

Let's Get Personal: Academic Office Displays and Gender

Katelyn Moretti, MD, MS¹; Andrew Musits, MD, MS¹; Alyson McGregor, MD, MA¹; Adam Aluisio, MD, MSc¹

Perm J 2020;24:19.237

E-pub: 09/08/2020

<https://doi.org/10.7812/TPP/19.237>

ABSTRACT

Introduction: Differential standards in academic medicine based on gender have been described for self-promoting behavior.

Objective: To explore differences in office display of professional and personal items between male and female academic physicians as a proxy for self-promotion.

Methods: A university hospital's faculty was invited to participate in a study on office setup. Participants were blinded to the study aim. Investigators evaluated offices to assess the number of professional and personal displays. De-identified data on participant characteristics and office physical characteristics were recorded. Correlations with the number of items displayed were analyzed by univariable and multivariable Poisson regression.

Results: Forty-eight physicians participated: 23 (47.9%) from emergency medicine, 9 (18.8%) from surgery, and 16 (33.3%) from internal medicine. The median number of professional displays was 5.0 for women (interquartile range [IQR] = 3.0-9.0) and 6.0 for men (IQR = 2.0-12.0). Controlling for specialty and academic rank, no significant difference existed in professional display rates by women (incidence rate ratio = 1.1, 95% confidence interval = 0.8-1.4). The median number of personal displays was 14.5 items for women (IQR = 8.0-25.0) and 6.0 items for men (IQR = 3.0-15.0), with a significantly different rate (incidence rate ratio = 1.4, 95% confidence interval = 1.2-1.7) when we controlled for specialty, generation, rank, and office characteristics.

Conclusion: Women displayed more personal items than did men, with no difference in professional display rates. Future studies should examine this difference to understand its cause, which may be linked to differences in academic promotion between men and women.

INTRODUCTION

Evidence that supports ongoing stereotypes is clear and fervent in the world of academic medicine.¹ Men are often expected to be confident and aggressive and are not highly criticized for putting work ahead of family. Women are more likely to be praised for being good wives and mothers; they often perceive that they have to make greater efforts to prove their worth compared with male colleagues, which can be a cause of greater stress in the work environment.² However, women generally have greater emotional involvement in social relationships and increased aptitude toward expressing emotions as a form of self-care than do men.³ This could reflect social conventions about gender-appropriate behavior in academic office settings.

Customarily, the office setting is about transparency and tradition: derived out of establishing credibility as a qualified professional. Most licensed professionals display

professional credentials because they show qualifications to visiting patients. In academic medicine, the office is often used to meet students, colleagues, and supervisors, and, in this case, it demonstrates a level of accomplishments. Self-promotion may be instrumental for managing a competent impression, yet women who self-promote may suffer social reprisals for violating gender prescriptions to be modest, whereas men are often pressured to conform to masculine norms and stereotypes of confidence and ambition.⁴

Women and men are exposed to different working environments and different types of demands and tensions, even when they work in the same profession. We wondered how these factors might affect outward displays of professional and personal identity in the work office environment. The goal of this study was to determine whether there were differences in office displays of professional and personal items between male and female academic physicians. Associations with age, academic rank, medical specialty, and office characteristics were also explored.

METHODS

Study Design, Setting, and Population

Academic faculty from the Departments of Emergency Medicine, Surgery, and Internal Medicine at a large university hospital were invited via email to participate in a study on academic office setup between February 2017 and March 2017. Participants were blinded to the study aim but were informed that researchers were investigating office arrangement. Faculty with more than 1 office were asked to identify their primary, nonclinical office for analysis. Offices were located across the academic campus and were not used for patient care, but for academic endeavors including meetings with colleagues and trainees. An ethical review was completed through our university's institutional review board, and all faculty from whom data were collected consented to participation.

