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IMPROVING THE PEER REVIEW PROCESS IN DEVELOPING COUNTRIES

Medicine

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ABSTRACT

SUMMARY: The peer review process has been regarded as an essential part of accepting or rejecting a paper for publication since 1752 when the process was started by *The Royal Society of London* in the publication entitled *"Philosophical Transactions"*. In developing countries, one of the primary reasons for submitting pieces for publication is to support promotion in universities. In fact, the argument can be made that the only reason for publishing in developing countries is for faculty promotion. Despite the peer review process being standard practice for scientific journals, many of the research publications on COVID-19 were not subjected to the peer review system. In fact, numerous publications were pre-prints and papers shared by researchers online which were not peer reviewed, yet they were accepted and published by scientific journals in developing nations. When authors start to lose confidence in the peer review process of a journal, they are not likely to submit their research work to such journals and this can lead to a diminished impact and reputation of such journals. Additionally, the selection of the assessors by the Editor-in -Chief is usually from the academic space of the editor and from the colleagues of the editor that usually share the editor's view. Contrary to what some editors in the developing countries believe, medical and academic administrative positions do not necessarily result in expertise in the peer review process. An editor can easily identify a poor assessment of an article, from the vitriolic feed-back of the author to the editor about an assessor when a paper is not recommended for publication.

This paper provides evidence of and outlines the possible reasons that the peer review process is substandard in developing countries.

KEYWORDS

peer review, assessors, indexing, COVID-19, journals, impact factor

INTRODUCTION:

Historically, the closest practice to peer review process began in 1752 by *The Royal Society of London* in the publication titled, "*Philosophical Transactions*".[1,2,3,4]. Since then, the peer review process has been an essential part of accepting or rejecting articles for publication. Even though there is no doubting the fact that the peer review process prevents the publication of unfounded, inaccurate or bogus studies, [4] there are some downsides related to the process. One of the most detrimental of which is that the process may be responsible for the rejection of manuscripts that deserve publication [5].

In developing countries, the primary reason for publishing is for promotion in the university setting. Actually, it may not be far-fetched to state that the only reason for publishing in the developing countries is for promotion in the universities. This "home-grown" process whereby faculty in developing nations, primarily publishing in local journals, may well explain why African doctors in the Diaspora perform in clinical meaningful research as well as the doctors in the developed countries but do not see the same results. Rather those who remain in their countries contribute little or nothing to the advancement medicine. Instead, they tend to boast about extracting two or more papers from one article for university promotion. Journals based in the developing countries understand this and take advantage of it by charging fees not charged in other countries for submitting articles to be considered for publication. Authors are first charged a "processing fee" which is non-refundable even if the article is not published. If an article is accepted, journals will then charge a "publication fee" in order for the article to appear in their journal. The "processing fee" for one journal based in West Africa is $50.00 (fifty U.S. dollars) and the "publication fee", if the paper is accepted for publication is $140.00, (One hundred and forty U.S. dollars). They justify this levy because they regard getting a paper published as an "investment" for university promotion and not necessarily for dissemination of knowledge. A well-known adage in the academic circle is "publish or perish". [5] Other important reasons for publishing are usually considered secondary and of little importance.

Evidence suggests that the Editor-in-Chief in some cases accepts a paper for publication as a favour to a friend, even if the paper does not merit publication, and rejects a paper for publication as a form of punishment for an adversary or if the opinion expressed in the paper contradicts the opinion held by the EIC, regardless of how instructive or good the paper is. That may be the reason why scientific publications in developing countries do not result in any practical and useful medical applications. It is therefore not surprising that many academics in the developing countries lobby furiously for the position of EIC. Should these individuals want to improve the standards of these journals, this would be a positive thing, however, this has not been the case.

The purpose of this paper is to identify the factors responsible for the substandard nature of the peer review process in the developing countries.

Publishing and Dissemination of Knowledge

The most important purpose of publishing in academic and scientific journals is the dissemination of knowledge. This fact is internationally accepted but often overlooked in the developing countries. It has been said that "a borderline paper published is not a sin, but a reasonable paper rejected is a shame because the purpose of a medical journal is to convey information, not to block it."[5,6,7] Unfortunately, many editors of the local journals in the developing countries do not follow this advice. If a paper does not share the views of the EIC, in many cases, the paper is rejected without even sending it to any assessor and they just "console" the author by saying, "The paper is not suitable for our journal" forgetting that medical journals are for the purpose of sharing information, and not to block information. Journals often place the blame of rejection squarely on the shoulders of the Editorial Board but when the EIC is determining which papers are sent on to assessors, that assertion is false.

Effect of poor peer review process on journals

The COVID-19 pandemic has raised an important point concerning the peer review process. Many of the useful findings reported after research on COVID-19 were pre-prints and papers shared by researchers on the internet. These were papers not yet peer reviewed for publication in journals, but were posted on the internet. Some of these were accepted for publication and published by scientific journals [8]. It was also stated that, "…only one of (Herr) Einstein's 300 or so published papers was ever peer-reviewed, (and the review) … so disgusted him, that he never submitted (any) paper to that journal again" [8] Yet, this is the researcher "…who proposed no less than four theories new to modern physics in a series of papers…" in 1905 [8].

This experience of Einstein is not an uncommon experience among researchers especially in the developing countries. Within a period of about 40 years, five articles on different topics were sent to locally based journals in a developing country which were rejected, yet these articles were accepted and published by foreign based journals in developed countries. In fact, one of these rejected papers was made a feature article in one internationally renowned surgical journal in one of the developed countries. These foreign-based journals in developed countries have much higher impact factors and are more

internationally recognized than the locally based journals in the developing countries that rejected the articles. It can therefore be inferred that the rejections by the locally based journals were due to poor peer review process by reviewers with limited knowledge of peer review process and not the quality of the submission.

