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DISTRIBUTION OF AUTHORSHIP IN A SCIENTIFIC WORK

Distribuição da autoria em trabalhos científicos

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ABSTRACT - ***Introduction*** – To publish became almost compulsory in Medicine. There is no doubt about the importance of publishing research, but the ordering of its authors is not easy. The lack of internationally accepted criteria led to the establishment of several groups or conventions particularized medical and scientific sectors. ***Objetive*** - To present numerical method to establish rule of value to people who carried out the research, and whether or not incorporated as authors. ***Method*** - The proposed score is based on the needs of each step when conducting a scientific work. They were divided into topics in which the main ones were: 1) scientific criteria for authorship; 2) create the idea that originated the work and develop hypotheses; 3) structure the method of work; 4) guiding the work; 5) write the manuscript; 6) coordinate the group that carried out the work; 7) reviewing the literature; 8) suggestions incorporated into the work; 9) to solve fundamental problems of labor; 10) to collect data; 11) presentation at scientific meetings; 12) lead the job and raise funds; 13) providing patients or material; 14) to do the routine needs; 15) specific fee to participate; 16) criteria for ranking the authors; 17) honorary author; 18) usurpation of the main authorship, 19) acknowledgments . ***Conclusions*** - It is important to emphasize that, to prevent major conflicts, the group that is willing to conduct a scientific work should establish at the outset, as objectively as possible, the criteria to be adopted for distribution of authorship. The subjective criteria here proposed avoid interference and prevent conflicts of interest.

HEADINGS - Research. Authorship. Authorship and co-authorship in scientific publications

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RESUMO – ***Introdução*** - Publicar tornou-se quase obrigatório em Medicina. Não há dúvida quanto à importância de publicar a pesquisa, porém a ordenação de seus autores não é tarefa fácil. A falta de critérios internacionalmente aceitos levou ao estabelecimento de diversas convenções particularizadas a grupos ou setores médicos e científicos. ***Objetivo*** – Apresentar método numérico para estabelecer regra de valor para as pessoas que realizaram a pesquisa, e serem ou não incorporadas como autores. ***Método*** – A proposta baseia-se em pontuar as necessidades de cada etapa ao se realizar um trabalho científico. Elas foram divididas em tópicos, nos quais os principais foram: 1) critérios relativos à autoria científica; 2) criar a ideia que originou o trabalho e elaborar hipóteses; 3) estruturar o método de trabalho; 4) orientar o trabalho; 5) escrever o manuscrito; 6) coordenar o grupo que realizou o trabalho; 7) rever a literatura; 8) apresentar sugestões incorporadas ao trabalho; 9) resolver problemas fundamentais do trabalho; 10) coletar dados; 11) apresentação do trabalho em eventos científicos; 12) chefiar o local do trabalho e conseguir verbas; 13) fornecer pacientes ou material; 14) trabalhar na rotina da função; 15) participar mediante pagamento específico; 16) critérios para ordenar os autores; 17) autor honorário; 18) usurpar a autoria principal; 19) agradecimentos. ***Conclusões*** - É importante reforçar que, para prevenir conflitos maiores, o grupo que se dispõe a realizar um trabalho científico deve estabelecer no início, da forma mais objetiva possível, os critérios que serão adotados para distribuição da autoria. Esses critérios evitam interferências subjetivas e previnem conflitos de interesse.

DESCRITORES - Pesquisa. Autoria. Autoria e co-autoria na publicação científica.

INTRODUCTION

Publish became almost mandatory in Medicine. The phrase "publish or perish" is no longer just a pun, to express the reality. Social contribution is one of the factors that influence the credibility and importance of the professional. It must be point out also that the researcher is judged by the number of published papers, their quality and vehicle used in its disclosure.