Data Collection

Research personnel evaluated the participants' offices to assess the number of professional and personal items on display. Professional items were defined as diplomas,

Author Affiliations

¹ Department of Emergency Medicine at Brown University, Providence, RI

Corresponding Author

Katelyn Moretti, MD, MS (katelyn_moretti@brown.edu)

Keywords: academic medicine, gender differences, office setup, self-promotion

Table 1. Characteristics of population and offices	
Characteristic	Frequency, no. (%)
Sex	
Male	26 (54.2)
Female	22 (45.8)
Generation	
Millennial (age < 37 y)	6 (12.5)
Generation X (37-52 y)	32 (66.7)
Baby boomer (> 52 y)	10 (20.8)
Academic rank	
Clinical instructor/assistant professor	24 (50.0)
Associate professor	16 (33.3)
Professor	8 (16.7)
Specialty	
Emergency medicine	23 (47.9)
Internal medicine	9 (18.8)
Surgery	16 (33.3)
Presence of a window	
Yes	41 (85.4)
No	7 (14.6)
Occupancy	
Private	34 (70.8)
Shared	14 (29.2)

documents of merit-based recognition, or awards, whereas personal items were defined as items indicative of life outside academics (eg, photographs of family, drawings from children). Items or collages within 1 frame or discrete unit were counted once. Office physical characteristics recorded included the presence or absence of a window and a shared vs private space. De-identified data on the participant's gender implied by name and appearance, age, academic rank, and medical specialty were also recorded.

Data Analysis

Data analysis was performed using statistical software (Stata version 15.0; StataCorp, College Station, TX). Academic rank was categorized as clinical instructor/assistant professor, associate professor, or full professor. Age was categorized by generations as seen in previous research on work attitudes^{5,6}: millennials (age < 37 years), generation X members (37-52 years), and baby boomers (> 52 years).

Some physicians may be general “displayers,” hanging up both personal and professional items in equal numbers, whereas others may display a majority of either classification. To control for the propensity of a physician to generally display items in his/her office, a personal-professional display index (PPDi) was calculated (the number of personal

