

## Factors Affecting Subsequent Full-text Publication of Papers Presented at the Annual Conference of the Indian Academy of Pediatrics

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**Objective:** To study the factors associated with the subsequent (over next 9 years) full-text publication of papers presented at the 44<sup>th</sup> National Conference of Indian Academy of Pediatrics (PEDICON), 2007. **Methods:** All papers presented at PEDICON 2007 were searched for subsequent full-text publication over the next 9 years in English-language journals by an internet-based search. The published papers were compared with the conference-abstracts. **Results:** 74 (16%) of the 450 abstracts presented were subsequently published; 61 (82.4%) in Medline-indexed journals. Majority (50, 67.6%) of the papers was published within the first 36 mo in journals with mean (SD) impact factor of 2.62 (1.63). The factors significantly associated with subsequent publication were papers presented as award papers ( $P<0.001$ ), those reporting on Interventional trials ( $P<0.001$ ), and those from medical colleges ( $P<0.05$ ). On comparison of the conference abstracts with the subsequently published full-papers, 55% had a change in title; authors were changed in 65%, and participants' numbers were dissimilar in 8.6%. **Conclusions:** There is a need to identify the factors responsible for this low rate of subsequent publication, and interventions to improve it both at institutional and researchers' level.

**Keywords:** Conference abstracts, Indexed journals, Research presentation.

Dissemination of scientific knowledge is commonly done through scientific papers presented in conferences. Wider recognition and dissemination can be achieved if these abstracts get published in peer-reviewed indexed journals. However, it is not well-understood what happens to abstracts submitted for presentation at meetings prior to acceptance [1], and the rigor of the peer-review. Around 30-40% of such abstracts are reported to get published as papers in peer-reviewed journals in various fields of medicine [2-4]. PEDICON is the annual National conference of Indian Academy of Pediatrics (IAP), the largest body of pediatricians in India, where numerous scientific papers are presented. Whether these scientific papers are submitted for publication, or if submitted, how many are able to go through the rigorous peer review process is unknown. Therefore, we conducted this study to analyze the factors associated with subsequent full-text publication of papers presented at the 44<sup>th</sup> PEDICON held in Mumbai in 2007.

### METHODS

All papers presented at the conference were identified and abstract information was retrieved from the official abstract book of the conference [5]. A detailed individual

internet-based literature search according to a set-protocol was conducted by one author each in 2012 and 2014, and by two authors independently in 2016, and results collated. A follow-up period of 9 years was given to ensure sufficient time for publication of full-text articles. The internet-based search used the first, second and third author names sequentially, followed by a full title search. If no published article matched, then repeat searches with different combinations of author names and keywords were conducted. The full-text articles were retrieved by sequential search on PubMed, Google Scholar and Indmed, and independent websites of the journal. If the full text article searched was comparable with the abstract in terms of the title, list of authors, and at least one outcome, the article was considered as matched.

Data collected included category of presentation (award paper, oral paper, poster presentation and 'Taken as read'), pediatric-subspecialty (adolescent pediatrics, community pediatrics, cardiology, endocrinology, growth and development, genetics, gastroenterology, neonatology, hematology, intensive care, infectious disease, nutrition, neurology, nephrology, respiratory, rheumatology, and miscellaneous) and the type of study design (intervention trials, observational descriptive studies,

observational analytical studies, case descriptions, and others, including systematic reviews, meta-analysis and diagnostic studies).

The full-text articles matching with the abstracts were compared for any change in title, number of authors (increased or decreased), change in the sequence of authors, and change in the number of participants. The papers published were analyzed for time taken for publication, institutions from where the published papers belonged (Medical College, Hospital), types of journal (indexed/non indexed) and Impact factor of the journal.

The data were entered in an Excel sheet, and analyzed with Microsoft Excel. The proportion of papers subsequently published was compared between categories of papers, different specialties, and different types of institutions using the chi-square test.  $P < 0.05$  was taken as statistically significant.

## RESULTS

A total of 450 abstracts were presented in 44th Annual Conference of IAP (PEDICON), held in Mumbai, in 2007. Out of these, 74 (16.4%) papers were subsequently published (61 (82.4% in Medline-indexed journals); 5 of these were found only as citations during the search but full-text could not be accessed. The median (range) duration from presentation to publication was 24 (12,72) months. Majority (50 (67.6%)) of the papers were published within the first 36 months in peer-reviewed indexed journals with a mean (SD) impact factor of 2.62 (1.63). Highest proportions (53.5%) of paper published were from Award paper category. The factors significantly associated with subsequent publication were presentation as an Award paper (53.5%,  $P = 0.003$ ), reporting an Interventional trials (42.8%,  $P < 0.001$ ), and those published from medical colleges (19.6%,  $P = 0.02$ ) (**Table I**).

On comparison of the conference abstracts with the subsequently published papers, only 40% had no change in authorship, or participant numbers. Of the 69 published papers for which this information was available, 38 (55%) had change in title, 45 (65%) had change in author number (increased in 27) and 42 (60%) in author sequence. Six papers had a different participants number from that mentioned in the conference-abstract.

