Reviewers' responses to medical research articles

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ORIGINAL ARTICLE

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Saba Sohail and Jamshed Akhtar

ABSTRACT

Objective: To document the reviewers' responses in terms of reviewers' demographic and professional characteristics, promptness of reply, and duration of reply to the request to review medical research articles for a general biomedical research journal.

Study Design: Cross-sectional, observational study.

Place and Duration of Study: Department of Publications, College of Physicians and Surgeons Pakistan (CPSP), from October to December 2015.

Methodology: Peer reviewed articles edited by a single staff editor were included. Editorials and correspondence were excluded. Manuscript category, discipline, and the total number of reviewers per manuscript were noted. Responses were divided into no response, regrets, and responded, i.e. provided with the review comments; and further sub-divided into timely response, i.e. within 21 days, or later. Total duration of response was counted in days from the date of dispatch to the date of receiving. Among those who provided a review, reviewers' characteristics were noted as designation, institute affiliation, qualification, and gender. Number and percentages of the studied variables were determined. Chi-square test of proportions was used for comparing the proportions with significance at p<0.05.

Results: Reviewers for 50 articles including 28 original articles, 15 case reports, three letters to the editor, two short communications, and two new techniques, were evaluated. A total of 598 reviewers were contacted for those 50 articles; forming an average of 11.96 reviewers contacted per manuscript. Four hundred and seventy (78.59%) did not reply at all, 18 (3.01%) regretted, and 110 (18.39%) responded (79/110=71.81% timely, and 31/110=28.18% late). Earliest reply was received in one day and the delayed reply in 87 days. Maximum number of reviewers was 24 for a single original article (internal medicine) and 22 for a case report (cardiology). Significantly, more fellows, professors and females (p=0.004, p=0.002, and p=0.017, respectively) provided timely response.

Conclusion: An overwhelming majority of the reviewers did not reply at all despite the incentives of CME credits and honorarium, adversely affecting the processing time. Majority of those who replied, were on time. Reasons for those who did not reply need to be explored.

Key Words: Reviewer, Peer review, Biomedical research, Response.

INTRODUCTION

Editorial decisions for a research manuscript need technical evaluation for quality assurance and appropriateness of the content, most important of which is the originality of the content. This evaluation checks the archival, statistical, and scientific research contents. While the archival and statistical evaluation is an in-house process carried out by the staff editors and statistician, the expert evaluation of the scientific content takes the form of an expert in the field, who is not a part of the editorial staff or board members. This is called external peer review and its broad aim is to help the editor as a consultant and provide feedback to the author for improvisation of the research communication.1

By definition, a peer "is a person who is equal in ability, standing, rank or value".2

External peer review process, to be referred subsequently as the Review, at the Journal of College of Physicians and Surgeons (JCPSP) is a double blind prepublication process.3 Every manuscript, including the editorials and the letters to editor, reporting a new finding, is subjected to an internal (in-house) and an external peer review. Reviewers at the Journal are selected from a database comprising predominantly of CPSP examiners and supervisors, those who apply for being included in the reviewers’ pool and frequent contributors to JCPCP. They must not be the editorial staff of JCPSP or the co-authors of the article under review. They must be academicians with major postgraduate qualification and research background. As a policy matter, JCPSP does not favour suggestions for reviewers by the authors.

For the articles clearing in the initial scrutiny, at least two reviews per manuscript are required — at least one from a technically developed country, before making a definite decision. Every manuscript is initially sent to four reviewers, or more if at least two reviews are not received from those who are initially contacted. The practice of reminders has been withdrawn for the past five years. In line with the paper-free policy of the parent institute, manuscripts are sent to the reviewers by e-mail only. The perks provided to the reviewers are CME credits by CPSP (accredited by the ACCME) and a token honorarium to reviewers residing in Pakistan.

It was repeatedly noted that article processing got delayed by authors and reviewers' non-to-delayed response.3
The delay in peer review was found to be a very unreliable link in the article processing chain at JCPSP. Timely reviews reduce the processing time; and it is important to identify the non-response patterns to predict as to which reviewers may respond timely.

The rationale of the study was that the characteristics of timely responding reviewers need to be identified. Response patterns need to be evaluated regarding the delay problem to seek remedy to the review problems. The objective of the study was to document the reviewers' responses in terms of certain reviewers' characteristics, reply and duration of reply to the request to review medical research articles for a general biomedical research journal.

**METHODOLOGY**

It was an observational study conducted at the Department of Publications, CPSP, from October to December 2015. All peer reviewed articles, edited by a single staff editor, were included. Editorials and letters to the editor in response to a published articles, were excluded.