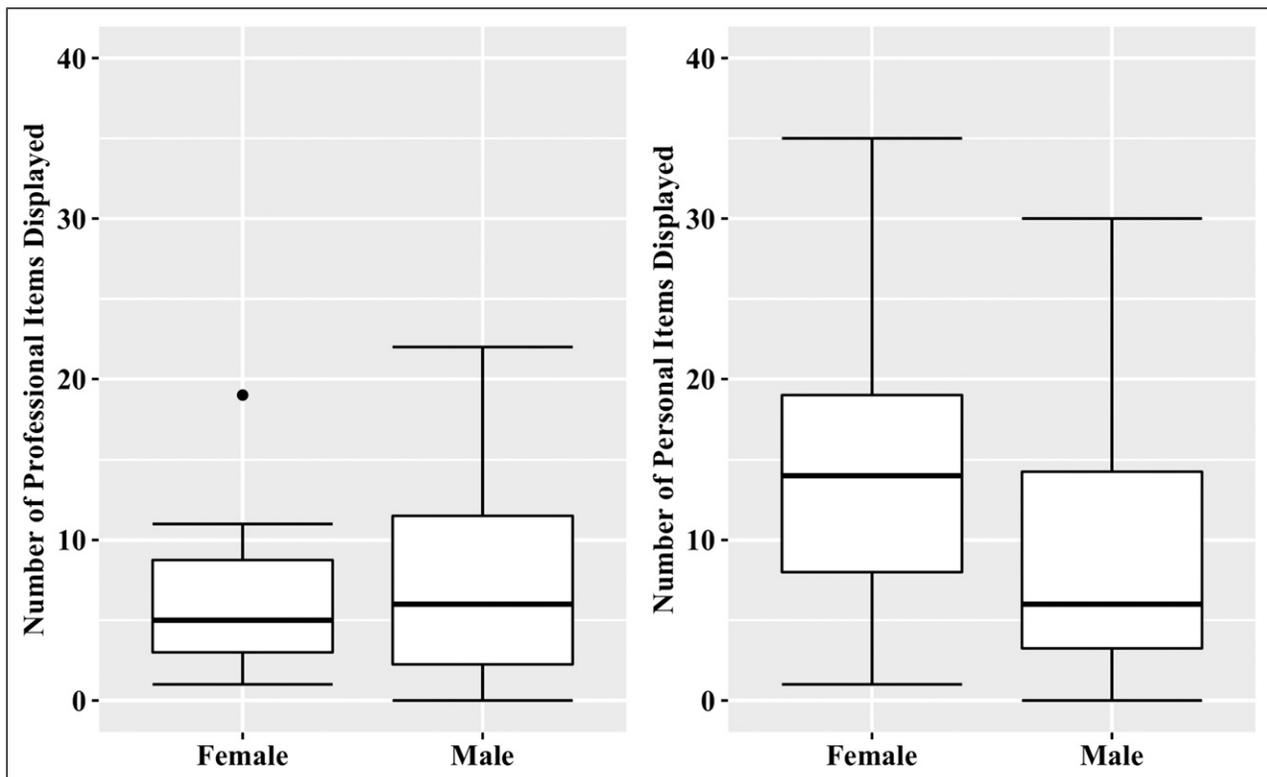


Figure 1. Displayed professional and personal items stratified by gender. Dot = outlier values; error bars = range; solid line inside box = median; box = interquartile range.

items minus professional items), which further classified the predominant type of items on display.

The count and percentage of participant and office characteristics were calculated. Given the nonparametric data, the median number of awards and personal items with interquartile ranges (IQRs) were calculated.

Univariable poisson regressions were performed for participant or office characteristics to assess for differences in the display rate of professional and personal items. Correlations of participant or office characteristics with the PPD_i were analyzed by univariable linear regression. Backward stepwise analysis with an inclusion threshold of $p = 0.05$ and exclusion threshold of $p = 0.1$ was performed for multivariable models.

Multivariable poisson regression of the correlation of the participant's gender with the display rate of professional items controlled for specialty and academic rank on the basis of inclusion and exclusion thresholds. Poisson regression of the correlation of gender with the display rate of personal items controlled for specialty, generation, rank, and the presence of a window. Linear regression of the correlation of gender with the PPD_i controlled for the presence of a window and specialty.

RESULTS

A total of 48 physicians participated in the study, with 23 physicians from emergency medicine (47.9%), 9 physicians from surgery (18.8%), and 16 physicians from internal medicine (33.3%). Approximately half of the cohort was male (54.2%) and clinical instructors/assistant professors (50%), and 66.7% were generation X (66.7%; [Table 1](#)).

Overall, the median number of professional items displayed was 5.0 (IQR = 2.5-10.0) and of personal items was 11.0 (IQR = 5.0-20.0). The median number of professional items displayed was 5.0 for women (IQR = 3.0-9.0) and 6.0 items for men (IQR = 2.0-12.0; [Figure 1](#)). In univariable analysis, there was no statistically significant difference in the rates of professional display by women compared with men (incidence rate ratio [IRR] = 0.9, 95% CI = 0.7-1.1) ([Table 2](#)). The median number of personal displays was 14.5 items for women (IQR = 8.0-25.0) and 6.0 items for men (IQR = 3.0-15.0), resulting in a significant difference in the rates of personal displays by women compared with men (IRR = 1.7, 95% CI = 1.4-1.9, $p < 0.001$; [Table 3](#)).

In multivariable Poisson regression, these relationships were maintained with no significant difference in the rate of professional displays (IRR = 1.1, 95% CI = 0.8-1.4) but a significant increase in the display rate of personal items by women (IRR = 1.4, 95% CI = 1.2-1.7, $p < 0.001$). For the PPD_i, there was no significant difference between genders.

