

Fate of Articles Rejected by *Indian Pediatrics*

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The present study was conducted to determine the fate of manuscripts rejected by *Indian Pediatrics* (IP), and to identify the factors facilitating publication of a rejected manuscript elsewhere. Database (PubMed, IndMed) and Google searches were performed to trace the manuscripts published elsewhere any time after rejection by *Indian Pediatrics* in the year 2002. Eighteen per cent of the rejected submissions (62 out of 347) were eventually (till July 2009) published elsewhere. These manuscripts subsequently appeared in 33 different journals; *Indian Journal of Pediatrics* published the maximum numbers ($n=22$). Seventy four per cent of the rejected papers were published in journals with a impact factor lesser than *Indian Pediatrics*. Rejection before initiating peer-review, and rejection on the grounds of over-interpretation of results or poor statistical analysis diminished the chances of subsequent publication, whereas manuscripts rejected on grounds of poor originality or poor language had greater chances of being published elsewhere. Rejection of a manuscript by IP does not preclude publication, but rejected manuscripts are published more often in non-pediatric journals or journals with a lower impact factor, although the occasional exception exists.

Key words: Biomedical journals, Peer review, Publication, Rejection.

Research that is never published represents wasted effort and resources; however, studies whose results are unreliable should not be published. Peer/editorial review of the submitted manuscripts is an important tool to this effect. However, peer review has been criticized for it is regarded as subjective, often biased, open to abuse, and poor at detecting errors and fraud(1,2). Reviewers chosen to decide the suitability of a particular manuscript may view a paper differently, and it is well known that the possibility of two reviewers agreeing is only slightly better than chance(3,4). The agreement has been found to be greater for rejection than acceptance. Peer review process is comparable to diagnostic tests and false positives and false negatives are inevitable(5). Due to these problems, it is likely that a manuscript deemed unsuitable for publication by the editorial board of one journal, may be found suitable by that of another journal. *Indian Pediatrics* rejects almost 70-80% of articles submitted to it; of these about 50% are rejected after an initial in-house review and the rest are rejected after a peer review

process(6). We conducted this study to determine the fate of the manuscripts rejected by *Indian Pediatrics*, and to identify the factors facilitating the publication of a rejected manuscript elsewhere.

METHODS

All manuscripts (original articles, brief reports, case reports, reviews, images, guidelines, personal practice) submitted to *Indian Pediatrics* between 1st January, 2002, and 31st December, 2002 were enlisted and those which were declined publication were reviewed. An internet search was performed for each manuscript rejected in 2002 using a search strategy based on the title of the manuscript, key words, and the names of the authors on the original manuscript submitted to *Indian Pediatrics*. Search engines used were Google, PubMed and IndMed. Relatively non-stringent criteria were used initially to retrieve as many manuscripts as possible. Search was then refined by manual comparison of abstract, and if necessary, by comparing the full text of the article. Articles found published elsewhere were listed along with the journal.

The characteristics (Indian/foreign, indexing status with PubMed, and impact factor) of journals that published the manuscripts rejected by *Indian Pediatrics* were studied. Impact factors were obtained from the Science Citation Index, edition 2008(7). The citation of these published articles was determined using Google scholar from the time of publication till the time of internet search. The time lag between rejection by IP and publication elsewhere for all published manuscripts was calculated.

The most common reasons for rejection of a manuscript by *Indian Pediatrics* were retrieved from a previous study(6). A binary logistic regression analysis was done to determine if the reasons of rejection could predict the chances of the manuscript being published elsewhere following rejection by *Indian Pediatrics*. 'Rejection by *Indian Pediatrics* but publication elsewhere' served as our target variable and the various factors like reasons for rejection (not contributing to existing knowledge, poor originality, poor methodology, not relevant to journal, over-interpretation of results, inappropriate writing style/grammar, inaccurate/inconsistent data, poor statistical analysis, insufficient data, and unsatisfactory illustrations/tables), rejection after editorial/ peer review, type of article, subject of the paper, institutional origin (teaching vs non-teaching), regional affiliation of manuscripts of Indian origin, and nationality of the author, were used as predictor variables. Data were analyzed with SPSS statistical package, version 13.

