

# Where are the Women?: Examining Two Programs for the Advancement of Post-Doctoral and Senior Faculty Women in STEM

T. Brace, E. Winterrowd, PhD, J.E. Mihalick, PhD  
University of Wisconsin Oshkosh



## Study 1: Post-Doc Scholars

### Introduction

Female post-doctoral scholars in science, technology, engineering, and mathematics (STEM) tend to be isolated in their fields and lack networking opportunities that promote interest in and knowledge of academic positions available to them, leading to lower rates of applications to tenure-track academic positions (NRC, 2010).

The current study evaluated the 1st year of a post-doctoral program designed to increase interest in, knowledge of, and preparedness for pursuing a STEM career at primarily undergraduate institutions (PUIs).

### Method

❖ **Participants:** 10 post-doctoral women were recruited for Year 1 of the program.

❖ **Program:** The participants gave research seminars at PUIs, and had additional career discussions with undergraduates and faculty in the host departments.

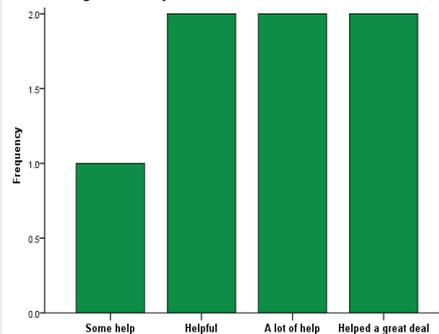
❖ **Surveys:** A preliminary and post survey measured the participants' interest in and knowledge of tenure-track positions at PUIs. All 10 women took the preliminary survey, 7 responded to the post program survey.

### Results & Discussion

✓ Participants' found the program to be helpful for increasing knowledge of careers at PUIs (Fig 1).

✓ 4 of 7 participants had applied to at least 1 PUI (8 out of 10 originally indicated they were likely to pursue an academic career).

Fig 1: "Extent that seminar experience increased knowledge of faculty and careers at institutions visited."



As this program continues, we hope to see women becoming more interested in and knowledgeable of PUIs resulting in additional applications to academic positions at PUIs.

## Study 2: Senior Faculty

### Introduction

Senior female faculty are underrepresented in STEM departments resulting in isolation and lack of support. This is particularly apparent at the PUIs within the UW System. Because of this isolation, these women lack female role models. Research suggests that mentoring is crucial to female faculty feeling connected to their field, accessing important information such as salary, and decreasing overall isolation (Hill, 2010; NRC, 2010).

The current study presents results from the 1<sup>st</sup> of five years of a faculty horizontal mentoring program which is designed to reduce isolation for senior female faculty as well as increase professional accomplishments and career success.

### Method

❖ **Participants:** 37 isolated female faculty from various STEM departments at the 11 UW System PUI's were invited to participate. 14 were able to meet for an initial meeting. A group of 8 participants were randomly selected to participate in semi-structured interviews.

❖ **Program:** Participants formed subgroups based on their discipline. Each group was asked to share information about different aspects of their careers as well as develop short and long term career goals for themselves and for their group.

❖ **Surveys & Semi-structured Interviews:** Preliminary and follow-up surveys were filled out and interviews were conducted to gather information regarding career experiences, goals, and mentors.

### Results & Discussion

In the interviews, female faculty revealed their struggles, support networks, and achievements. Themes were constructed from the participants' experiences:

**Explicit sexism:** One woman described struggling with sexism prior to being hired at her current academic institution:

*"...it was the only department that did not ask me any questions about my husband or if I was married...He's not applying for the job, I am."*

**Playboys & strippers:** Another participant described sexism in graduate school.

*"...people who had playboy in their drawer... in the lab drawers and I mean it's sort of a mild thing, right? Then there were the strippers to the tenure parties..."*

### Burned out:

*"By the time I had tenure, I felt burned out, and I don't have kids, so I can't imagine what it would be like in my department to be a woman with kids."*

**Providing Advocacy:** Participants gave back through advocacy and organizing of events for women faculty.

*"We have a women faculty and staff potluck and you can either bring a bottle of wine or a dish to pass and the place is jam packed and they walk in about 5 and at about 9:30, you know, the last leave"*

**Difficulty finding a mentor/loss of mentors:** Several participants expressed frustration with not having a mentor when they needed one.



### Funding

This study was funded by a NSF 10-593 ADVANCE grant #1106646 awarded to the second and third authors.

### References

- Hill, (2010). *Why so few? Women in Science, Technology, Engineering, and Mathematics.*
- National Research Council, (2010). *Gender differences at Critical Transitions in the Careers of Science, Engineering, and Mathematics Faculty.*

### Contact Information

Erin Winterrowd, Ph.D.  
Assistant Professor, Psychology  
University of Wisconsin Oshkosh  
winterre@uwosh.edu