Specialty and rank were significantly correlated with the number of awards displayed in the studied offices. Both

Table 2. Professional and personal displays by physician and office characteristics

Characteristic	Median professional displays (IQR)	Median personal displays (IQR)
Physician characteristics		
Sex		
Female	5.0 (3.0-9.0)	14.5 (8.0-25.0)
Male	6.0 (2.0-12.0)	6.0 (3.0-15.0)
Generation		
Millennial (< 37 y)	3.0 (1.0-5.0)	6.0 (4.0-11.0)
Generation X (37-52 y)	5.0 (3.0-10.5)	11.0 (5.0-18.0)
Baby boomer (> 52 y)	7.5 (5.0-12.0)	19.5 (8.0-25.0)
Academic rank		
Clinical instructor/assistant professor	3.5 (2.0-7.0)	7.5 (4.5-14.5)
Associate professor	7.0 (3.5-12.5)	9.5 (5.0-16.5)
Professor	8.5 (6.5-10.0)	22.5 (14.5-29.5)
Specialty		
Emergency medicine	6.0 (3.0-14.0)	6.0 (3.0-15.0)
Internal medicine	5.0 (3.0-11.0)	16.0 (2.0-29.0)
Surgery	5.0 (2.0-7.0)	12.0 (7.0-23.0)
Office characteristics		
Presence of a window		
No	9.0 (3.0-10.0)	6.0 (2.0-8.0)
Yes	5 (2.0-10.0)	12.0 (6.0-21.0)
Occupancy		
Shared	4.5 (2.0-9.0)	8.0 (5.0-14.0)
Private	5.5 (3.0-11.0)	11.5 (5.0-21.0)

IQR = interquartile range.

internal medicine and surgery specialists had a lower rate of professional items displayed compared with emergency medicine (IRR = 0.7, IRR = 0.6; [Table 3](#)). There was no significant difference between the internal medicine and surgery specialties. Associate and full professors also displayed professional items at a higher rate (IRR = 1.8, IRR = 1.8, respectively; [Table 3](#)) with no significant difference between associate and full professors.

Specialty, rank, generation, and the presence of a window were all correlated with the rate of personal item display. Physicians in internal medicine and surgery displayed personal items at a higher rate compared with emergency medicine physicians (IRR = 1.5, IRR = 1.6, respectively; [Table 4](#)). There was no difference between internal medicine and surgery. Full professors displayed personal items at a higher rate than assistant or associate professors (IRR = 1.6; [Table 4](#)). Generation X members and baby boomers displayed personal items at a higher rate compared with millennials (IRR = 2.2, IRR = 2.2; [Table 4](#)). Individuals whose office had a window also displayed personal items at a higher rate than those without a

Characteristic	Professional display		Personal display		PPDi	
	IRR (95% CI)	p Value	IRR (95% CI)	p Value	RR (95% CI)	p Value
Participant characteristics						
Male	1 [Reference]	—	1 [Reference]	—	0 [Reference]	—
Female	0.9 (0.7-1.1)	0.2	1.7 (1.4-1.9)	< 0.001	7.5 (1.3-13.7)	0.02
Generation						
Millennial (< 37 y)	1 [Reference]	—	1 [Reference]	—	0 [Reference]	—
Generation X (37-52 y)	2 (1.3-3.1)	0.003	1.9 (1.4-2.6)	< 0.001	2.7 (-7.4 to 12.8)	0.17
Baby boomer (> 52 y)	2.3 (1.4-3.7)	0.001	2.4 (1.7-3.4)	< 0.001	5.3 (-6.5 to 17.0)	0.18
Academic rank						
Clinical instructor/assistant professor	1 [Reference]	—	1 [Reference]	—	0 [Reference]	—
Associate professor	1.9 (1.5-2.4)	< 0.001	0.9 (0.8-1.1)	0.5	-4.8 (-11.8 to 2.2)	0.17
Professor	1.7 (1.3-2.4)	< 0.001	1.8 (1.5-2.2)	< 0.001	6 (-2.8 to 14.9)	0.18
Specialty						
Emergency medicine	1 [Reference]	—	1 [Reference]	—	0 [Reference]	—
Internal medicine	0.8 (0.6-1.1)	0.1	2.0 (1.6-2.4)	< 0.001	11.0 (2.8-19.1)	0.009
Surgery	0.6 (0.5-0.8)	< 0.001	1.6 (1.3-1.9)	< 0.001	8.7 (2.0-15.5)	0.012
Office characteristics						
No window	1 [Reference]	—	1 [Reference]	—	0 [Reference]	—
Presence of a window	0.9 (0.7-1.3)	0.6	2.8 (2.0-4.0)	< 0.001	9.8 (0.98-18.6)	0.03
Shared office	1 [Reference]	—	1 [Reference]	—	0 [Reference]	—
Private office	1.2 (0.9-1.5)	0.2	1.4 (1.2-1.7)	< 0.001	3.3 (-3.7 to 10.5)	0.4

