

# **Female Authorship Publishing Trends & Forecasting in Pediatric Urology:**

## ***Are We Closer to Gender Equality?***

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# Background

- Previous studies have reported gender differences in medical publications
- Most studies across specialties reflect a male predominance
- Also true of pediatric and surgical literature

Mueller: J Surg. Res. 2016

Fishman: J Pediatr. 2017

Mueller: BMC Surg. 2017



# Background

- 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



# Hypotheses

- 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, hydronephrosis, 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



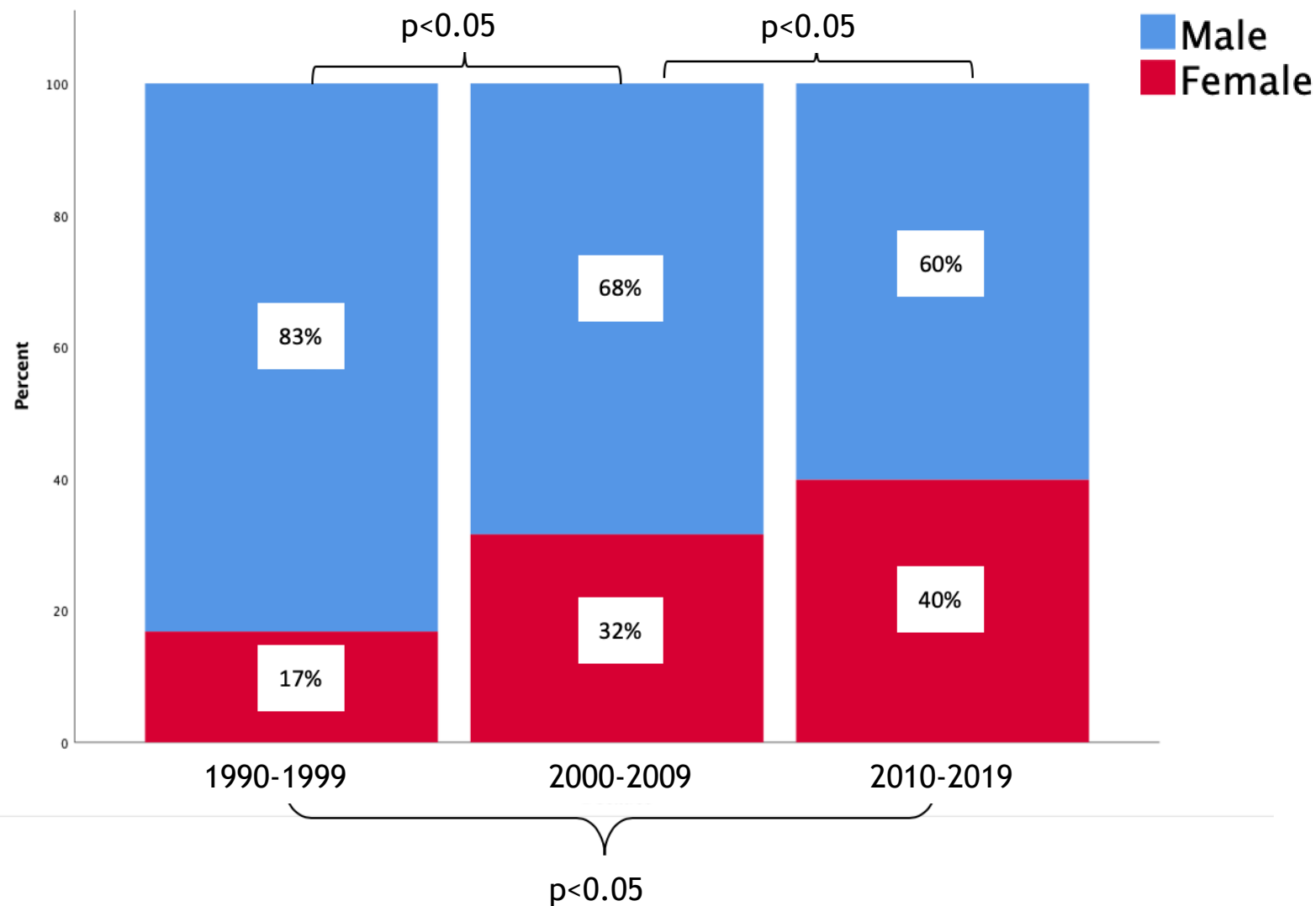


# Results

- 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:  $4 \pm 4$
- Median citation count: 18 (0-1404)