Articles were grouped according to the manuscript category, i.e. original articles (OA), case reports (CR), new techniques, surveys etc. The discipline of the specialty and the total number of reviewers per manuscript were noted.

Responses were divided into no response, regrets, and responded, i.e. provided with the review comments. Responses were divided into timely response, i.e. within 21 days, or later, i.e. after 21 days. Total duration of response was counted in days from the date of dispatch to the date of receiving. Those reviewers who did not respond were not included in further analysis. Among those who provided a review, reviewers' characteristics were noted as designation, institute affiliation – public or private – qualification, and gender.

Number and percentages of the studied variables were determined as simple descriptive measures of central tendency and dispersion. Cross-tabulation was done for comparing different variables between the timely and late reviewers groups. Chi-square test was used for comparing proportions of designation, institute affiliation – public or private – qualification, and gender among the timely and late reviewers, with significance at p <0.05.

**RESULTS**

During the three months of study, a total of 50 articles including 28 original articles, 15 case reports, three letters to the editor, two short communications and two new techniques, were edited by a single manuscript editor. A total of 598 reviewers were contacted for those 50 articles forming an average of 11.96 reviewers contacted and 2.2 responded per manuscript. Four hundred and seventy (78.59%) did not reply at all, 18 (3.01%) regretted, and 110 (18.39%) responded (79/110=71.81% timely, and 31/110=28.18% late). Earliest replies were received in one day for an infectious disease letter to the editor and an ophthalmology case report. The delayed reply took 87 days for a survey from general surgery. The maximum number of reviewers were 24 for a single original article (internal medicine) and 22 for a case report (cardiology).

Qualification of the reviewers showed that 85 had fellowship; 49 (57.6%) from CPSP (41/49 = 83.6% being timely reviewers), and 36 from abroad (17/36= 47.22% reviewing timely). There were four PhDs, all reviewing timely. Two reviewers were Diplomat American Board (DAB) and both responded timely. The rest (n=19) had miscellaneous degrees including MPhil, MPH, MDS; out of whom, 16 (84%) responded early (Table I).

Academic designations and response trends are shown in Table II, significantly more reviewers of Professorial rank as responding timely. Institutional affiliation and response analysis showed that 70 (63.63%) reviewers belonged to government/public sector institutes. Out of them, 64.28% (45/70) responded within 21 days and 25/70 (35.7%) responded later, which was not statistically significant (p=0.094). Forty reviewers belonged to private institutions, out of whom 32 (80%) responded timely and 8 (20%) were late. There were 82 (74.54%) male reviewers and 28 (25.46%) female reviewers. Proporionately and significantly more female than male reviewers (n=25, 89.28% vs. n=54, 65.85%, p=0.017) provided timely response.

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Timely</th>
<th>Late response</th>
<th>Total</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship</td>
<td>57</td>
<td>28 (33%)</td>
<td>85</td>
<td>0.004</td>
</tr>
<tr>
<td>MPhil</td>
<td>15</td>
<td>00</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>PhD</td>
<td>04</td>
<td>00</td>
<td>04</td>
<td></td>
</tr>
<tr>
<td>MDS</td>
<td>00</td>
<td>03 (100%)</td>
<td>03</td>
<td></td>
</tr>
<tr>
<td>DAB</td>
<td>02</td>
<td>00</td>
<td>02</td>
<td></td>
</tr>
<tr>
<td>MHPE</td>
<td>01</td>
<td>00</td>
<td>01</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Designation (numbers)</th>
<th>Timely</th>
<th>Late response</th>
<th>Total</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor (63)</td>
<td>50 (79%)</td>
<td>13 (21%)</td>
<td>63</td>
<td>0.002</td>
</tr>
<tr>
<td>Associate Professor (36)</td>
<td>18 (50%)</td>
<td>18(50%)</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Assistant Professor (06)</td>
<td>06 (100%)</td>
<td>00</td>
<td>06</td>
<td></td>
</tr>
<tr>
<td>Consultant (05)</td>
<td>05 (100%)</td>
<td>00</td>
<td>05</td>
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</tbody>
</table>