CI = confidence interval; IRR = incidence rate ratio; PPDi = personal professional display index; RR = rate ratio.

Characteristic	Professional display		Personal display		PPDi	
	IRR (95% CI)	p Value	IRR (95% CI)	p Value	RR (95% CI)	p Value
Male	1 [Reference]	—	1 [Reference]	—	0 [Reference]	—
Female	1.1 (0.8-1.4)	0.6	1.4 (1.2-1.7)	< 0.001	3.4 (-3.1 to 9.9)	0.3
Generation						
Millennial (< 37 y)	—	—	1 [Reference]	—	—	—
Generation X (37-52 y)	—	—	2.2 (1.5-3.1)	< 0.001	—	—
Baby boomer (> 52 y)	—	—	2.2 (1.5-3.3)	< 0.001	—	—
Specialty						
Emergency medicine	1 [Reference]	—	1 [Reference]	—	0 [Reference]	—
Internal medicine	0.7 (0.5-0.9)	0.03	1.5 (1.2-1.9)	0.001	9.6 (1.4-17.8)	0.02
Surgery	0.6 (0.5-0.8)	0.01	1.6 (1.3-2.0)	< 0.001	8.1 (1.0-15.2)	0.03
Academic rank						
Clinical instructor/assistant professor	1 [Reference]	—	1 [Reference]	—	—	—
Associate professor	1.8 (1.4-2.4)	< 0.001	0.9 (0.7-1.1)	0.2	—	—
Professor	1.8 (1.3-2.5)	< 0.001	1.6 (1.2-2.1)	0.001	—	—
No window	—	—	1 [Reference]	—	1 [Reference]	—
Presence of a window	—	—	2.9 (2.0-4.1)	< 0.001	9.7 (1.5-17.9)	0.02

CI = confidence interval; IRR = incidence rate ratio; PPDi = personal professional display index; RR = rate ratio.

window (IRR = 2.9; Table 4). Similarly, those with a window had a higher PPDi (rate ratio [RR] = 9.7; Table 4), as did internal medicine specialists (RR = 9.6) and surgery faculty (RR = 8.1).

DISCUSSION

As an underrepresented group in science, technology, engineering, and mathematics and specifically in the higher ranks of academic medicine, women, it has been argued,

should be encouraged to display their diplomas as a way to provide validation to those they mentor and to counteract imposter syndrome.⁷ In fact, contemporary culture illustrates this, as demonstrated on Twitter by #hangupyourdiplomas. In this convenience sample at a single academic institution, men and women displayed their academic achievements at equal rates, suggesting either a shift in current acceptable female behavior or a push against social expectations.⁸

However, women displayed personal items at a higher rate compared with men. This finding is consistent with findings of workers in other office-based industries.⁹ Higher rates of personal displays have also been suggested to lead to higher levels of wellness.¹⁰ Although cause and effect cannot be determined from this study, the gender difference seen in personal displays may reflect a coping mechanism by female physicians to improve wellness as they shoulder increased home-life demands in addition to academic careers.¹¹⁻¹³ Alternatively, it may be reflective of the work/family narrative pervasive throughout our society, demonstrating the social expectation that women focus more on family, whereas men focus primarily on work, despite both genders having equal work-home demands.¹⁴ In future studies researchers may want to examine the correlation between rates of personal displays with physician wellness in academic medicine.