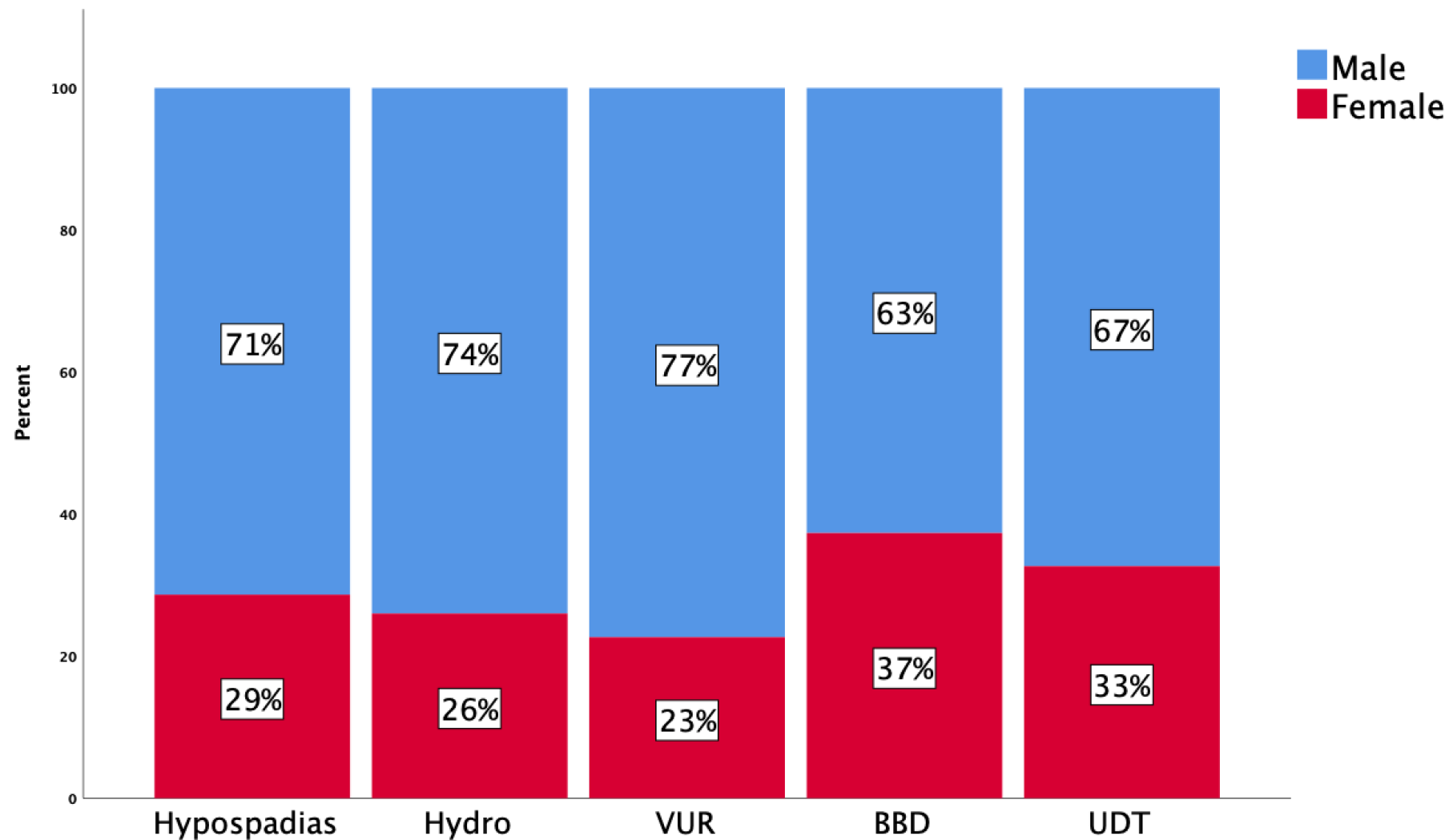
# First Author Characteristics



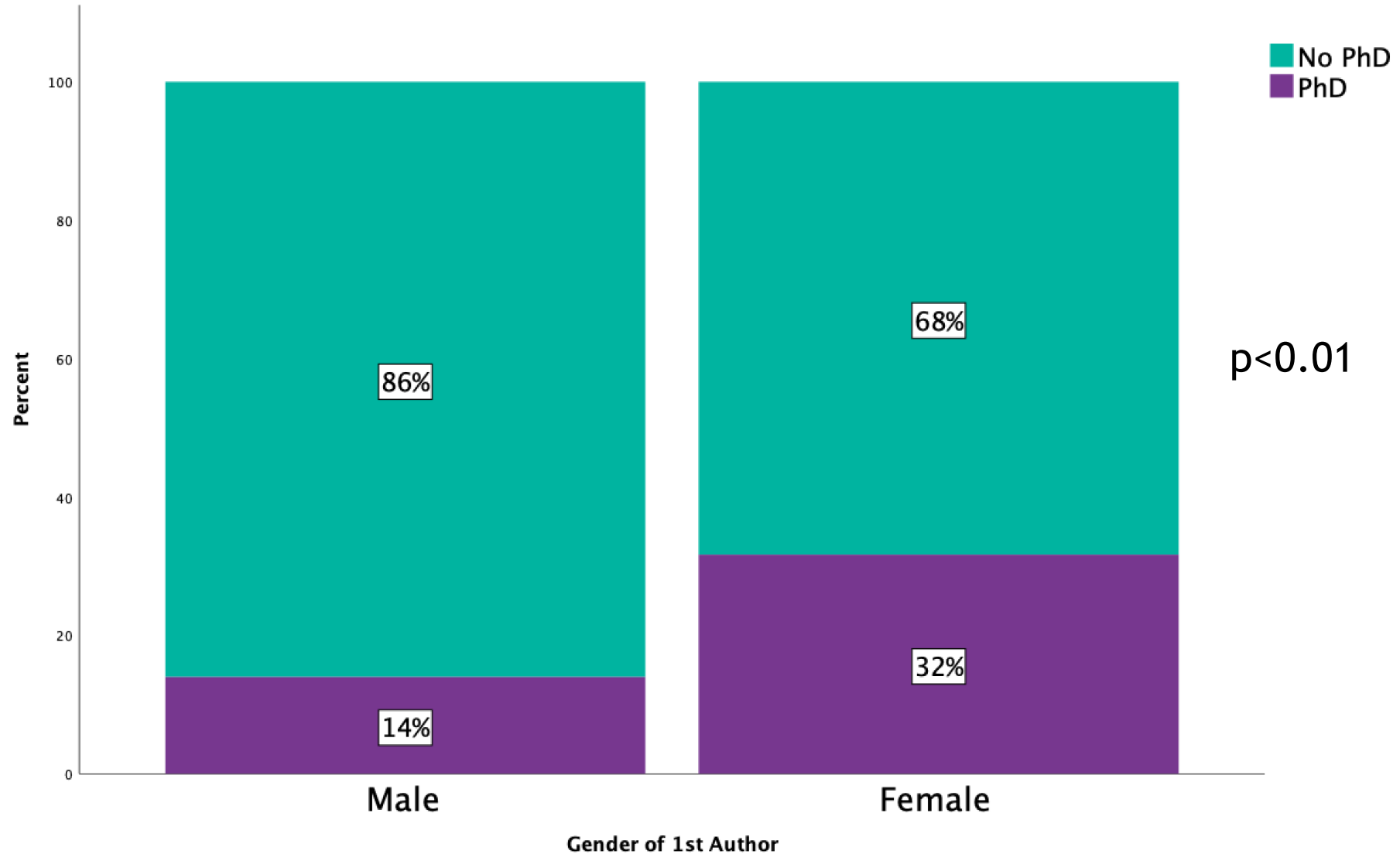
- Overall 70% male
- 80% MD
- 11% PhD; MD/PhD
- h index  $12 \pm 11$
- 60% from Urology
- 9% General Surgery
- 8% Pediatrics



