Gender Gap and Indian Academy of Pediatrics: Still a Long Way to Go!

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We conducted this study to document the female participation in the administrative and academic affairs of the Indian Academy of Pediatrics (IAP). Of 45 IAP Presidents till date, 7 (15.6%) were women. Females comprised 6% (2/31), 8.8% (3/31), 5.4% (2/37), and 2.3% (1/44) of IAP executive board members in 1990, 1995, 2000, and 2005, respectively. Only once (out of 10), a woman was appointed as the Editor-in-Chief of Indian Pediatrics; of 4 Editor-in-chiefs of IJPP till date, none was a female. Of 181 heads of the department of Pediatrics at different medical colleges, 58 (32%) are women. Overall female authorship in articles published in Indian Pediatrics has increased from 23.1% (133/576) in 1990 to 43% (154/358) in 2005 (P < 0.001). We conclude that there is a definite increase in the female participation in academic matters of IAP; however, the gender gap is persisting in the administrative domain.

Keywords: Female, Gender, Indian Academy of Pediatrics, Sex, Women.

Studies have found that participation of women in the medical profession is less than that of their male counterparts. As compared to male doctors, female doctors have a slower career progress, have fewer publications and fewer still manage to attain highest academic ranks(1-3).

The Indian Academy of Pediatrics (IAP) was founded in 1962. It has grown from a body comprising of only about hundred members to about 16,000 members in 2007. The exact gender composition of its members is not known; unofficially, the proportion of female members is estimated to be about 20% in 2007.

We conducted this study to ascertain the trend of female participation in administrative and academic domains of Indian Academy of Pediatrics.

Methods

Participation in the administrative affairs of IAP was adjudged by the proportion of women holding the office of the President (from inception till date), and members of the Executive Board (in four representative years; *i.e.*, 1990, 1995, 2000, and 2005); and Editor-in-Chief of the two journals owned by the IAP, *i.e.*, 'Indian Pediatrics' (IP) and 'Indian Journal of Practical Pediatrics (IJPP)' (from inception till date).

The proportion of female authorship for articles

published in Indian Pediatrics served as a measure of academic performance. Trends in authorship were studied taking 1990, 1995, 2000 and 2005 as representative years. A total of 48 issues of Indian Pediatrics were scanned. All categories of articles, *viz.*, original articles, review articles, special articles, brief reports, case reports and editorials published by Indian authors in the representative years were included. An attempt was made to categorize the contributing authors as male or female. We also assessed the proportion of females presently holding the post of head of the department of Pediatrics at medical colleges, all over India.

The list of the President of IAP (1964 to 2008), Editors-in-Chief of IP and IJPP, and the executive board members of IAP for the years 1990, 1995, 2000 and 2005, was provided by the IAP office. The Medical Colleges in India and the heads of department of pediatrics were identified by visiting the websites of IAP and the Medical Council of India; and by making personal contacts, wherever feasible.

Once the data were collected, the gender of the author was determined by the initial inspection of the first name. In cases where first name was not mentioned and in doubtful cases, the gender was determined by performing Internet search using Google search engine and by visiting the institutional website. While determining the gender of authors in Indian Pediatrics, electronic and postal mails were also used to contact the corresponding author. Academy friends from various cities were contacted telephonically or on e-mail all over India; this also helped to ascertain the sex of the authors. Authors whose gender could not be ascertained were excluded from the analysis.

Descriptive data are presented as proportions. Chi-square and Fisher's exact test were used for comparison of categorical variables. Linear-by-linear association was used to study the trends in authorship. As per the Bonferroni test, the *P* value was considered significant at P < 0.01.

Results

Between 1964 and 2008 there have been 45 presidents of the Indian Academy of Pediatrics, out of which 7 (15.6%) were females. The proportion of female executive board members of IAP for the years 1990, 1995, 2000 and 2005 was found to be 6% (2/31), 8.8% (3/31), 5.4% (2/37), and 2.3% (1/44) respectively. Between 1964 and 2007, Indian Pediatrics had 10 Editor-in-Chiefs, of which only 1 was a female. Indian Journal of Practical Pediatrics has never had a female Editor-in Chief, since its inception in 1994.

