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EDITORIAL

Editorial bias in scientific publications

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Abstract

Introduction: Many authors believe that there are biases in scientific publications. Editorial biases include publication bias; which refers to those situations where the results influence the editor's decision, and editorial bias refers to those situations where factors related with authors or their environment influence the decision.

Development: This paper includes an analysis of the situation of editorial biases. One bias is where mainly articles with positive results are accepted, as opposed to those with negative results. Another is latent bias, where positive results are published before those with negative results. In order to examine editorial bias, this paper analyses the influence of where the article originated; the country or continent, academic centre of origin, belonging to cooperative groups, and the maternal language of the authors. The article analyses biases in the editorial process in the publication of funded clinical trials.

Conclusions: Editorial biases exist. Authors, when submitting their manuscript, should analyse different journals and decide where their article will receive adequate treatment.

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PALABRAS CLAVE

Publicaciones médicas;
Editores;
Sesgos de publicación;
Idioma

Sesgos en la edición de las publicaciones científicas

Resumen

Introducción: La existencia de sesgos en la edición científica está en la literatura y es una percepción de muchos autores. Se entiende por sesgos de edición, el sesgo de publicación, que se refiere a aquellas situaciones en las que los resultados influyen en la decisión de la aceptación, y el sesgo editorial, que se refiere a aquellas situaciones que influyen en la decisión de la aceptación de un manuscrito y que están relacionadas con los autores, bien por su origen bien por sus características o por su entorno.

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Desarrollo: Se realiza un análisis de la situación de los sesgos editoriales, como los que se desprenden de aceptar en mayor grado artículos con resultados positivos frente a los negativos por el hecho de serlo, o el grado de significación estadística de los mismos, así como el denominado sesgo de la latencia de la publicación, cuando los artículos con resultados positivos se publican antes que aquellos con resultados negativos. Dentro del sesgo editorial, se analiza la influencia del país o el continente de donde procede el artículo, el centro académico de procedencia, haber publicado previamente en la revista, la pertenencia a grandes grupos cooperativos o el idioma materno de los autores, y su influencia en la aceptación. Se analiza específicamente los sesgos producidos en la trayectoria editorial en la publicación de ensayos clínicos financiados.

Conclusiones: La existencia de sesgos en la edición es innegable, tanto de la publicación como editoriales, y desde un punto de vista ideológico sería preferible que no existieran. El autor, cuando remite su manuscrito, debe analizar si el mismo va a tener un trato de equidad o no, y actuar en consecuencia.

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Many authors hold a conviction regarding the acceptability of their articles by indexed journals as being based on parameters that have nothing to do with quality or innovation. The potential existence of bias in scientific publishing is present in the literature,^{1,2} despite the fact that this would appear not to be the case in some articles in major, highly relevant journals.^{3,4} However, the idea that a journal should carry out a self-analysis to see whether they are biased in their decisions to accept a work is a biased analysis from the outset, especially if we bear in mind the position of the editors, who are very concerned with issues regarding editorial independence⁵ or inappropriate behaviour by authors^{6,7} and not so worried about a critical evaluation of the decisions they make.⁸ Although on many occasions the decision not to accept a work is attributed to the consequences of the external review,⁹ there are undoubtedly other factors related with publishing itself and which we will discuss in this article from the position of the current management team of *Neurología* but independently of the journal's editorial policy, which, although conditioning acceptability, cannot be considered to be a bias as such.¹⁰⁻¹²

Types of bias in scientific publishing

Although there is no clear definition of publishing bias in the literature, several types can be identified and multiple terms can be found for them. Publication bias refers to those situations in which the results have a bearing on the decision as to whether or not to accept a work.^{13,14} Accepting more articles with positive results in comparison with those with negative results¹⁵⁻¹⁷ on the sole basis of being either positive or negative, or the degree of statistical significance of the works,¹⁸ represents an anomaly in the decision. Within this bias there is the so-called latency bias of publication, whereby articles with positive results are published before the ones yielding negative results. There is no doubt that the speed with which something is published affects not only citation but dissemination itself.¹⁹ In

connection with publication bias, some authors have reported dissemination bias, which means that the impact of a given result confers greater knowledge and dissemination of the research.²⁰ Although it is not a publication bias in the strictest sense, it obviously has aspects in common, because positive results are better disseminated than negative ones.²¹

Editorial bias refers to those situations impacting the decision to accept a manuscript and having to do with the authors, either due to their origin or characteristics, or due to their setting. The country or continent²² the article comes from,²³⁻²⁹ the academic institution producing it,³⁰ a prior history of work published in the journal, participation in large corporate groups³¹ or the authors' mother tongue influences the issue of acceptance.³² The use of open evaluation models fosters these types of bias, particularly as regards the place of origin and belonging to prestigious academic institutions.³³ There is ample literature revealing how corporate authors have an easier time publishing their articles than isolated authors. Studies sponsored by commercial enterprises appear to have a higher rate of publication^{34,35} in comparison with non-sponsored ones.^{36,37} Several reasons have accounted for editorial bias, such as corporatism of certain groups or countries, the language or make-up of the editorial boards, as they encourage bias,³⁸⁻⁴¹ since most of them belong to very few countries.