# First Author (Topic)

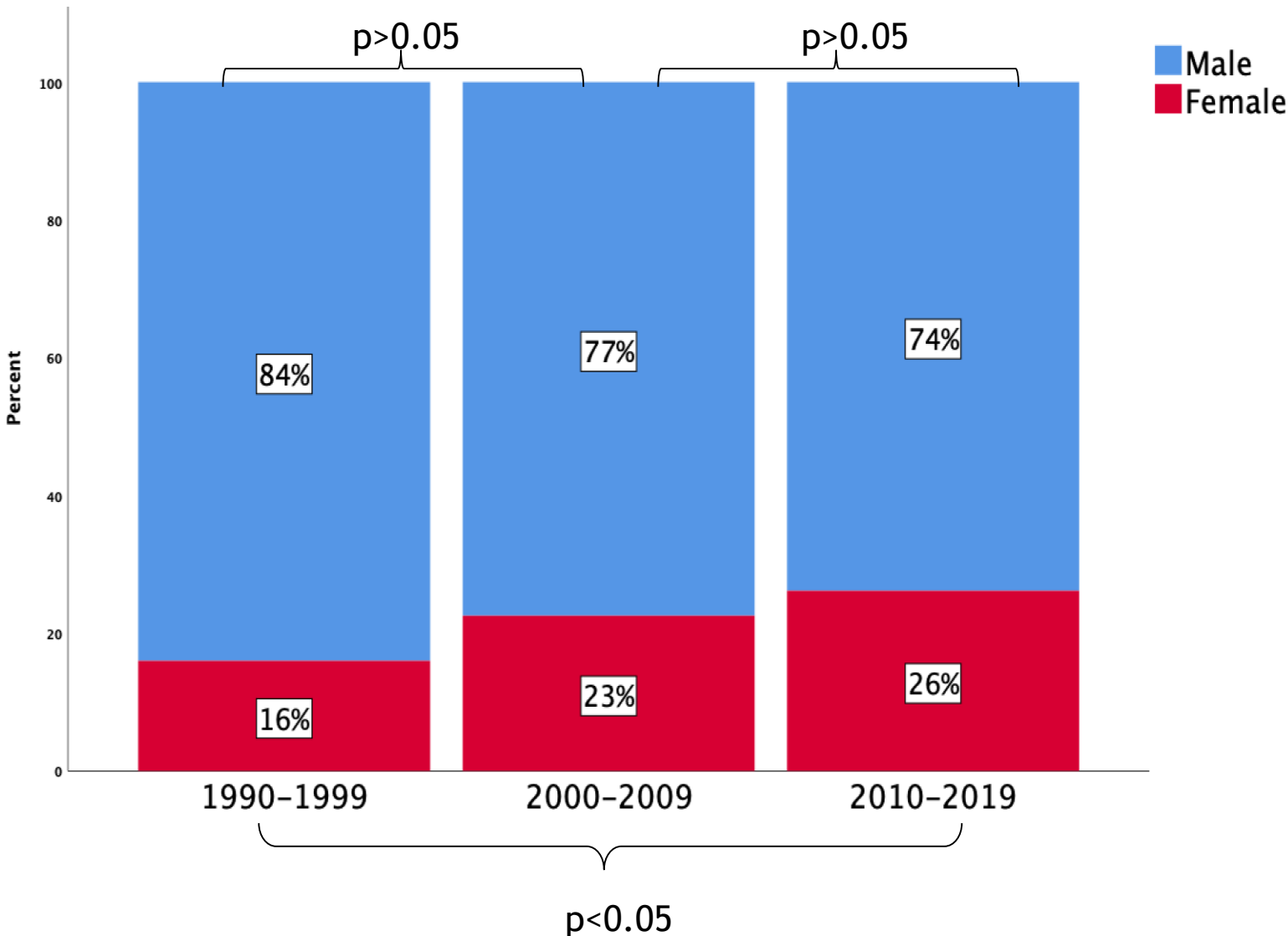


# First Author (Degrees)

