

# Parental Leave Experience for Academic Neurology Faculty at 19 Academic Centers

Annie He, BS<sup>1</sup>; Parneet Grewal, MBBS<sup>2</sup>; Kamala Rodrigues, MD<sup>3</sup>; Suma Shah, MD<sup>4</sup>; Halley Alexander, MD<sup>5</sup>; Ailing Yang, MD<sup>6</sup>; Neishay Ayub, MD<sup>7</sup>; Jane Allendorfer, PhD<sup>8</sup>; Christa O'Hana Nobleza, MD<sup>9</sup>; Doris Kung, DO<sup>10</sup>; Natasha Frost, MD<sup>11</sup>; Seema Nagpal, MD<sup>3</sup>; Sarah Durica, MD<sup>12</sup>; Julie Silver, MD<sup>13</sup>; Sima Patel, MD<sup>14</sup>; Sasha Alick Lindstrom, MD<sup>1</sup>

<sup>1</sup>UT Southwestern Medical Center; <sup>2</sup>Medical University of South Carolina; <sup>3</sup>Stanford Medicine; <sup>4</sup>Duke University Medical Center; <sup>5</sup>Wake Forest Baptist Health; <sup>6</sup>Beth Israel Deaconess Medical Center; <sup>7</sup>Warren Alpert Medical School of Brown University; <sup>8</sup>University of Alabama at Birmingham; <sup>9</sup>Baptist Memorial Hospital/University of Tennessee Health Science Center; <sup>10</sup>Baylor College of Medicine; <sup>11</sup>University of Wisconsin; <sup>12</sup>University of Oklahoma Health Sciences Center; <sup>13</sup>Harvard Medical School, Massachusetts General Hospital; <sup>14</sup>University of Minnesota School of Medicine

**UT Southwestern**  
Medical Center

## Introduction

### Background

Despite the rising number of women in academic neurology, there continues to be variability in parental leave policies, and we need to better understand the impact of parental leave on career achievements and burnout for academic neurology faculty. We hypothesize parental leave does not impact academic achievements; however, women who take parental leave experience higher burnout.

### Objective

To evaluate the impact of parental leave on career achievements and burnout for academic neurology faculty.

## Methods

- The survey was administered to 19 academic neurology institutions across the US from February 2021 to April 2022.
- Inclusion criteria: any faculty member with doctorate degrees (MD, DO, PhD, MD/PhD, MBBS, MS) and in neurology or pediatric neurology departments.
- A total of 239 participants self-reported academic achievements (rank, leadership positions, awards, publications, funded projects, and speakerships), experience of parental leave, family work conflict, and burnout. Likert scale was utilized as applicable.
- Groupwise comparisons and regression analyses were performed to examine the effects of parental leave and gender on academic achievement outcomes and on burnout.

## Results

**Table 1.** Demographic and sample characteristics of survey respondents.

	Overall	No Leave <sup>a</sup>	Leave <sup>a</sup>	p-value
N	239	84	155	-
Gender, N female (%)	140 (58.6)	24 (28.6)	116 (74.8)	<0.001
Race/Ethnicity, N (%)				0.667
Asian	55 (23.01)	24 (28.6)	31 (20.0)	
White	150 (62.76)	49 (58.3)	101 (65.2)	
Underrepresented <sup>b</sup>	19 (7.95)	6 (7.1)	13 (8.4)	
Not reported <sup>a</sup>	12 (5.02)	4 (4.8)	8 (5.2)	
Other	3 (1.26)	1 (1.2)	2 (1.3)	
Marital Status, N married (%)	226 (94.6)	78 (92.9)	148 (95.5)	0.583
Years in Profession	13.01 (8.23)	14.40 (9.59)	12.26 (7.30)	0.077
Academic Track, N tenure-track (%)	34 (14.23)	12 (14.3)	22 (14.2)	1.000
Academic Rank, N (%)				0.124
Instructor or Senior Instructor	2 (0.01)	0 (0.0)	2 (1.3)	
Assistant Professor	117 (48.95)	35 (41.7)	82 (52.9)	
Associate Professor	76 (31.80)	27 (32.1)	49 (31.6)	
Professor	39 (16.32)	19 (22.6)	20 (12.9)	
Other	5 (2.09)	3 (3.6)	2 (1.3)	
Full Time Employee, N yes (%)	229 (95.82)	81 (96.4)	148 (95.5)	1.000
Hours worked per week				0.212
< 20 hours/week	1 (<0.01)	0 (0.0)	1 (0.6)	
21-40 hours/week	19 (7.95)	7 (8.3)	12 (7.7)	
41-60 hours/week	134 (56.07)	41 (48.8)	93 (60.0)	
61-80 hours/week	65 (27.20)	25 (29.8)	40 (25.8)	
> 80 hours/week	20 (8.37)	11 (13.1)	9 (5.8)	
Family-Work Conflict Score <sup>c</sup>	21.12 (6.88)	18.27 (6.82)	22.64 (6.43)	<0.001

