criteria, many academicians and students ignore them. A qualitative study[5] conducted in this area indicates that among the reasons why an individual must be considered an author is the experience on a given theme or the fact of having supervised the student's work. Hren *et al.,*[8] in a research conducted in a faculty of medicine, found that a percentage of the students who had graduated considered as authorship criterion that of obtaining the financial support to carry out the research.[8] It has also been described that including authors who do not comply with the authorship criteria is a practice undertaken for the purpose of, among others, maintaining good relationships within the team.[5]

Among the facts that have been erroneously attributed as authorship in the past and which currently confuse some researchers, especially those lacking expertise, is that of offering the space to conduct the research or providing funding or permission for the research.[2] although both activities are important, they do not imply the right of authorship and could, thereby, be considered part of the acknowledgments whenever corresponding.

Principal problems of authorship

There are many potential problems in which researchers and students may be confronted. These could be summarized in five types:

- Including individuals who do not have the merit of being an author: examples of this is the authorship as a 'gift' or invited/honorary author.[3,9,10] In the first case, the author does not contribute to the manuscript and is given the credentials without complying with any of the requisites. In the second case, the author may partially comply with the criteria of authorship; however, this author's inclusion is considered fundamentally to grant the publication greater prestige. Students may be involved in this problem when including a professor or mentor with these characteristics who do not fulfill the criteria for being authors. This situation also occurs when, for example, there are many authors in a publication, who for the most part do not fulfill the authorship criteria.[2]
- Excluding individuals who have the merits for being authors: in this case, there is the presence of ghost writers,[2,9,10] write the article, however, upon submitting the manuscript are not considered as authors. Hence, including multiple individuals were not authors may also mean that as a consequence those who deserve to be included are left out. Both situations may be paths through which students are excluded from authorship.
- Not giving the merit that corresponds to the authors: given that the order of the authors[2,9] reflects the individual contribution to the manuscript and that the convention on this is not clear in practice, disputes on this topic are quite frequent. It is rather frequent. Students may need affected when assigning the order, being relegated to a lower rank due to their poor experience in publications or to their lesser need for public recognition.
- Publishing articles that should not be published, like plagiarized articles, with false data, or duplicate articles.[2,7,9] Regarding this last case, it may be the complete or partial

duplication of the article[2] and, generally, affects young researchers (among which there may be students) or from institutions without accreditation.[7]

- Articles that should be published, but which upon obtaining 'negative' results or unfavorable to what the researchers expect, are not published.[2,7] This situation tends to occur within the context of the contractual relationship between the researcher and the funding entity. This situation is perhaps the least frequent in which students may be involved.

Potential conflicts in the professor-student relationship

The professor-student relationship within an academic research context and which could cause conflicts in the area of authorship mainly occurs in two cases. The first of these is that often researchers include undergraduate and graduate students in the development of research projects; these students are considered to carry out different paid and unpaid functions within the team. The second case involves students who must elaborate their degree thesis or conduct a research project under the mentorship of a professor. Both situations are important in student formation and also respond to the academic duty of the comprehensive formation of professionals. However, it is within this relationship where ethical conflicts may arise with the authorship of manuscripts.

The professor-student relationship is a unique relationship, whose characteristics represent potential dilemmas when contextualizing it within the research collaboration setting and, particularly in the authorship of manuscripts.[3,11] Given the relationship of authority established when a professor supervises a student and the potential influence this professor has upon the student's professional future, students – understandably – may seem unwilling to question or manifest their concern with aspects of authorship in which they are involved.[3] The relationship of power, as well as high academic competitiveness, has been described as one of the principal causes of conflicts and bad practices in the area of authorship.[5] This situation entails a series of ethical "infractions" that are rarely discussed or clarified.[3]

Many undergraduate and graduate programs consider research activities in their curriculums, including those theses whose final format requires the elaboration of articles;[12] additionally, student interest for research and, thus, publish is also evaluated by academicians when selecting them to enter said programs.[3] Both factors make the incorporation of students to research activities greater every day and, hence, the risk of "bad practices" in this area is a reality.[3,12] In this respect, a study conducted over a decade ago[13] indicated that of the 51 students who had been listed as authors of an article, 18 reported that at least one of the criteria to become an author had not been fulfilled in their own case, and 24 reported this in the case of other co-authors. In this same study, 16 students of the 51 indicated that the department head had been considered honorary author.[13] Karani *et al.,*[3] in a study with medical, dentistry, and veterinary medicine students found that only 65% of them recognized having been oriented with respect to the criteria of the authorship of their projects. Upon analyzing the problems in a manuscript's authorship, 71% point to problems due to the presence of individuals who did not participate in the study design and 62% indicate problems in the lack of participation in the manuscript's elaboration.

A particular relationship is produced during the development of degree theses, especially PhD theses, where many times the final requisite in this process is translated into one or more manuscripts for publication. In this case, the determination of authorship may lead students to conflict.[14] The big question is: should the student's guiding professor or mentor and the members of the committee be considered authors of said publication? The conflict for students will fundamentally arise when the decision must be made prior to the research defense,[12] that is, prior to finishing the professor-student relationship, which by definition is a relationship of power,[11]

and when contributions from their professors and, thereby, compliance with the requisites of authorship are in doubt.