There is no doubt about the importance of publishing the researches, but the ordering of the authors is not easy. The international lack of accepted criteria led to the establishment, by several groups or conventions, particularized rules. As an example, the first author may be the one that gave the idea, the hardest working, the supervisor of the investigation, the coordinator of the research group or the department responsible or by the institution where the research was developed. The last author can be also understood as one who had the idea, guided the trial, was the responsible for the institution where the research was conducted or who funded the study. It should also highlighted the tendency of some journals to include in their references only the first three authors, leaving the others in anonymity, regardless of its value in conducting the paper.

METHOD

Criteria for scientific authorship

In order to suggest scientific authorship, several topics and scores are summarized in Table 1. The work done by each team member will be discussed with a view to graduate its participation and, therefore, inclusion in the article as author or only acknowledgements.

The main condition for being an author is to have intellectual participation in the design, conduction, analysis and writing of the paper. Creativity deserves scientific authoring.

Creating the idea that originated the study and develop hypotheses

All scientific paper is from an idea and attempt to solve a problem. In various cultures and religious books quoted a sentence that is contemporaneously Claude Levi-Strauss[1] said: "Wise is the man who provides the real answers; is the one that makes the real questions." If the question is well formulated, it shows the way to the answer. This first step is the basic structure; without, it will never exist.

There are some good ideas that come up from people not connected with medical field and brings applicability. Informal conversations may give rise to issues that can start good scientific research. If the owner of the idea has no interest or expertise to develop hypotheses and structure a research, he can give it to a group capable to develop.

Structuring the method

The second stage, as important as the idea, is its structure. Preferably, the author of the idea should be able to develop it; but, if not, he can seek someone to outline the research. These first two topics, due to its importance, deserve the highest scores.

Guidance of a research

The orientation of the research should not be understood only as a relationship between master and disciple. All researchers need at some stage of their work to be helped by someone more experienced in the matter, especially when the study is in a scientific field in which the researcher is not used to. In this case, it is advisable to refer to an expert on the subject. The value of guides cannot be at the same level as those who had the idea or outlined the study. However, as supervisor, he must participate in all research and be prominent among the authors.

Writing the manuscript

It is essential that all scientific work, once completed, be published. It makes no sense to conduct a study, regardless of its value, and not divulge it. Every article in some way contributes to scientific progress and may help other researchers working in the same area of knowledge. Currently, there is a growing trend of publishing in English to achieve international dissemination. So who write the article and, especially, the one that put it into English deserves higher score, and included among the highlighted authors.

Coordinating the group that carried out the study

The role of coordination is very important because it is the role of the leader to unite team members and put them in the tasks they are best suited. The integration of researchers also depends on coordinator. It is assumed that he is experienced and able to enrich their knowledge. Therefore, although not essential to the job in question, he does justice to the score.

To review the literature

The literature review is part of research, the benefits it can bring to the project design and to compare the results with those previously found by other authors. The study can be conducted without this step and achieve a successful outcome, but runs the risk of committing improprieties that might compromise him and to render it invalid for lack of essential features described above.

Make suggestions incorporated into the work

At all stages of the research opportunities arise for suggestions for the improvements or to facilitate its conduct. However, some proposals put at risk the initial design, by the profound changes made to it. Therefore, any proposed amendment should be considered carefully for its impact not descaracterizarem or invalidate the research results. If the suggestion greatly appreciate the work, the author deserves to be considered for authorship, provided it reaches the required score, through other activities focused on the research question.

Solve fundamental problems of labor

Are not uncommon during an investigation, impasses that jeopardize their development. A difference must be the resolution of a problem arising from the original design of new proposals made to a work that was being conducted without major impediments. The solution of the obstacles is essential, under penalty of losing the job. Whoever is able to solve a larger problem deserves an invitation to join the team and eventually authored the study.

Collect data

Data collection is often a tedious and time consuming work, but rarely involves some sort of intellectual contribution. Thus, it does not necessarily require specific training in the area of knowledge in which research is embedded and, even considering the importance of effort and delay in collecting data, the value of who performed this work is lower. Such a situation may conflict with some employees who have only contributed to the collection of data, judge the right to be the principal authors of the study. In fact, it should be stressed that, in law, only those who participated intellectually deserves authorship. The aid can not receive intellectual appreciation. To avoid unpleasant disputes, such information must be clarified before starting the task. Of course, if the person responsible for collecting data on other tasks highlighted in the research, may even become the main author, the sum of activities.