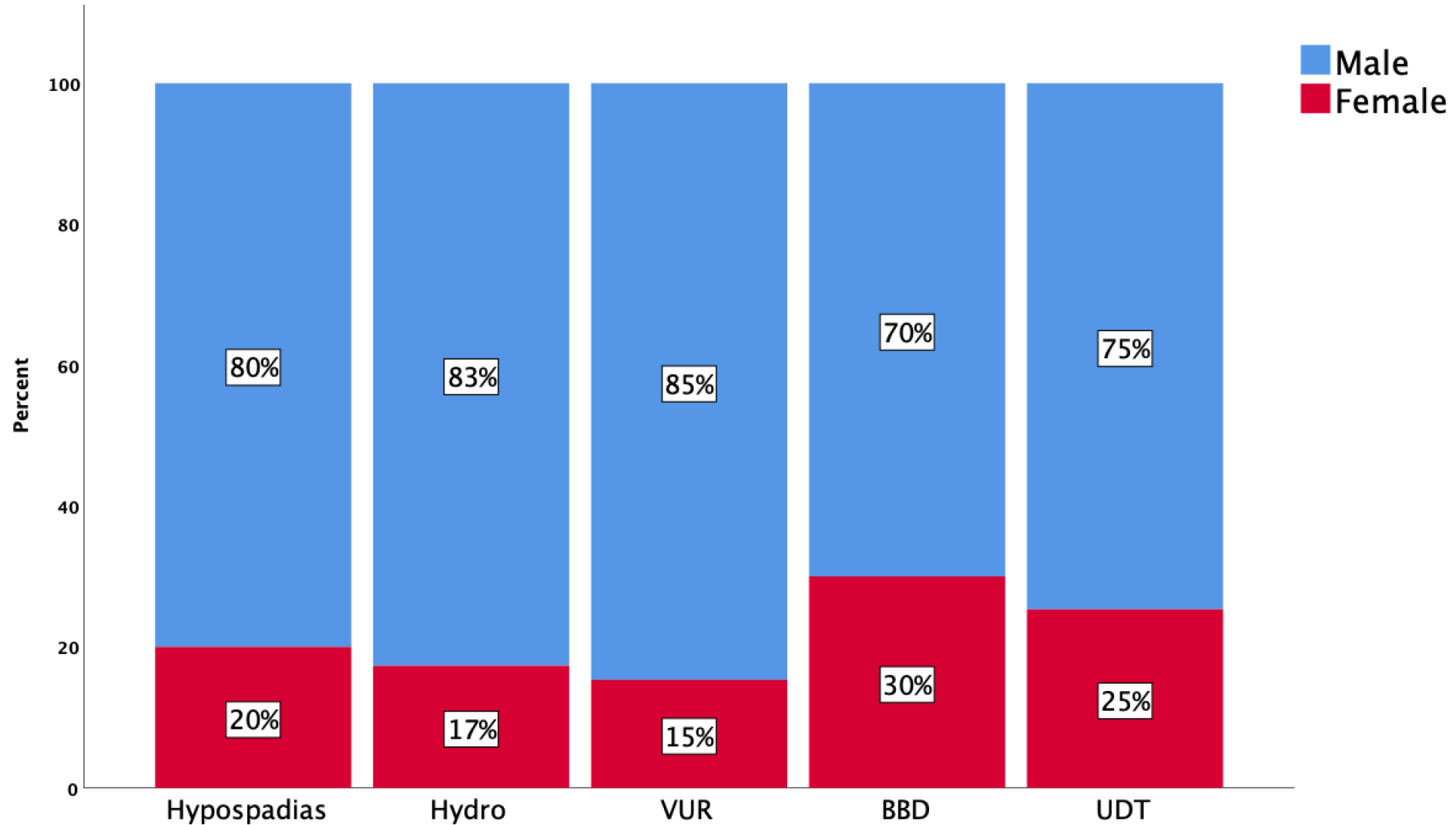


# Corresponding Author Characteristics

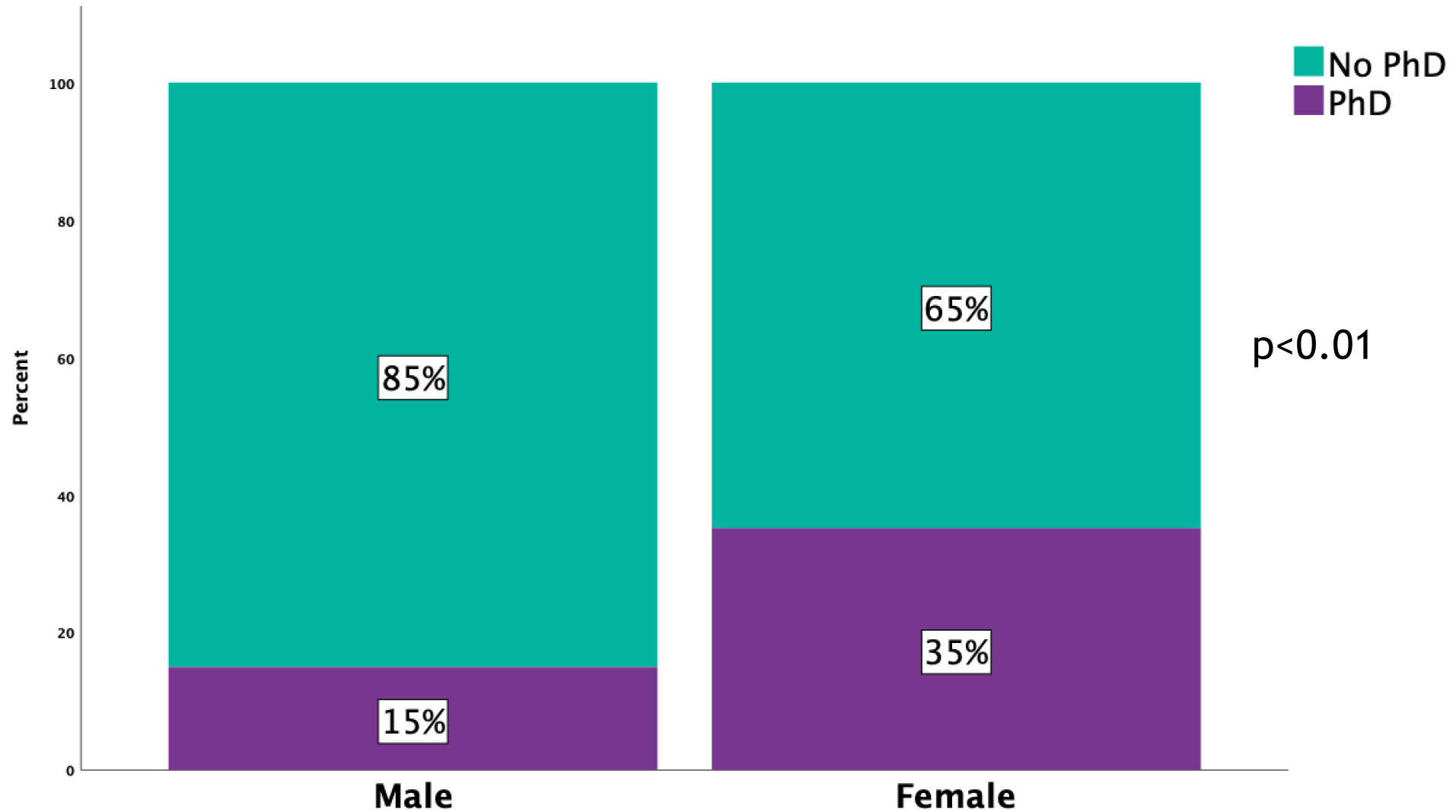
- Overall 78% male
- 79% MD
- 13% MD/PhD
- h index  $21 \pm 15$
- 60% from Urology
- 9% General Surgery
- 8% Pediatrics