RESULTS

Between 1 January 2002 and 31 December 2002, *Indian Pediatrics* received 687 submissions. A detailed analysis of these articles has been reported earlier(6). About 43% of manuscripts ($n=294$) were ultimately accepted for publication; 50% of the manuscripts ($n=347$) were rejected for one reason or the other, and files of 46 manuscripts (7%) were closed because of non-response by the authors despite repeated reminders, withdrawal by the authors, or ethical reasons. Reasons for rejection and factors affecting rejection have also been presented earlier(6). This article shall focus only on the fate of the 347 manuscripts denied publication by *Indian*

Pediatrics. Almost half ($n=169$) of the rejected manuscripts were case reports and images, one third ($n=101$) were research papers *viz.*, original articles and brief reports, while the rest included letters to editor ($n=49$), review articles ($n=22$), and miscellaneous articles including guidelines, book reviews, and personal practice ($n=6$). Forty two percent of these manuscripts ($n=145$) were rejected after an initial editorial board review without being subjected to external peer review process; the remaining manuscripts were rejected on the basis of reviewers' recommendations. The median time to rejection was 2 months (IQR: 1-4 months).

Rejected Manuscripts Published Elsewhere

Of the 347 rejected submissions, 62 manuscripts (18%) were published elsewhere till 31 July, 2009. The median time taken following rejection to publication elsewhere was 17.5 months (IQR: 7.25-30.5 months). Of these 62 manuscripts, there were 25 research papers, 27 case reports and images, 8 review articles and 2 miscellaneous articles (**Fig. 1**).

The rejected submissions that were eventually published appeared in 33 different journals (**Table I**). Sixteen of these journals were indexed in PubMed. Impact factors were available for only 12 of the 33 journals; 8 had an impact factor greater than IP (*Journal of Postgraduate Medicine*: 1.538, *Cell Biology International*: 1.619, *Clinical Microbiology and Infection*: 3.554, *European Journal of Pediatrics*: 1.416, *Neurosciences*: 3.661, *Pediatric Development and Pathology*: 1.156, *Vaccine*: 3.189, *Child Care and Health Development*: 1.154) and 4 had an Impact Factor less than IP (*Indian Journal of*

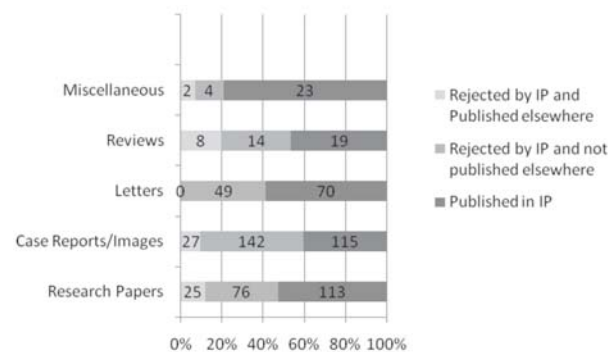


FIG. 1 Fate of manuscripts rejected by *Indian Pediatrics* in 2002.

TABLE I JOURNALS THAT PUBLISHED MANUSCRIPTS REJECTED BY *INDIAN PEDIATRICS* IN 2002

Journals from India	N	Journals from other countries	N
<i>Indexed in PubMed</i>			
Indian Heart Journal	1	*Canadian Journal of Surgery	1
Indian Med Gazette	1	*Cell Biology International	1
Indian Journal of Critical Care Med	2	*Clinical Microbiology and Infection	1
*Indian Journal of Pediatrics	22	*European Journal of Pediatrics	1
Journal of Indian Medical Association	4	*Neurosciences	1
*Journal of Postgraduate Medicine	2	*Pediatrics Development and Pathology	1
*National Medical Journal of India	1	*Pediatrics International	1
		Revista da Assoc Med Brasileira	1
		*Vaccine	1
<i>Non-indexed</i>			
Bombay Hospital Journal	1	*Child Care and Health Development	1
BMJ South East Asia Ed	1	Eastern Journal of Medicine	1
Indian Journal of Clinical Biochemistry	1	Gazi Med Journal	1
Indian Journal of Microbiology	1	Internet Journal of Pulmonary Medicine	1
Indian Journal of Nutrition and Dietetics	2	Journal of Child Health	1
International Journal of Human Genetics	1	Kuwait Medical Journal	1
Journal of Indian Association Pediatric Surgeons	1	New Medical Journal	1
Journal of Obstetrics and Gynaecology	1		
Journal of International Medical Sciences Academy	2		
Journal of Indian Rheumatology Association	1		
Orissa Journal of Pediatrics	1		

*Journals listed by Science Citation Index for calculation of Impact factor.