Presentation of work in scientific

Many studies, before being published in a journal, such as communications are presented at scientific meetings. This procedure is advisable, since the plenary debate with other professionals is accompanied by helpful suggestions to enrich the research. Further investigations on the same line can also arise after such discussions.

Anyone involved in the work is able to make good show and deserves credit consistent with this task. However, by submitting a paper for presentation at an event médicocientífico, we should observe certain standards for its scientific committee. Most of the time, respects the order of authorship determined by the research team, stressing the presenter's name. However, there are cases where the rules define the event as the first author who will present, changing the order of the authors only for this particular situation. This fact does not constitute disrespect the other team members, provided that everyone agrees with this change transient. Authoring in the annals of Congress is of little value, because work has not previously been judged as to its merits.

The Head of the workplace and raise funds

Being a boss and still participate in the work is worthy of being valued. The merit lies in the unifying power and encouraging their presence is working for the other team members. The suit he also fits the infrastructure needs of teams and obtain funding. However, their contribution must also be intellectual, because otherwise, your work becomes merely a technical function.

Provide patients or material

In medicine, many studies are conducted with patients. It is not necessary that the physician evaluate only their own sick, he may also investigate the medical records of patients registered in a service hospital or seek permission from colleagues to conduct the work in their patients. If patients or medical records are studied, following the ethical principles, standardized in several codes, there is no greater obstacle in the relationship between researcher and patient and doctor. When only one or a few doctors provide their patients for the study, each of these professionals have the right to appreciation recorded in the publication. On the other hand, if you studied any conduct workup or treatment specifically created or adopted by a particular professional, he starts to play the role of who created the idea used in this work and will be valued with the highest score.

Working in the routine function

Many investigations depend on the collaboration of professionals who, while acting in their duties, may assist in the search. Between them stand out doctors, nurses, psychologists, physiotherapists, social workers, laboratory technicians, secretaries, librarians and so on. Each may have contributed to the study, but their assistance is limited to its performance in routine work eventually directed to a specific request and transient. Most often, they are not involved with the research and did not even know it. Therefore, only by this function, there is no merit to the author.

Participate by paying particular

Every scientific activity requires a higher ideal and is not consistent with the monetary remuneration specific to it. It is clear that researchers have obligations as individuals, families and social mediated by money and need to be paid adequately for their survival with dignity, as well as their dependents, within the standard conditions for their social and intellectual. However, the funds received in the form of salary, honorarium, or purse, it must be for a specific job, but by scientific and professional activities. Under this assumption, it would be strange any team member to request payment for help in the search. If the work is important for the participation of a particular professional and they request payment for his help, the group should bear that cost. However, participation in the work, under pay, belies the granting of authorship.

Criteria for ordering the authors

There are several rules to establish the order of the authors of a particular job. Many research groups have their own rules, in which there is perfect harmony. It is unwise to change this balance, especially after starting work, otherwise create conflicts that endanger the very team integration. It is best to clarify and agree on the main objectives to be followed for authorship before starting work. Any imposition is deplorable, especially if it comes from a superior power over others.

The criterion proposed here, each team member receives the points corresponding to the items that have participated. There is no limit to the number of researchers in each stage of the work.Each participant will be granted the sum of the steps that have contributed. If in doubt, it should be discussed in groups, to reach an agreement. In a tie score, we consider the following items in Table 1. Whoever has achieved in item points will be of more value ahead of the others. The authors are placed in descending order of score until the minimum value of seven. Those who get less than seven may receive thanks, but will not be included in the authorship of scientific articles.

