

# Advancing Senior Faculty Women in Science and Engineering in the University of Wisconsin System

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## Introduction

In the U.S., women are consistently underrepresented at the associate professor and professor ranks in science, technology, engineering, and math (STEM) fields. Primarily undergraduate institutions (PUIs), such as the 11 UW System comprehensive universities, are large enough in size to employ a number of female professors in STEM fields, but small enough that a significant concentration of women scientists are hard to find. For instance, many UW System comprehensive universities employ only a single female full professor or a single female associate professor in STEM departments (herein referred to as isolated faculty). Women at such universities may lack role models for professional success. Previous research suggests that mentoring is crucial to female faculty feeling connected to their field, accessing important information such as salary, and decreasing overall isolation.

Using an ADVANCE PAID grant awarded by the National Science Foundation, the UW System Women and Science Program developed a horizontal mentoring program that targets isolated female faculty from the 11 comprehensive universities. The program was designed to decrease isolation within participating faculty as well as increase professional accomplishments and career success. The current poster describes participants' attitudes and experiences prior to participation in the five-year program. We expected participants to be slow in their career development and advancement due to strong feelings of isolation and lack of support.

## Method

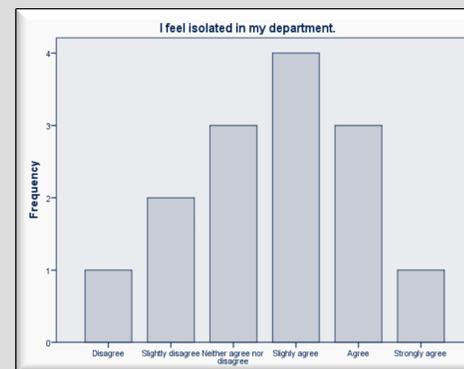
- 37 isolated female faculty in various STEM fields (e.g. Biology, Chemistry, Computer Science, Engineering, Mathematics, Geology, and Physics) at the 11 UW System comprehensive universities were identified and invited to participate in the program. 14 were able to attend an initial meeting in a central location.
- Participants formed subgroups based on their discipline and were asked to share information about their courses, research projects, and service activities, and to develop short and long term career goals for themselves and for their groups.

The meeting also included professional development/leadership workshops led by an outside consultant.

- Participants completed a preliminary survey as part of participation in the program. The survey assessed workplace experiences and identified professional goals and mentors. Participants will be instructed to fill out the survey every year of the program.
- A subset of 10 participants was randomly selected to participate in interviews to gather additional information regarding career experiences, goals, mentors, and expectations in a less structured manner. They will be interviewed again at years 3 and 5.

## Results

Participating faculty revealed that they continuously struggle with gender discrimination within their fields and lack mentors to assist them in advancement in their careers. Of the 14 participants, 8 claimed in survey response that they feel at least somewhat isolated within their department. Interviews resulted in similar responses:

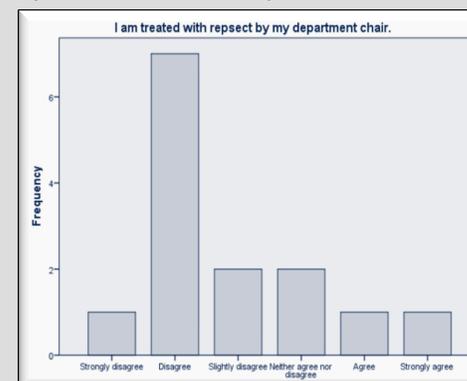


*"I'm the only tenure woman there"*

*"I am the only female in my department... I usually end up talking to women in other departments."*

Isolated faculty also described a lack of respect from students and their department chair. Six participants disagreed or strongly disagreed that they are treated with respect by their students. In one interview a women, when asked why she agreed to participate in the program, claimed her class evaluations tend to be a little lower and was wondering if it is because she is female. More surprisingly, 10 of the 14 participants indicated they at

least slightly disagree that they are treated with respect by their department chair. One participant even explained an incident involving promotion to department chair. The dean of the college was reluctant to promote a female faculty member over a male faculty from another college because the female faculty had no department chair



experience, whereas the male professor did. A female colleague responded to the dean with this statement:

*"How about the other department chairs that you have that are all men? Did they have any experience before you appointed them as department chair?"*

The dean responded by confirming it was never a requirement before and was unable to provide reasonable explanation as to why he would require experience of the female faculty candidate in question. Such instances of advocacy were often described by participants.

Though many women revealed negative experiences, half of the women indicated they were satisfied with career progression. Further, half the participants felt they were usually satisfied with the way they balance their professional and personal lives.



## Discussion

In line with our expectations, senior female faculty in the UW System claim to lack professional female mentors. Further, faculty report feeling they are treated unfairly by students and/or department chairs. Contrary to our predictions, half of the participants seem at least somewhat satisfied with their career progression and/or believe they are successful in balancing their professional and personal lives. Though not all participants are experiencing a lack of career progression and/or satisfaction, we expect that following participation in the mentoring program, participants will have increased career success and satisfaction due to decreased overall isolation. Consequently, we expect an overall advancement in the involvement of women in STEM in the UW System.

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