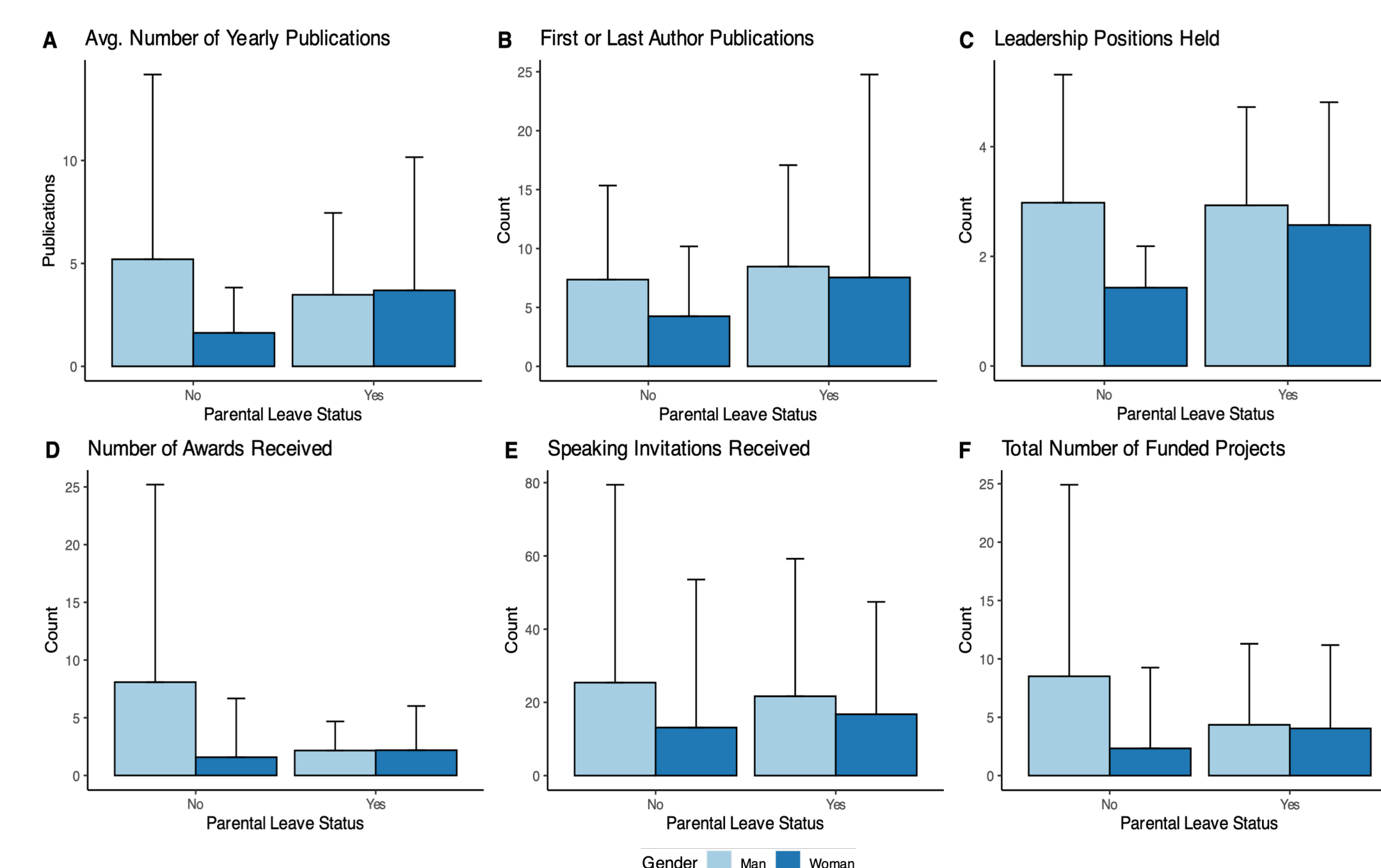
Note: Data are presented as mean (SD) or frequency (percentage) as appropriate.

<sup>a</sup>3 participants responded with "Prefer not to answer" (N=3).