Those participants at a higher academic rank displayed more professional items. Most logically, those who have reached the level of associate or full professor have also earned more degrees and awards. However, it may also be that those who self-promote via office displays of their achievements are more likely to get promoted. Future studies may examine the offices of assistant professors and prospectively follow up with them through the promotion process. There were also differences observed between generations, perhaps consistent with previous work in the social sciences that has identified generational differences in workplace values.⁶ Qualitative evaluation of attitudes in office displays compared across generations may also help to explain differences observed, especially in light of previously documented shifting work attitudes between generations, with work identified as less central and younger generations focusing on work-life balance earlier.⁶

Higher display rates of professional items were found in emergency medicine physicians' offices compared with those in internal medicine and surgery. As first point of contact, emergency medicine physicians have described feeling critiqued through a "retrospectroscope."^{15,16} Professional displays may represent an adaptive response to their work environment or may reflect the personality types generally represented in each specialty.

In addition, higher rates of personal displays were seen in offices with windows. In previous research, offices with

windows have been shown to increase job satisfaction.¹⁷ Although causal associations cannot be determined in this study, we postulate that this increased satisfaction leads to increased personalization of the office space.

The current study was a single-center convenience sample and, as such, the findings may not be generalizable to other institutions or specialties not included in this analysis. In addition, gender, treated as a binary variable, was assumed on the basis of the participant's name and appearance and consequently may not reflect the individual's true gender; transgender and agender were not identified.

CONCLUSION

As the first of its kind, this study provides preliminary results for hypothesis generation and self-reflection regarding gender differences in the display of personal and professional items in medical faculty offices. Although we offer several hypotheses for the findings in this study, these are not exhaustive, and other, unidentified reasons may be the cause.

Future studies should correlate gender, physician wellness, and office characteristics. In fact, we encourage you to look around your office and reflect: What is hanging on your wall? Why is it there? How does it affect you and those with whom you interact? ♦

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

Acknowledgments

Kathleen Loudon, ELS, of Loudon Health Communications performed a primary copyedit.

Authors' Contributions

Katelyn Moretti, MD, and Andrew Musits, MD, MS, participated in study design, data collection, critical review, analysis of the data, and drafting and submission of the final manuscript. Alyson McGregor, MD, MA, and Adam Aluisio, MD, MSc, participated in data analysis and drafting and submission of the final manuscript. All authors have given final approval to the manuscript.

How to Cite this Article

Moretti K, Musits A, McGregor A, Aluisio A. Let's get personal: Academic office displays and gender. *Perm J* 2020;24:19.237. DOI: <https://doi.org/10.7812/TPP/19.237>

References

1. Morgan AU, Chaiyachati KH, Weissman GE, Liao JM. Eliminating gender-based bias in academic medicine: More than naming the "Elephant in the Room". *J Gen Intern Med* 2018 Jun;33(6):966-8. DOI: <https://doi.org/10.1007/s11606-018-4411-0>
2. Carnes M, Bartels CM, Kaatz A, Kolehmainen C. Why is John more likely to become department chair than Jennifer? *Trans Am Clin Climatol Assoc* 2015 Jan;126:197-214. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4530686/>
3. Rivera-Torres P, Araque-Padilla R, Montero-Simó M. Job stress across gender: The importance of emotional and intellectual demands and social support in women. *Int J Environ Res Public Health* 2013 Jan;10(1):375-89. DOI: <https://doi.org/10.3390/ijerph10010375>
4. Moss-Racusin CA, Phelan JE, Rudman LA. When men break the gender rules: Status incongruity and backlash against modest men. *Psychol Men Masc* 2010 Apr;11(2):140-51. DOI: <https://doi.org/10.1037/a0018093>

