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Research and Discussion Note

Peer review process in medical research publications: Language and content comments

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Abstract

Every article sent by an author to a reputed scientific journal undergoes a rigorous editorial evaluation. The editor has the final responsibility of accepting or rejecting manuscripts and thus can confer authority and validity on the author's research and help to disseminate new knowledge. In this task, editors make use of a panel of expert peer reviewers in the field who examine the manuscript and make recommendations. Some aspects of the peer review process have been investigated by medical scientists and by linguists but to the best of our knowledge, there have been no studies conducted on peer reviewer comments of medical articles written in English by Italian researchers.

The present study aimed to establish the most frequent types of comments made by peer reviewers to identify the most frequent linguistic problems that Italian researchers encounter in this process. A collection of clinical research manuscripts submitted by Italian medical researchers to reputable English language journals were analysed together with the comments by editors and reviewers.

The most frequent comments and criticisms were mainly in the area of scientific and methodological content, followed by lexical and grammatical errors, clarity and verbosity or repetition. An awareness of the features which might affect the acceptance or rejection of manuscripts may help novice writers and furnish training materials to aid researchers in writing publications in English.

1. Introduction

There are roughly 1 million new scientific publications each year, according to the numbers of abstracts published in the scientific abstracting database of the US National Library of Medicine in Bethesda, but because many manuscripts are rejected, editors of scientific journals play a significant role as gatekeepers in the publication quality and trends in scientific research. The editor has the final responsibility of accepting or rejecting manuscripts and can confer authority and validity on the author's research and help to disseminate new knowledge. In this task, editors make use of a panel of expert reviewers in the field called peer reviewers, who examine the manuscript and can recommend rejection, acceptance of the article in the version

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submitted or can send it back to the author enclosing their comments/criticisms, often recommending changes to be made in the text. Each manuscript is usually reviewed by two or three reviewers, who may at times express conflicting opinions. Authors often accept the reviewers' suggestions which may be useful in improving the text.

In the highly competitive arena of academic publications, authors are particularly concerned about the international prestige of the journals in which they publish, in order to ensure high visibility and reader audience. The visibility of scientific journals is given by an index called the Impact Factor (IF), calculated using reader access as well as citation frequencies. It is well known that the prestige journals in medicine are published in English and therefore, it is logical that researchers who are non-native speakers of English (NNSE) might feel disadvantaged and marginalized in such competition because they are often unaware of the linguistic conventions and strategies commonly used in English language journals (Belcher, 2007; Canagarajah, 1996; Gupta, Kaur, Sharma, Shah, & Choudhury, 2006; Loonen, Hage, & Kon, 2005; Myers, 1990; Swales, 1990, 1996 and more recently Giannone, 2008).

The fairness of the review process in science manuscripts has been addressed by Berkenkotter and Huckin (1999, p. 62) and they suggest that "although peer review is not infallible, it remains the primary means through which authority and authenticity are conferred upon scientific and scholarly papers by journal editors and the expert judges whom they have consulted". They describe peer review comments in terms of speech act theory as an argumentative discussion of author and reviewer. Bias by peer reviewers may be introduced by way of a negative authorial voice, that is, opinion constructed by the reviewer about the author (Matsuda & Tardy, 2007), but though asymmetric in discourse terms, peer review does offer guarantees of fairness like blinding, such that the reviewer does not know the name or status of the author and can thus objectively judge the quality of the publication, authorship and conflict of interest (Callaham, 2002). Beyer, Chanove, and Fox (1995) studied peer review comments of Management manuscripts and advocated a coaching style of reviewer comments to improve publication outcomes.

Peer review reports have long been considered an occluded genre (Gosden, 2001; Swales, 1996) and this has made it difficult to study their effect on publication outcomes. In order to improve publication rates, medical editors have published a content-based checklist of study design items under the name of the CONSORT[1] Statement, (Begg et al., 1996). In a conference dedicated to Medical Journals Editing (2002) and reported in a special issue of the *Journal of the American Medical Association* (*JAMA*), particular attention was paid to creating checklists concerning the soundness of the scientific methodology of research manuscripts (Day, Schriger, Todd, & Wears, 2002; Schriger, Cooper, Wears, & Waeckerle, 2002) but these checklists were not data-driven or pertinent to any pool of manuscripts but rather derived from a generalized reviewer opinion (Schriger et al., 2002) or from a meta-analytic overview (Jefferson, Alderson, Wager, & Davidoff, 2002) and none of the checklists was concerned with the special linguistic problems NNS scientists faced.

In the area of Applied Linguistics for EAP (English for Academic Purposes), Gosden (1995) proposed a social-constructionist interpretation of reviewer comments in order to identify communicative strategies such as improvements in moves or "rhetorical machining" and suggested wider use of context frames such as connectors by non-native speakers of English (NNSE) who had unsuccessfully submitted research articles to international journals. He stressed the need for "cultural awareness" (p. 4) on the part of young research authors in handling the social interaction of scientific research communication. Similarly, Kourilovà (1996) analysed a corpus of peer review reports on rejected medical manuscripts of Slovak scientists to identify the pragmatic communicative functions of reviewer comments. She suggested that Slovak writers of English scientific discourse need to master pragmatic skills and socio-cultural strategies. The importance of authors being able to recognize the difference between social interactional (or interpersonal) as opposed to technical comments by peer reviewers was also noted by Gosden (2001). Gosden (2003) also examined a corpus of 40 manuscript submissions with some of their reviewer comments to identify the frequencies of comment types and the motivations behind reviews in order to help novice scientists in revising their manuscripts. In this study, Gosden noted that about two-thirds of all peer comments were interactional in nature and identified the sections of

[1] CONSORT is the acronym for "**Con**solidated **S**tandards for **R**eporting **T**rials", a 22-item methodology checklist for improving the quality of reporting publications of clinical trials in the bio-medical sciences.