TABLE 1 - Score for authorship, according to participation in the published paper

Participation	Points
Creatiation of the idea that originated the paper and developed hypotheses	6
Structuring the method	6
Conducting or coordinating the study	5
Writing the manuscript	5
Coordination of the group that carried out the study	4
Review of the literature	4
Important suggestions incorporated into the study	4
Fundamental problems solutions	4
Creation of devices/equipments	3
Data collection	3
Statistical analyzes	3
Orientation in the manuscript writing	3
Preparation for scientific event	3
Presentation in the scientific event	2
Head of the place where the study was done	2
Provision of patients or material for the study	2
Raise funds for the completion of the study	2
Minor suggestions incorporated into the study	1
Routine function without intellectual contribution	1
Payed participation	- 5

Honorary Author

Following completion of the work, the researchers may decide to grant, incorrectly, written to a person outside the research. The copyright fee is the most common inappropriate authorship. Among the circumstances that lead to such behavior are:

- honor someone important in their personal, professional or scientific one or more team members;
- honor someone who somehow connected to the work, even without direct involvement therein, for example, author of the particular technique;
- include a name among the authors of scientific reputation, social or attached to the journal in which to publish the work, with a view to easier access to the publication;
- repay the kindness done previously by a particular researcher in relation to the team that conducted the study, for example, were given undue authoring team members, unless they have participated in other research;
- allow the inclusion of a professional colleague with difficulty, due to its low scientific production.

The author is an honorary guest and his name can only appear in the authorship of the work after their explicit approval, preferably in writing, because once included, the author will also be responsible for the content of the work. Therefore, it should only accept this "honor" after reviewing the manuscript and very sure of the truth of any information contained therein.

Usurping the principal author

While some research has the potential to have a greater impact in the scientific community or society, there is the tendency of its leaders want to take ownership of this investigation. In order that the investigations are usually the result of the contribution of many researchers, it is natural to consider each team member's share as the most important. The impasse could jeopardize the publication itself and could jeopardize the relationship within the research group.

Another situation is more common and less elegant, occurs when the employee knows that their contribution was lower, but considering the importance of the work overlaps with other team members, taking advantage of financial power, political science or even without take into account ethical standards. The dimension of this fact is identified in everyday life, not only between researchers but throughout society. Unfortunately, it is difficult to avoid or correct this shameful misuse.

Thanks

The topic of gratitude is the most elegant of the article and shows the good character of the authors, who were able to express your gratitude to those who helped. In some situations, the appreciation is required, as in the case of sources that sponsored the work and the place where the research was conducted, if it has not unfolded in the work environment of their own authors. In this condition, the location name is already included in the presentation of the authors. If the research is conducted with patients or medical records of institutions outside the home of the authors, it is compulsory to mention those places in this topic.

Most of the work brings thanks adequate, but some authors exaggerate with excessive number of entries. This attitude, as well as being improper,

belittles those who truly deserved the recognition.

In the case of a thesis or monograph, is unusual and well advised to put in the opening pages long list of thanks. At that time, it is pertinent to extend the list of names to whom he gave up minor contribution, however, necessarily, it must be specific to the job in question, otherwise you can get on the topic of dedications. However, by transforming the thesis in a magazine article, this list is restricted to essential employees.

There is a principle to guide the authors for names to be included in this topic. Perhaps it can be used to Table 1, to quantify the merits and give thanks to those who have obtained three to six points.

CONCLUSIONS

It is observed by this Article, the complexity of values that revolves around the criteria for publishing a scientific paper. This is a very delicate matter, requiring careful and very seriously, because it involves the name of a researcher, and behind him, all the individual principles such as honor, morality, credibility, respect, interests, standards of conduct, ideals and so forth. It is important to emphasize that, to prevent major conflicts, the group that is willing to conduct a scientific study should establish early on, as objectively as possible, the criteria to be adopted for distribution of authorship. The topics covered reflect the views of the author, based on scientific literature and personal experience. These subjective criteria avoid interference and prevent conflicts of interest. However, it is the reader to meditate on the following figures and the behavior that seems most correct and honest.

REFERENCE

1 Discours prononcé dans la séance publique le jeudi 27 juin 1974 - Paris Palais de L'institut http://www.academie-francaise.fr/immortels/discours_reponses/caillois.html