If we analyze the power both participants in this relationship have, the student is undoubtedly the least powerful,[11,14] and if we add to this that the decision of authorship must often be made before obtaining the academic degree, the asymmetric relationship of power becomes even more perilous.[14] In an editorial published in 2012, the author proposes that students must always be considered first author and that the inclusion and order of the members evaluating the thesis should be defined by their real contribution to the work.[12] The same author suggests that the true conflict is generated for the student when the contribution has been unequal or inexistent from the professors involved. However, Gaberson[11] indicates that a PhD student must always be considered the only author of the publication of his or her thesis, given that it is a demonstration that the student is capable of independently conducting research and if the professor or members of the evaluating committee believe their contribution to the thesis has been sufficiently substantial to be considered co-authors of the publication, the true skills the student accomplished as an independent researcher would be questionable; in this case, the author proposes that professors should only be recognized in the acknowledgments section. Independent of which is the position accepted, the academician must consider his or her teaching function in ethical aspects of this magnitude,[11] in reflexive manner or through modeling.

The question is: which are the ethical dilemmas involved in the work between professors and students at the moment of publishing? Gaberson[11] tries to solve said inquiry through a reflection of the very nature of the academic work. The author establishes that publishing produces important recognition in the academic world, useful for successful evaluations, and career promotions; to this we add that the successful academic activity must also include teaching aspects and, specifically, mentorship of students. Given this context, many times academicians try to conduct an activity that allows them to respond to both requirements, and it is how within the course requirements students are asked to elaborate a manuscript and publish it with the professor as co-author. The author proposes that when a professor performs teaching tasks, like teaching how to publish or elaborate a manuscript, and obtains benefits as co-author as a product of this teaching, said practice can be ethically questioned[11] and should then be carefully analyzed.

Ways of preventing conflicts of authorship between students and professors

Prevention is the most expeditious way of avoiding harmful disputes within research teams and, specifically, when within the team students are involved. The first suggestion is the designation of authors, their order, and – thus - their responsibilities at the beginning of the drafting of the manuscript.[2] To disregard, Karani *et al.*,[3] indicated that in 40% of the cases the moment in which the criteria of the authorship of an article was clarified for students was during the development of said article and in 23% of the cases after the article was drafted. In that same study, the order of the authors was decided only in 27% of the cases prior to starting the manuscript; of the total number of students who did not agree with the order of the authors, 61% based their discrepancy in that said authorship did not represent the true contribution to the manuscript. It is important to reflect upon the relevance of clarifying the assignment of authorship and, hence, the order of the authors and the beginning of a manuscript, given that this allows making explicit the expectations on the work of each of the authors,[15] as well as distributing the responsibilities this implies.

Another way of preventing conflicts is by discussing and reflecting with the academicians about the ethical responsibilities they have when working with students in publications.[16] It is important to clarify the requisites that must be fulfilled to be an author of an article, and that no motive exists to exclude students from those attributions in case of having them. Also, the relevance on

the student's formation of the modelling by the professor is, likewise, an ethical responsibility of all academicians. A third way is by educating students with respect to the criteria of authorship. A study conducted by Karani *et al.,*[3] established that only 66% of the students had received some type of training in this subject matter, and in an Australian study none of the participants had received formal education in that regard.[5] As per the way of teaching them, this should be done through online or written modules, reflexive discusions,[17] or through direct conversations with the mentor in charge.[3] This last aspect should be an imperative for the professor.[11] It is essential for those wishing to be considered authors of scientific work to know the existence of the norms to that respect.[17]

A fourth recommendation suggests for universities and their respective faculties to develop guidelines or committees[9] that explicitly establish the criteria of authorship in the case of research carried out with,[12] as well as the functions of professors as Master's or PhD thesis director-guide, and – ideally – establish the need to sign a commitment of authorship. This guideline, according to Gross *et al.,*[12] should also include aspects that guide not only the criteria of authorship, but also the procedures to solve conflicts, explaining the guiding role of the mentor in this area.

Finally, but not a less important form of prevention, is external control[7] through the work of editors in scientific journals.[4] Editors have the obligation of ensuring respect for the legality and legitimacy of written products.[7,17] Given that scientific literature is analyzed before publication, it is where the editor's function gains importance as guarantor of both aspects, which include the criteria of authorship. Gaberson[11] suggests that journals should clearly explain their expectations related to the work among academic staff and students.

Conclusion

There are many potential conflicts where professors and students are confronted during the mutual work of publishing an article; however, it is assumed that in a higher percentage of cases there is no intention of carrying out unethical practices in this area. It is important to reflect on this respect and, particularly, assign the true importance and ethical scope these conflicts have: if an author accepts been involved in a wrong assignation of authorship, whether personal or that of others, is it not a motive to raise doubt regarding the veracity of the results being published? [18] The ethical integrity must be evaluated in its whole dimension. In this respect, it must be indicated that a correct assignment of the authors in a manuscript becomes a rightful action, given that it permits giving credit to whom it corresponds, as well as reflecting respect toward the authors including the students.

The call is, on the one hand, to value the wealth that the professor-student relationship entails with respect to the learning both can reach and, specifically, to the experience of teaching, and on the other hand, to abide by the ethical norms involved in the assignation of authorship. Regrettably, not all academicians have received an appropriate model concerning this practice, which is why often the conflict or error in assigning authorship may be given by tradition,[12] which is not necessarily linked to a correct practice. In light of this situation, broad dissemination should be made of internationally recognized authorship criteria to academicians and students and, secondly, look after the correct application of said criteria in the practice. "Students and academicians have much to gain and run great risk when they are involved in the co-authorship of a publication; however, careful attention to ethical aspects will allow preventing inappropriate authorships".[11]

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