<sup>b</sup>Data for participants who responded with "American Indian/Alaskan Native" (N=0), "Black or African American" (N=3), "Native Hawaiian or other Pacific Islander" (N=2) and "Hispanic/Latino" (N=14) were combined under "Underrepresented" due to the small numbers.

<sup>c</sup>Data for participants who responded with "Not reported" (N=2) and "Prefer not to say" (N=10) were combined under "Not reported" due to the small numbers.

<sup>d</sup>Score is presented as the sum of five questions related to family-work conflict. Individuals that responded with "N/A" for any of the five questions (N=7) were excluded from this row.



**Figure 1:** The mean value and standard error of the six quantitative academic productivity measures, stratified by leave status and gender.

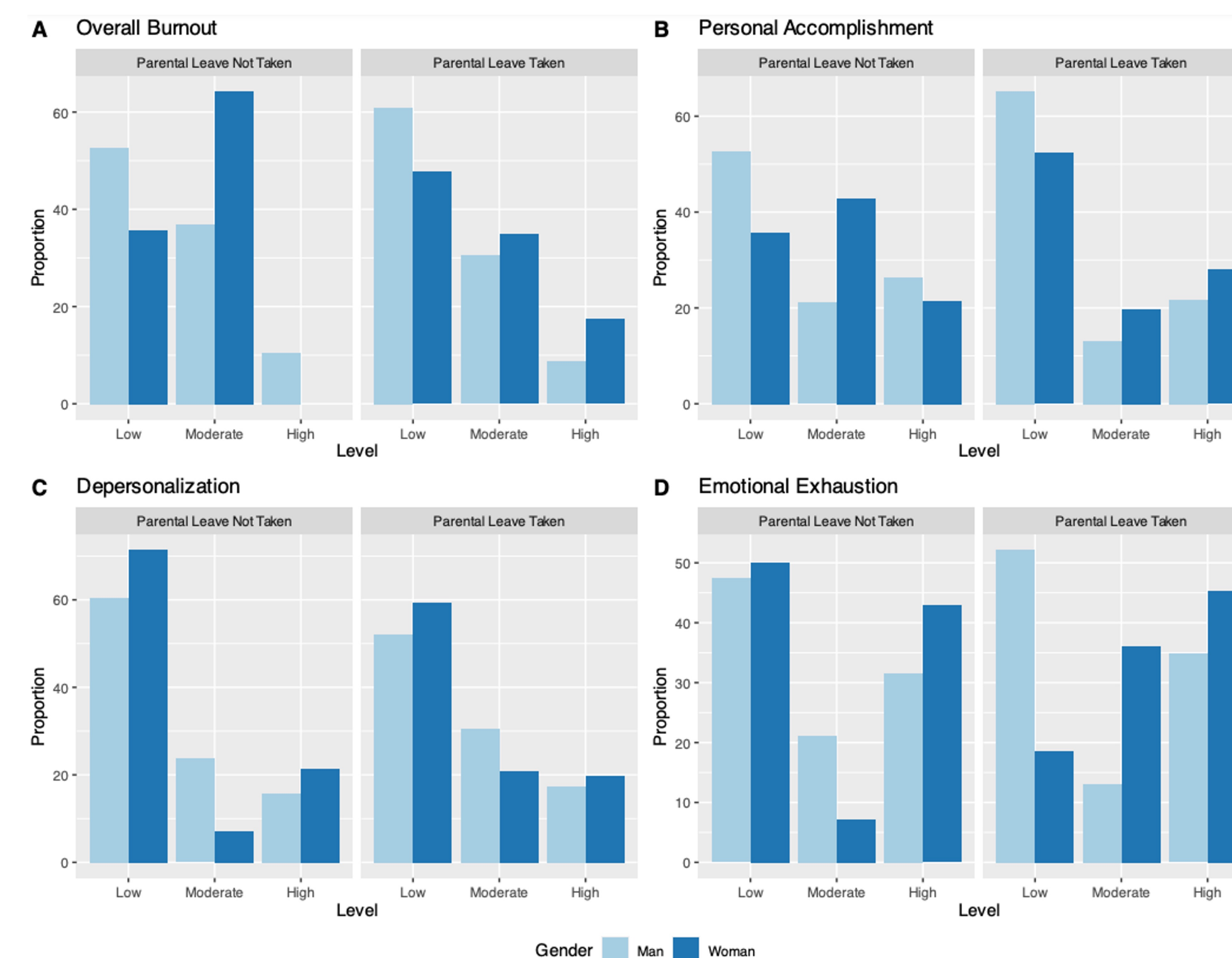
**Table 2.** Contentment and leave duration for subset of respondents who took parental leave.