**DISCUSSION**

As stressed earlier, an efficient and timely external peer review is a great help to a research editor. This study reiterated the impression that most reviewers do not respond at all, in the process of external peer review. This difficulty has been felt by the editors in the more developed countries, as well. In most scholarly journals, peer reviewers are usually unpaid, as this service is considered an honor; and a remuneration is not
considered a due equivalent to their professional
service. Moreover, their efforts are also not formally
acknowledged. This leads to difficulty in finding
competent and efficient reviewers submitting timely
reviews, resulting in publication delays. Nguyen et al.
suggested providing incentives to peer-reviewers, it was
among the top suggested alterations to the system along
with training graduate students in peer-review, increased
editorial persistence.\textsuperscript{6}

It has also been observed that reviewers are more likely
to respond positively when the study subject is of their
interest. Being pressed for time, is another important
factor in declining to review a research study.\textsuperscript{5} It has
been suggested that reviewing should be formally
recognised by academic institutes; and research
journals should formally recognise reviewers' work as an
academic contribution of high order of continuing
medical education (CME).\textsuperscript{5}

On an average, a single manuscript was sent to
approximately 12 reviewers and two responded for each
manuscript in this study. While obtaining response from
at least two reviewers and more in case of reviewers'
opinion being at variance, is a policy practice at JCPSP.
It has been observed by Mutz et al. that increasing the
number of reviewers of each manuscript decreases the
heterogeneity of response.\textsuperscript{7}

Contrary to the popular but undocumented belief, a vast
majority (65/110) of responders were Professors who
replied early, compared to junior ranked academicians
and private consultants. This new and hitherto unreported
finding nullifies the myth that Pakistani academicians
conduct research work only till gaining a certain
academic position. In this study, 80\% of the timely
reviewers were Professors and two of them replied as
early as within a day, which was commendable.

Overall, more reviewers were male, but proportionately
more females were earlier responders. However, gender
has not been found to affect either the review process or
a manuscript's final outcome regarding final acceptance
or otherwise.\textsuperscript{8}

Another new and previously unreported finding of this
study was that those affiliated with private set-up
responded early in greater proportion (84.61\%) compared to those at public institutes (53.84\%). This
effect of institution-affiliation related time-delay response
conforms to the prevalent expectations among the
Pakistani editors. It may, perhaps, be due to the fact that
some private medical universities in Pakistan do provide
CME credit for review activities done by their faculty.

Reviewers are extremely important for those journals
which do not have a copy editor.\textsuperscript{9} They not only improve
the scientific content but sometimes bibliography, as
well.\textsuperscript{10} Reviewers’ comments authenticate observations
and the conclusions drawn from them, and help clarify
the technical write-up ambiguities, which may not be
obvious to a non-specialty editor. It is imperative to enlist
their help for making the decision of publishing quality
research.\textsuperscript{11}

Various ways have been suggested to get more
involvement of efficient reviewers of high quality. Among
them, the most studied are the financial incentives.\textsuperscript{12-14}
This may in turn affect the publication cost and revenue
of the journal;\textsuperscript{15} and some discussions on WAME serve
list even argue that this may jeopardise the reviewers' judgment towards submitting speedy reviews without
giving a due and thorough evaluation. Since a fair,
unbiased and thorough peer review is quintessential for
breeding the clinical practice guidelines,\textsuperscript{16} it has to be
flawless and genuine, which may get compromised by
financial incentives. Awarding CME credits is another
suggestion.\textsuperscript{12} JCPSP already practises this; the parent
institute, that is College of Physicians and Surgeons
Pakistan (CPSP), is accredited to award CME points on
behalf of the ACCME (American College of Continuing
Medical Education).

Another way to get timely and good reviews is to have a
sufficiently large pool of reviewers. Selection of
reviewers for a research journal depends upon editorial
choice, may be subjective and experience-based, and
the availability of reviewers for this mostly voluntary
activity.\textsuperscript{17} JCPSP, as a policy matter, does not encourage
authors to suggest reviewers as this may well open the
avenues for publication fraud. This has been described
in an interesting detail by Cohen et al. who nipped one
such fraud in the bud.\textsuperscript{18}

The main limitations of this study are lack of details
about those who did not reply. It would have been
interesting to know the reasons as to why reviewers did
not respond – time constraints, lack of interest, any
conflict of research or any other reason.

While peer review is as old as the history of scientific
journal publication,\textsuperscript{19} it remains as controversial as it is
indispensable. The major strength of this study is that it
is a pioneer local attempt to find the reasons which delay
the review and ultimately the publication process, in
order to find the solution of the problem.

**CONCLUSION**

An overwhelming majority of the reviewers did not reply
at all despite the incentives of CME credits and
honorarium, adversely affecting the processing time.
Majority of those who replied, were on time. Reasons for
those who did not reply need to be explored.

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