5. Colby S. Talkin' 'bout our generations: Will millennials have a similar impact on America's institutions as the baby boomers? Washington, DC: US Census Bureau; 2015 May 4 [cited 2020 Jul 6]. Available from: <https://www.census.gov/newsroom/blogs/research-matters/2015/05/talkin-bout-our-generations-will-millennials-have-a-similar-impact-on-americas-institutions-as-the-baby-boomers.html>.
6. Twenge JM. A review of the empirical evidence on generational differences in work attitudes. *J Bus Psychol* 2010 Feb;25(2):201-10. DOI: <https://doi.org/10.1007/s10869-010-9165-6>
7. Beamer P. Why you should display your diploma. *Time* 2016 May 16 [cited 2020 Jul 6]. Available from: <https://time.com/4330143/hang-up-your-diploma/>.
8. Eagly AH, Karau SJ. Role congruity theory of prejudice toward female leaders. *Psychol Rev* 2002 Jul;109(3):573-98. DOI: <https://doi.org/10.1037/0033-295x.109.3.573>
9. Wells MM. Office clutter or meaningful personal displays: The role of office personalization in employee and organizational well-being. *J Environ Psychol* 2000 Sep; 20(3):239-55. DOI: <https://doi.org/10.1006/jevp.1999.0166>
10. Becker F, Steele F. The total workplace. *Facilities* 1990 Mar;8(3):9-14. DOI: <https://doi.org/10.1108/eum0000000002099>
11. Jolly S, Griffith KA, DeCastro R, Stewart A, Ubel P, Jaggi R. Gender differences in time spent on parenting and domestic responsibilities by high-achieving young physician-researchers. *Ann Intern Med* 2014;160(5):344-53. DOI: <https://doi.org/10.7326/m13-0974>
12. Carr PL, Ash AS, Friedman RH, Szalacha L, Barnett RC, Palepu A, Moskowitz MM. Faculty perceptions of gender discrimination and sexual harassment in academic medicine. *Ann Intern Med* 2000 Jun;132(11):889-96. DOI: <https://doi.org/10.7326/0003-4819-132-11-200006060-00007>
13. Ash DL, Newbill SL, Cardinali G, Morahan PS, Chang S, Magrane D. Narratives of participants in national career development programs for women in academic medicine: Identifying the opportunities for strategic investment. *J Women's Health* 2016 Mar;25(4): 360-70. DOI: <https://doi.org/10.1089/jwh.2015.5354>
14. Ely RJ, Padavic I. What's really holding women back? *Harvard Business Review* 2020 Mar-Apr [cited 2020 Jul 6]. Available from: <https://hbr.org/2020/03/whats-really-holding-women-back>.
15. Louie TA, Rajan MN, Sibley RE. Tackling the Monday-morning quarterback: Applications of hindsight bias in decision-making settings. *Soc Cog* 2007 Feb;25(1):32-47. DOI: <https://doi.org/10.1521/soco.2007.25.1.32>
16. Peth HA. High-risk presentations in emergency medicine. *Emerg Med Clin North Am* 2003 Feb;21(1):xv-xvii. DOI: [https://doi.org/10.1016/s0733-8627\(02\)00088-3](https://doi.org/10.1016/s0733-8627(02)00088-3)
17. Dravigne A, Waliczek TM, Lineberger RD, Zajicek JM. The effect of live plants and window views of green spaces on employee perceptions of job satisfaction. *HortScience* 2008 Feb;43(1):183-7. DOI: <https://doi.org/10.21273/hortsci.43.1.183>