	Men <sup>a</sup>	Women <sup>a</sup>	p-value
N	37	116	
Content w/ parental leave	29 (78.4)	57 (49.1)	0.003
If not content, why? <sup>b</sup>			
I did not have access to paid parental leave	3 (37.5)	15 (25.4)	0.672
I had to take additional unpaid leave after my paid leave was utilized	0 (0.0)	25 (42.4)	0.021
There were no adjustments in productivity during parental leave	2 (25.0)	23 (39.0)	0.700
Institution was not supportive of parental leave	2 (25.0)	13 (22.0)	1.000
Colleagues were not supportive of parental leave	2 (25.0)	10 (16.9)	0.627
Parental leave instructions were not organized or clear	3 (37.5)	24 (40.7)	1.000
Other	2 (25.0)	24 (40.7)	0.469
How much total paid time did you take for parental leave at current and/or past institution as a faculty member? *			<0.001
≤ 6 weeks	34 (91.9)	64 (55.2)	
7 - 12 weeks	2 (5.4)	39 (33.6)	
> 12 weeks	1 (2.7)	13 (11.2)	
How much total unpaid time did you take for parental leave at current and/or past institution as a faculty member? *			0.277
≤ 6 weeks	36 (97.3)	102 (87.9)	
7 - 12 weeks	1 (2.7)	12 (10.3)	
> 12 weeks	0 (0.0)	2 (1.7)	

<sup>a</sup>Data for 2 participants who responded with "Prefer not to answer" (N=2) are not included in the table due to the small number.

\* Note that the survey had options for 2, 4, 6, 8, and 12 weeks, as well as an "Other" option for write-in responses. There were 27 respondents that reported taking parental leave but logged a total leave time of zero weeks, mostly because they used vacation or sick days in place of official leave.

<sup>b</sup>The proportions listed were computed relative to those who were not content with their parental leave, i.e., 8 men and 59 women.



**Figure 2:** The proportions of men and women experiencing low, moderate, or high burnout, personal accomplishment, depersonalization, and emotional exhaustion for two subsets of the study population: those who took parental leave and those who did not.

## Conclusions

Parental leave disproportionately affects women and men with respect to academic achievement and emotional exhaustion. In principle, parental leave is meant to provide support to faculty during a major life event, but the current climate in academic neurology is such that parental leave policies fall short of this. Further studies are necessary to resolve existing inequities in academic neurology, provide greater support for working parents, and develop more equitable parental leave policies.

## Acknowledgements

We thank Nitya Shah for the statistical analysis.

We thank all 19 Women in Neurology Collaborative Study (WINCS) participating sites, listed below:

Baylor College of Medicine, Boston University & Boston Medical Center, Brown University, Cleveland Clinic, Duke University, Indiana University, Medical University of South Carolina, Penn State Hershey Medical Center, Stanford University, SUNY Upstate Medical University, University of Alabama at Birmingham, University of California San Diego, University of Florida, University of Kentucky, University of Minnesota, University of Oklahoma Health Sciences Center, UT Southwestern Medical Center, University of Wisconsin, Wake Forest University

## References

- The complexities of physician supply and demand: Projections from 2019 to 2034. AAMC. <https://www.aamc.org/media/54681/download>. Accessed October 14, 2022.
- Morgenroth T, Heilman ME. Should I stay or should I go? Implications of maternity leave choice for perceptions of working mothers. *Journal of Experimental Social Psychology*. 2017;72:53-56. doi:10.1016/j.jesp.2017.04.008
- Castillo-Angeles M, Smink DS, Rangel EL. Perspectives of US general surgery program directors on cultural and fiscal barriers to maternity leave and postpartum support during surgical training. *JAMA Surgery*. 2021;156(7):647. doi:10.1001/jamasurg.2021.1807
- Collie E, Lew R, Peate M. Merging motherhood and medicine: A qualitative study exploring barriers and enablers to motherhood among female doctors in Australia. *Women's Health*. 2022;18:174550572211142. doi:10.1177/17455057221114268
- Hasan TF, Turnbull MT, Vatz KA, Robinson MT, Mauricio EA, Freeman WD. Burnout and attrition. *Neurology*. 2019;93(23):1002-1008. doi:10.1212/wnl.0000000000008583
- Underrepresented in medicine definition. AAMC. <https://www.aamc.org/what-we-do/equity-diversity-inclusion/underrepresented-in-medicine>. Accessed October 14, 2022.