Of 201 medical colleges in India approached we could identify the gender of the heads of department of pediatrics for 181 medical colleges. A woman was heading the department of pediatrics in 58 (32%)

medical colleges.

A total of 639 articles (191 original articles, 299 brief reports, 82 case reports, 21 review/special articles, 46 editorials) were studied from 48 issues of Indian Pediatrics in the years 1990, 1995, 2000, and 2005. These articles were contributed by a total of 2245 authors. Sex could be determined for 2135 authors. *Table I* depicts the proportion of female authors in the representative years.

Discussion

Male pediatricians outnumber their female counterparts in terms of higher academic and administrative ranks in the Indian Academy of Pediatrics. Our results suggest that despite an increase in the female authorship of Indian Pediatrics, a significant "gender gap" persists in the administrative domain of IAP. In a recent study, Jagsi, *et al.*(4) studied the gender gap in authorship of academic medicine over the past 35 years and found that participation of women has increased significantly. With a significant increase in academic publications by women over the past two decades, the glass ceiling is slowly but surely cracking, but a lot is desired so as to bridge this gender gap.

Since our study did not evaluate the reasons for the "gender gap" we can only speculate about it. Greater family responsibilities and more child rearing duties have been implicated in the lower academic productivity and slower career progress of women compared to men(5-8). Carr, *et al.*(5)

Year	Original articles	*Brief Reports	Review <i>etc.</i>	*Case reports	Editorials <i>etc</i> .	All articles
1990	76/349 (21.8%)	49/315 (15.6%)	4/29 (13.8%)	_	4/17 (23.5%)	133/710 (18.7%)
1995	72/414 (17.4%)	93/363 (25.6%)	1/4 (25%)	_	4/19 (21%)	170/800 (21.3%)
2000	38/160 (23.8%)	77/302 (25.5%)	4/11 (36.3%)	72/274 (26.3%)	3/18 (16.7%)	194/765 (25.3%)
2005	31/94 (33%)	77/250 (30.8%)	6/17 (35.3%)	35/130 (26.9%)	5/23 (21.7%)	154/514 (30%)
Trend	P = 0.006	P<0.001	-	_	_	P<0.001

 TABLE I-Proportion (Females/Total) and Percentage of Female Authors of Articles Published in Indian Pediatrics between 1990 and 2005

*case-reports were being published as brief reports; and brief reports as original articles in 1990 and 1995

What this Study Adds?

 There is a definite increase in the female participation in academic matters of IAP; however, the gender gap is persisting in the administrative domain.

reported that female faculty members who had children published less. Some studies have argued that women identify more with their primary role as a parent or wife rather than their profession; men identify more with their role as 'bread winners' and thus are motivated to invest more in their profession (6). Some other explanations include structural factors in workplace like gender bias resulting in less favorable allocation of institutional resources like space, salary and positions of influence, for women(7). Kaplan, *et al.*(8) found that compared to males, female faculty had less institutional support for research.

There are other possible explanations for lesser attainment of higher administrative ranks by women. Fewer women have political aspirations, or possess the negotiation and networking skills needed to further one's administrative and academic ambitions (9). Also the attrition rate of women from academic careers is greater, thus decreasing the percentage of women at higher academic rank.

This study has certain limitations. Our sample included representative years chosen in a non randomized manner and may have possibility of bias. Further had we known the sex-composition of IAP members, we would be able to better correlate the proportion of females with respect to academics, research, and leadership responsibilities.

In the social and political arena, the gender issues are well-known and highlighted. Active participation of women in non governmental organizations and the media has resulted in various forms of affirmative action, *e.g.*, the Women's Reservation Bill in Parliament, but in the pediatric fraternity the facts have probably not been borne by any scientific study. It was our aim, to identify a pattern from collected data and invite a discussion on this issue.

Contributors: PG conceived the idea of this study and provided the study design. Data were collected and tabulated by PD, PG and PC. PD and PG analyzed and interpreted the

results. PD drafted the manuscript along with PG, with intellectual inputs from PC. All authors approved the final manuscript.

Funding: None.

Competing interests: PD is a female. All authors are also members of the IAP.

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