## DISCUSSION

We describe the various factors associated with full-text publication of papers presented at an annual conference of the Indian Academy of Pediatrics, over the subsequent nine years. Only about one out of six abstracts presented at the conference was subsequently published in peer-

reviewed journals. Papers reporting on interventional studies, those from medical colleges, and those submitted as award papers had a significantly higher association of subsequent full-text publication.

The subsequent full-text publication rate of conference papers was found to be much lower than what is reported from medical conferences of various organizations from some other countries [1-4,6]. In the field of Pediatrics, a study from UK reported a publication rate of 78% for two general pediatric conferences after an interval of 3 years [4]. A recent Cochrane review also reported a publication rate of 44.5% at International meetings [2]. Such discrepancy could possibly be that researchers submit their best research-work to these conferences, and the likely stringent acceptance criteria for papers in these

**TABLE I** FACTORS RELATED TO PUBLICATIONS ( $N = 450$ )

<i>Papers presented</i>	<i>Papers published (n = 74) No. (%)</i>
<i>*Category</i>	
Award paper (n=13)	7 (53.5)
Oral paper (n=68)	10 (14.7)
Poster (n=291)	44 (15.1)
<sup>§</sup> Taken as read (n=78)	13 (16.7)
<i>‡Sub-specialty (at least 15 papers)</i>	
Cardiology (n=20)	5 (25)
Infectious disease (n=63)	12 (19)
Community pediatrics (n=44)	8 (18)
Hematology (n=33)	6 (18)
Neonatology (n=63)	10 (16)
Gastroenterology (n=25)	4 (16)
Endocrinology (n=18)	3 (16)
Neurology (n=39)	6 (15)
Genetics (n=16) Miscellaneous (n=39)	1 (6) 3 (7.5)
<i>#Institution</i>	
Medical college (n=264)	52 (19.6)
Hospitals (n=186)	22 (11.8)
<i>^Type of study</i>	
Intervention trial (n=28)	12 (42.8)
Observational: Descriptive (n=118)	05 (4.2)
Observational Analytical (n=144)	36 (25)
Case descriptions (n=153)	19 (12.4)
@Others (n=7)	02 (28.5)

<sup>§</sup>Taken as read: Papers which are neither presented as oral nor as posters, but abstract is printed in the abstract book; @Others: Diagnostic tests/Systematic review and meta-analysis; \* $P = 0.003$ , <sup>‡</sup> $P = 0.02$ , <sup>^</sup> $P < 0.001$ ; <sup>‡</sup> $P > 0.05$  for differences across all sub-specialties.

**WHAT THIS STUDY ADDS?**

- Papers presented as award papers, reporting on Interventional trials, and those published from medical colleges are more likely to be published subsequently.

conferences. The differences could also be because the maximum (34%) abstracts from the PEDICON were case-descriptions, which are the lowest level of evidence-based medicine, and have a high rejection rate in most journals [7]. There is lack of data for suitable comparison with Indian conference in Pediatrics, but on comparison with other Indian studies in different fields of medicine, the rates of publications are comparable. Dhaliwal, *et al.* [8] reported a publication rate of 16.5% over a period of seven years after an Ophthalmology conference. More recently, Singh, *et al.* [9] reported a publication rate of 13.7% over a period of five years after a National-level neonatology conference. Some of the reasons identified for low publication rates in the literature are lack of time or priority, poor study design, poor grammatical style, and language barriers [2,12,13].

Mittal, *et al.* [10] previously reported 37% publication rate for award papers presented at PEDICON over a period of 13 years, and found papers originating from medical colleges to have a higher chance of publication. Other authors also report high publication rates of 47%-83% for award papers [9, 11]. This could be attributed to high-quality research-work being submitted as award paper, high degree of motivation for publication if the paper gets an award, and the full-text article being reviewed for award papers as compared to only abstracts for non-award papers. Medical colleges have better research-facilities and institutional support, leading to better quality of research, and possibly also pressure to publish. Residents working in medical colleges also are more motivated to write scientific papers in order to start their journey of research. A Cochrane review reported in the past, that rate of publication of Randomized or controlled clinical trials is higher (63%) as compared to other study designs (49.1%) [2]. In our study, 80% of the papers got published in the first 36 months, and none after 7 years. This was found to be comparable with previous studies who reported a median duration of 19 months with a range of 12-32 months from presentation to publication [1,14,15].

One important limitation of this study is that we focused on abstracts presented at only one annual conference, thereby hindering its generalizability; although results matching a previous study from an Indian neonatal conference [9] increases confidence in our findings. The search for full-text article was done on

three popular electronic databases and no search was conducted for journals with only print editions, thus possibly missing some published articles; though the number of such articles is likely to be few. Other possible factors responsible for low publication, specifically those related to authors or institutions, were not studied; neither was individual contact made with authors for confirming submission and/or rejection.

The low rate of publications from presented papers warrants a focused peer-review of all the abstracts with communication of the reviewers' comments to the authors, so as to increase the quality of the papers and thereby the subsequent publication rates. The presenters also need to put in more efforts to submit their research for publication, after the conference.

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