Female Authorship Publishing Trends & Forecasting in Pediatric Urology:

Are We Closer to Gender Equality?

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Authors have no conflicts
Previous studies have reported gender differences in medical publications. Most studies across specialties reflect a male predominance. Also true of pediatric and surgical literature.

Fishman: J Pediatr. 2017
Mueller: BMC Surg. 2017
Urology has been and remains a male-dominated specialty

Women entering the specialty are on the rise

Females comprise 9% of practicing urologists

- 22% <45 years of age
- 9% 45-54 years
- 5% 55-64 years
- 1% >65 years

AUA 2018
Pediatric urology literature is predominantly authored by males

Female authorship is increasing due to growing numbers of women entering medical field

Females more commonly author medical versus surgical topics

Female authors more frequently have medical than surgical backgrounds
Objectives

- Primary:
  - Review of literature for 5 common pediatric urology conditions over the last 30 years with gender-based bibliometric analyses of first and corresponding authors

- Secondary:
  - Forecasting analyses to project future publication trends
Methods

- Literature search for: hypospadias, hydrenephrosis, VUR, BBD, & UDT
- Performed by decade:
  - 1990-1999
  - 2000-2009
  - 2010-2019
- Sorted by “Best Match”
- Within each topic, first 50 papers from each time period were extracted
Methods

- Topics were sub-categorized into surgical vs. medical
- Author Variables (First and Corresponding):
  - Gender
  - Specialty area (medical vs. surgical)
  - Additional advanced degrees (PhD vs. No PhD)
  - Geographical region
  - $h$-index
Statistical Analysis

- Descriptive statistics for demographic characteristics

- Group differences were compared using parametric and nonparametric tests based on data distribution

- Forecasting analyses were carried out by the Holt-Winters exponential smoothing method
Results

- 750 papers were included in our analysis

- Most papers originated from the United States (38%), Canada (6%), England (5%)

- Most published in *Journal of Urology* (29%), *Journal of Pediatric Urology* (8%), *Urology* (6%)

- Average impact factor of publishing journal: 4±4

- Median citation count: 18 (0-1404)
Overall 70% male
80% MD
11% PhD; MD/PhD
h index 12±11
60% from Urology
9% General Surgery
8% Pediatrics
First Author (Topic)

The bar chart shows the percentage distribution of males and females across different conditions:
- **Hypospadias**: 71% male, 29% female
- **Hydro**: 74% male, 26% female
- **VUR**: 77% male, 23% female
- **BBD**: 63% male, 37% female
- **UDT**: 67% male, 33% female
First Author (Degrees)

- Male: 86% No PhD, 14% PhD
- Female: 68% No PhD, 32% PhD

p<0.01
- Overall 78% male
- 79% MD
- 13% MD/PhD
- h index 21±15
- 60% from Urology
- 9% General Surgery
- 8% Pediatrics
Corresponding Author (Degrees)

- Male: 85% with No PhD, 15% with PhD
- Female: 65% with No PhD, 35% with PhD

p<0.01
Forecasting Analysis - First Authors
Forecasting Analysis - Corresponding
Vast majority of pediatric urology literature authored by men regardless of topic, specialty, or year of publication

Female authorship across all pediatric urology topics is on the rise with a projected continuing upward trend

Findings are encouraging → suggest movement towards proportional gender representation of authorship in pediatric urology literature