Although no one doubts that these two types of bias pose an important scientific problem,^{42,43} in that they entail a flawed analysis of the literature and, consequently, a flawed analysis of the evidence,^{44,45} it is not an easy issue to address and has undeniable consequences on an important part of the pathology, given that less is published about illnesses affecting third world countries.⁴⁶

Language and publication bias

Language plays a restrictive role in scientific production, insofar as production itself is concerned, as well as in the areas of publication and dissemination. Journals not

published in English tend to have a lower impact factor, due to the fact that they are valued less, even in those countries where the language is spoken, in itself a contradiction. Research coming out of countries that do not have English as their mother tongue has less impact.⁴⁷⁻⁵¹ However, it is not merely a matter of the visibility of the language, because, although it is certainly not easy for journals not published in English to capture citations in Anglo-Saxon publications,⁵² it is also difficult to gain access to these citations when adopting the English language for a Spanish⁵³⁻⁵⁵ or Latin American⁵⁶ journal, for instance, since Anglo-Saxon authors and readers do not read them and, hence, do not cite them either. Thus, the reason why journals in Spanish are less able to achieve a high impact is probably not due to the language *per se*, but to the fact that they are not included in authorship networks.

Because authors' mother tongue is a form of editorial bias, it is harder for articles in their own language to be included in citation networks. This bias is complemented by other difficulties. Thus, databases favour publications in English,⁵⁷ not only because of their high number, but also due to the ease with which they can be accessed. There are examples of Anglo-Saxon publications having been indexed prior to the first issue even coming off the press; this is unthinkable for a journal published in another language. But a very important aspect is the non-inclusion of articles not published in English in systematic reviews, despite being indexed. Language is a bias in many meta-analyses.⁵⁸⁻⁶¹ A recent article appearing in the *Cochrane Database of Systematic Reviews* has shown that only 52% of the meta-analyses published in the literature include indexed articles not published in English. Although this article points out that the weight of such articles is scant in terms of the entire meta-analysis, it is striking that their inclusion or exclusion has a bearing on the degree of benefit obtained and, hence, it points out that this may be a reason for the result. In light of this, it would appear recommendable for articles in the relevant languages to be included in the meta-analyses; at any rate, their exclusion is an editorial bias, since it is not such a small number, given that it accounts for 22.2% in the field of Neurology but 35% in Psychiatry.⁶²⁻⁶⁴

Publishing bias and clinical trials

Although publishing bias affects all fields of science, the greatest debate has taken place regarding clinical trials,⁶⁵ especially those with industry support or potential repercussions on the pharmaceutical market.⁶⁶ This debate undoubtedly has certain ideological restraints, more than purely editorial ones, but it would appear that trials sponsored by the pharmaceutical industry are published more easily or with a shorter latency period than other research. Without a doubt, the publication of these trials takes on certain special characteristics.⁶⁷ First of all, there is a greater likelihood of "ghost writing", a term describing professionals who have been involved in developing the manuscript, but who do not sign it.⁶⁸⁻⁷⁶ Although it has been deemed to be an authorship anomaly, it is also true that, using the strict authorship criteria set forth by the Vancouver

Group, these authors should not be included in the signatories, given that they do not participate in the entire process of drafting the article,^{77,78} with the result that this criticism is not quite so true. The second criticism refers to the fact that, in this type of trial, the publishers accept sequels or partial articles, in what has come to be known as salami publication,⁷⁹ i.e. articles with a common methodology that leads to further publications or even redundant articles, without sufficient differences to justify this.⁸⁰⁻⁸³ Secondly, clinical trials generally have a visible review process, since, even in blinded studies, experts have prior knowledge about the existence of the study and its lead investigators.⁸⁴ Unblinded external review has specific connotations that distinguish it from blinded review.^{85,86} Because of this, there is great competition among journals to publish these trials, which undoubtedly favours the bias.

The question, however, is whether, thanks to publishing bias, relatively irrelevant favourable results appear in the literature as being more transcendental than they truly are⁸⁷⁻⁹⁰ or whether the impact of adverse events is reduced⁹¹ thanks to editorial bias. This discussion is more academic than real, because it presupposes that readers and researchers are incapable of discriminating data from publications and that, even when presented with a greater volume of information, they do not give the data fair consideration. The volume of correspondence that follows publication of a clinical trial probably refutes this position. Hence, it is a matter of debate in which the editorial lobbies lose sight of the fact that the readers of a medical publication have enough critical elements to be able to put the results in their proper place and that the scientific debate goes beyond the publications themselves. Co-operative, industry-sponsored clinical trials are not comparable to other studies as a result of their complexity and, therefore, there are both positive and negative connotations, and comparison is simply not possible.

Conclusions

The existence of bias in publishing, both publication and editorial bias, is undeniable and from an ideological standpoint, it would be desirable for it not to exist, but the issues revolve around whether or not bias is relevant, whether it is avoidable, and whether it constrains changes in scientific opinion. The management team of *Neurología* advocates in favour of fairness and must therefore seek to decrease bias as far as possible. Editorial bias, such as bias with respect to the mother tongue or country of origin of the manuscript must be avoided, but the publications that talk the most about editorial bias are those in which least is done to avoid it. Authors, when submitting manuscripts, must analyze whether or not it will receive fair treatment and act in consequence.

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