# Corresponding Author (Topic)

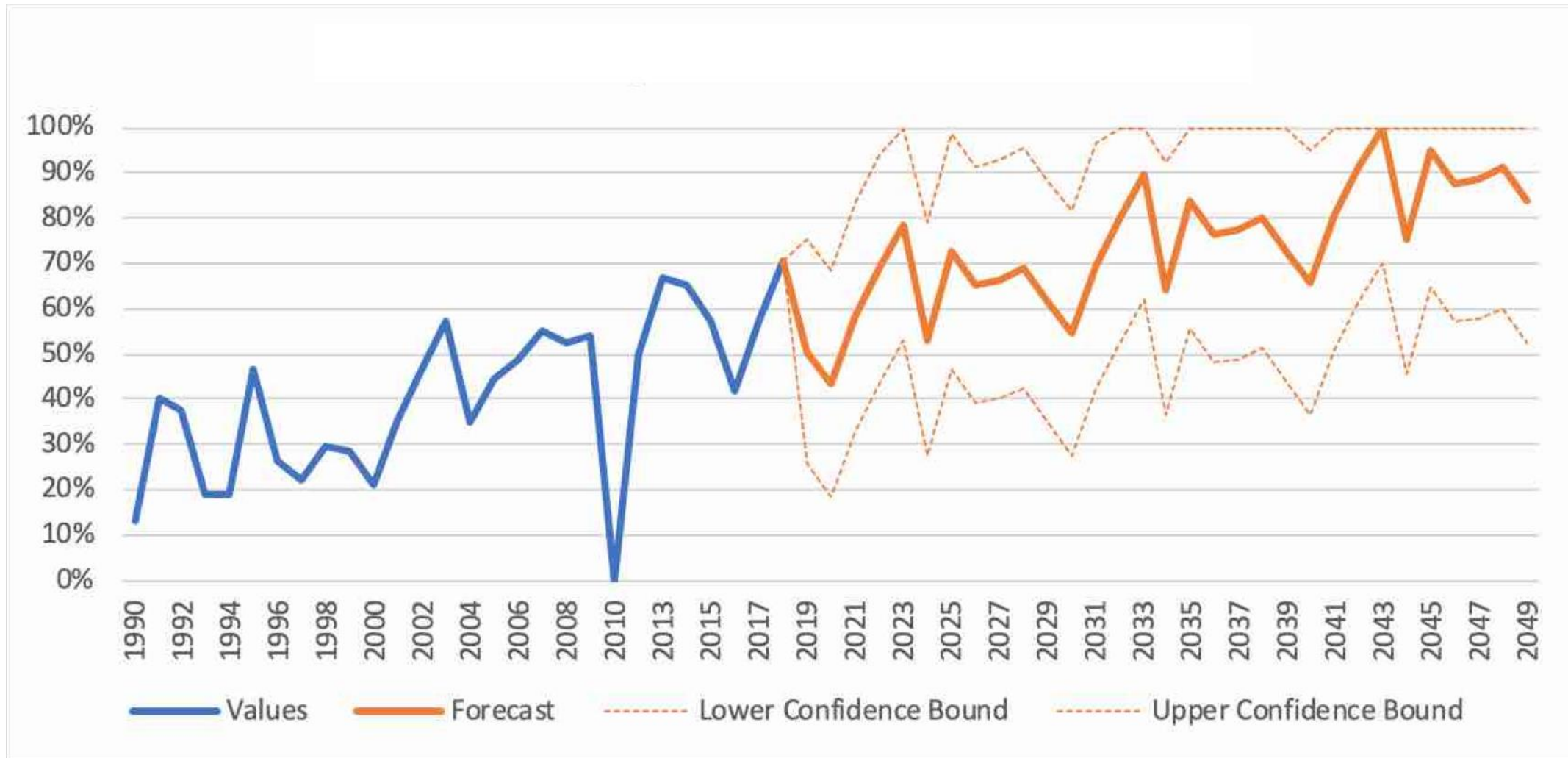


# Corresponding Author (Degrees)

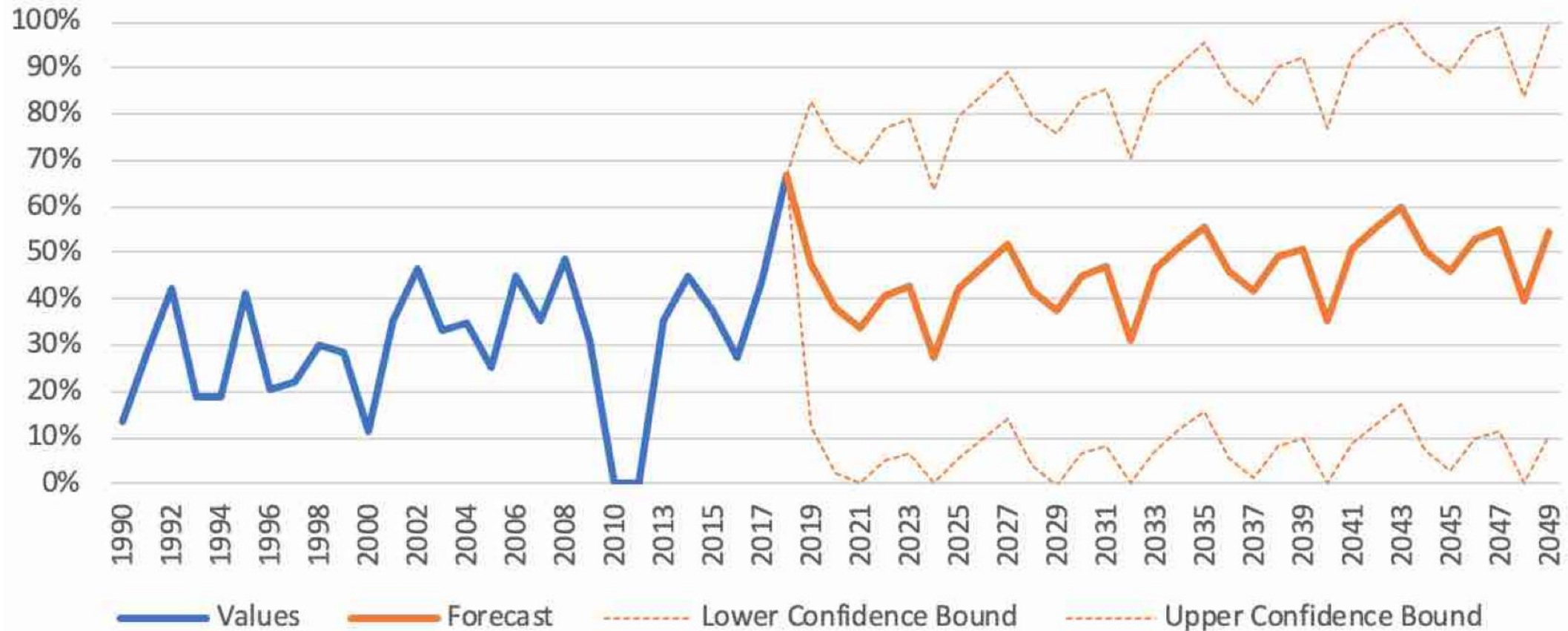




# Forecasting Analysis - First Authors



# Forecasting Analysis - Corresponding



# Conclusion

- 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







**THANK YOU**