Pediatrics: 0.646, *National Medical Journal of India*: 0.858, *Canadian Journal of Surgery*: 0.657, *Pediatric International*: 0.900). Of the 34 papers published in journals having an Impact factor, 25 (74%) were published in journals with impact factor less than IP. Majority of the rejected submissions (n=22, 35%) were published in the *Indian Journal of Pediatrics*. Nearly 58% of papers were published in non-pediatric journals. The median citation value of the rejected papers published elsewhere was 0 (IQR: 0-3).

We found that rejection by the editorial board (without peer review) was an important factor determining the probability of a rejected manuscript getting published elsewhere. A manuscript rejected by *Indian Pediatrics* at the stage of initial editorial

review had lesser chances of being published elsewhere compared to manuscripts rejected after undergoing a peer review process ($P < 0.001$). A manuscript originating from northern India had greater chances of being published elsewhere despite rejection by *Indian Pediatrics* ($P = 0.04$, OR=2.46, 95% CI=1.043-5.813). The subject of the paper, article type, institutional origin (teaching vs non-teaching), and nationality of the authors did not affect the chances of publication elsewhere.

Manuscripts rejected on grounds of poor originality, or poor language had greater chances of being published elsewhere ($P = 0.027$, OR=2.808; $P = 0.002$, OR=4.627). Manuscripts rejected on grounds of over-interpretation of results ($P = 0.001$, OR=0.095) or poor statistical analysis ($P = 0.002$,

OR=0.146) had less chances of being accepted elsewhere for publication.

Indian Journal of Pediatrics published the maximum number of papers rejected by *Indian Pediatrics* ($n=22$). More than half of the rejected manuscripts (53%) were published in non-pediatric journals. About one fourth of the rejected papers were published in journals with impact factor greater than *Indian Pediatrics*.

DISCUSSION

We conducted a quantitative and qualitative analysis to determine the fate of manuscripts rejected by *Indian Pediatrics* for the year 2002. We chose the manuscripts of year 2002, as a 7-year period was presumed to be good enough to provide final data regarding publication of these manuscripts (to allow for author's revision and resubmission after rejection (3 months), peer review process by another journal (3 months), re-revision and lag between acceptance and publication (18 months); allowing all these for three times (in case rejection done by the 2nd and 3rd journal also).

The publication rate of rejected manuscripts (18%) was much lower than the previously reported rates ranging from 38-85% (8-14). The reasons could be the variation in authors' profile, type of manuscripts and target reader profile.

Our study had certain limitations. Individual authors were not consulted to detect the actual publication rate of rejected manuscripts; the findings were only based on internet retrieval. Some of the rejected articles may have been published in journals with a more local distribution and in other languages, which were not indexed or identified by the database and search engines used in this study.

Authors often fail to modify their manuscripts as per journal's specific format, fail to provide clarifications to the reviewer queries, and most often there are serious methodological flaws in the study which cannot be masked. All these factors can result in failure of publication of submitted work (9,10). We also do not know if authors used reviewers' comments from *IP* to revise their manuscripts to improve the chance of subsequent publication, and

whether there was a significant change in the content of finally published manuscript. A more detailed evaluation of rejected submissions will allow us to more objectively assess the role of *IP* in pediatric health care and research.

Authors must not be dejected by rejection as many of rejected manuscripts do find a place for publication elsewhere. When resubmitting their paper, the journal must be chosen according to the reason of rejection, as often the paper may be more suited to some specialty journal; and authors should modify the manuscript suitably using the reviewers comments. In case of papers related to pediatrics, *Indian Journal of Pediatrics* appears to be a good alternative to *Indian Pediatrics*, as it is the only other Indian pediatric journal indexed with Medline.

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