Poor peer review process is so common in developing countries where there is a great shortage of academics qualified to review many scientific papers. Many of these "academics" are actually academic Lilliputians arrogantly masquerading as academic behemoths. Some examples below here will show the reactions of some authors to the comments of those that reviewed their paper.

1. Concerning a paper on *"Traditional Medicine"* the assessor wrote, *"…how about diseases that cannot be treated in hospitals, but are treated by traditional doctors?".* The authors replied, *"…we are shocked to hear this from a medically qualified reviewer. One aim of our paper is to educate medical doctors with this mode of thinking…"*
2. In another paper *on "residency training program"* which was rejected by a local journal, but accepted by a journal with a higher Impact Factor in a developed country, and more highly recognized internationally, the authors wrote the editor, *"your assessor tore to shreds our paper with his/her asinine remarks and insulting comments instead of addressing the contents of the article…mediocrity is at play…"*
3. In another paper that was eventually published, after initial rejection titled, *"Factors determining results of examination…"*. The authors wrote back to the editor, *"…this assessment cannot be regarded as a tour de force. A good assessor should be authoritative and not authoritarian…this assessor has a limited knowledge of the basic principles of peer review process."*

A good review by an assessor will usually not attract any negative comment from the author even if the paper has not been recommended for acceptance and publication.

All these vitriolic attacks by the authors to their assessors show a great deal of mediocrity in the peer review process. Incompetent, inexperienced and unknowledgeable reviewers can significantly damage the reputation of a journal. When authors start losing confidence in a peer review process of a journal, they are not likely to submit their research work to such journals and this will probably make the Impact Factor of such journals to plummet. The best way for a journal to attract good articles and therefore improve its Impact Factor, weighted impact factor, Page Rank and Eigen factor, is to have a good and knowledgeable reviewers of articles submitted for publication. [9]

Selection of reviewers

Many editors in developing counties select assessors who exist within their academic circles. This selection process is not appropriate to adequately review a variety of submissions to journals. Best practices suggest that assessors should be selected from those individuals listed under references. One potential downside of this method is that it may be difficult to locate such people, or they might have passed on.

Many of the problems and arguments that arise from peer review process stem from the fact that there is no formal education on how to adequately, consistently and fairly complete a peer review. There is this erroneous notion in the developing countries that medical and academic administrative positions convey expertise in dealing with the process. Therefore, it is generally believed that heads of departments, deans, provosts of institutions, chief medical directors of hospitals and vice-chancellors of the universities will be "experts" in peer review. This is not necessarily so. In fact, because of the encumbrances of the administrative duties, these individuals may not be the most up to date in their fields and therefore show some defects in the assessment of a publication.

What is expected of a reviewer

Being selected as a peer reviewer for a journal should be regarded as a great honour. I do not believe that reviewers should receive financial remuneration. The time that an assessor has to complete an assigned review should not be excessive. The EIC should give a hard deadline (2 weeks) within which to complete a review. If there is no reply within the stipulated time, the EIC should withdraw the paper from the assessor and reassign the article to another reviewer. The reviewer should maintain professionalism and not be arrogant or condescending in their comments when reviewing an author's article. The reviewer should not edit the paper in any way or attempt to change the theme of the paper. The authors have submitted papers based on what they found from their studies, but if there is a contrary opinion, the reviewer can state it but should provide references or data to justify their position.

DISCUSSION:

Although a number of biomedical journals are being published in developing countries, only a fraction of them have met the criteria for indexing.[10] Therefore, many of the articles they contain are unavailable to the outside world as the search engines would be unable to pick the publications.[11] These articles are therefore regarded in developed countries as "ghost publications" [11] because they cannot be accessed from *PubMed*, *Medline, ISI Web of Science* and *Google.* Some claim that journals in the developed (technologically advanced) countries discriminate against articles from developing countries. [11] However, this claim is unsubstantiated.

In an analysis of 120 published articles by one of these authors (O.G.A.) and his group from 1977 to the year 2020, 84 articles (70%) were published by journals outside Nigeria. These are journals based in developed countries, and well-established journals in some "third world" countries. Thirty-six, 36 (30%) of these articles were published in journals based in Nigeria. The main reasons for rejection of articles from developing countries by developed countries are because of the poor standard of the research conducted, and shoddy standard of presentation. Most of the decisions made as to the acceptance or rejection of a paper in the developing countries are made by the EIC by fiat, although they attribute the rejection to the "editorial board".

Not all the criticism or anger directed to reviewers by rejected authors are justified. But it should be realized that the assessor may not know more about the research presented than the author unless there is a great obvious flaw in the methodology of the study.

Peer review does not necessarily prevent the publication of bogus articles or else, there would not have been retraction of some published papers. For example, recently in BMJ 2021;374 dol: published 07 July 2021 (BMJ 2021:n1726) *" a research paper that was promoted by anti-vaccination activists was retracted by the journal 'Vaccines' …titled The safety of Covid-19 vaccinations…by Harald Walach, Rainer clement and Wouter Aukema…"* [13]

CONCLUSION:

We agree with Kassirer and Campion [12] that "…manuscript assessment like a sophisticated diagnostic test has a certain 'sensitivity' and 'specificity'. Therefore, it must yield a certain complement of false-positive and false-negative results," However taking cognizance of the observations mentioned above may improve the peer review process especially in the developing countries.

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Abbreviations: Editor-in-Chief (EIC), Corona virus infection (COVID-19)

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