



# Beyond Traditional Scientific Training: The Importance of Community and Empowerment for Women in Ecology and Evolutionary Biology

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While the biological sciences have achieved gender parity in the undergraduate and graduate career stages, this is not the case at the faculty level. The WEBS (Women Evolving the Biological Sciences) symposia go beyond traditional scientific training and professional development to address factors critical to women's persistence in faculty careers: community and empowerment. Through a series of panel discussions, personal reflections and skills workshops, WEBS creates a community-based professional development experience and a space for participants to grapple with central issues affecting their scientific careers. Longitudinal qualitative survey data suggest that WEBS bolsters the participants' confidence and empowerment, in addition to providing concrete skills for addressing a range of issues necessary to navigating scientific careers, leading to increased career satisfaction and career self-efficacy (i.e., the belief in one's capacity to pursue their chosen career). These results highlight the importance and need for programs and opportunities for women in STEM that go beyond training in scientific skills and traditional professional development to include those that create a sense of community and empowerment.

**Keywords:** female faculty, persistence, professional development, mentoring, networking, women in STEM, community, empowerment

## INTRODUCTION

Diversity within the fields of ecology and evolutionary biology remains relatively low. For example, the membership of the Ecological Society of America remains disproportionately composed for white males; from 1979 to 2012 the percentage of women increased from 23 to 37%, and the percentage of underrepresented minorities, including Hispanic American, African American, and Native American increased from 4 to 9% (Beck et al., 2014). Diversity is similarly low in fisheries and natural resource management (Kern et al., 2015; Arismendi and Penaluna, 2016).

Numerous studies explore why women not only comprise a smaller proportion of the field, but also have higher attrition rates than men in science, technology, engineering, and mathematics

(STEM) as they advance through their academic careers (Xie and Shauman, 2006; Martinez et al., 2007; Blau et al., 2010; Feeney and Bernal, 2010; Goulden et al., 2011; Glass et al., 2013; Arismendi and Penaluna, 2016). These losses of talented individuals from academic “pipeline,” better termed the career development pathways (Cannady et al., 2014; Gibbs and Marsteller, 2016; Metcalf, 2016), occur even in fields where women are well represented in the student ranks. Biology, for example, loses women at every stage of tenure track careers, particularly during the transition from graduate student and postdoctoral scholar to faculty (Martinez et al., 2007; National Science Foundation, 2012; nsf.gov—Science and Engineering Degrees, by Race/Ethnicity of Recipients: 2002–12—NCSES—US National Science Foundation (NSF; Shaw and Stanton, 2012).

The postdoctoral career stage is underserved in the academy in terms of professional development support and access to networking opportunities (although the NSF now requires a Mentoring Plan) (Greenwald and Banaji, 1995; Beverly, 2007; Committee on Maximizing the Potential of Women in Academic Science Engineering et al., 2007). A career management plan and gaining leadership, time management, and other professional skills improve the likelihood of success and persistence in academic careers. Furthermore, research shows that faculty who receive regular mentoring are better prepared to navigate organizational structures and the requirements for tenure and thus, are more likely to enjoy success in their academic pursuits (Tenenbaum et al., 2001; de Janasz and Sullivan, 2004; Blau et al., 2010; Reybold et al., 2012). Numerous studies have shown that women receive less mentoring and have a more difficult time being selected as mentees than males, especially in male-dominated fields (Baugh and Scandura, 1999; Feeney and Bernal, 2010; Moody, 2012). Moreover, women often must seek formal mentors because they are not tapped as informal mentees (de Janasz and Sullivan, 2004). While more and more campuses and professional societies are implementing professional development programming for early-career faculty, the scientific community must do more to support the career advancement and success of women in STEM, particularly at this post-Ph.D. career phase when the individual and the community has already invested so much in the scientific skill set of this population. Further while there are many efforts to recruit faculty from underrepresented groups, fewer initiatives focus on ensuring that diverse faculty members thrive and are promoted and retained in academia (Misra and Lundquist, 2015). The WEBS symposia are one way to meet this need and were developed to provide early career female biologists with increased access to career development, mentoring, and networking opportunities that provide the participants with a sense of community and empowerment, and thus to maximize their career success (Katz, 2008).

## WEBS: WOMEN EVOLVING BIOLOGICAL SCIENCES

WEBS is a 4-day symposium for early career women in ecology and evolutionary biology and was originally funded

by the National Science Foundation’s ADVANCE program. From 2007 to 2013, five WEBS symposia took place, serving 142 participants from nearly 100 U.S.-based institutions. The WEBS symposia focus on the critical transition from graduate studies and postdoctoral positions to permanent research and teaching positions. **Table 1** shows the demographics of the WEBS applicant pool from 2007 and 2008, which reflect the low racial and ethnic diversity in the fields of ecology and evolutionary biology (Beck et al., 2014). Preference is given to promising biologists considered at risk of leaving academia due to lack of mentoring, career support, career satisfaction, and peer networks, and to applicants from underrepresented groups. WEBS thus targets a subset of high-potential, early career female scientists who are primed for professional development opportunities.

The WEBS program has four distinctive elements that help create a counterspace, a setting that promotes positive self-concepts among individuals from underrepresented groups (Solorzano, 1998; Case and Hunter, 2012). A counterspace can offer an opportunity for women to “combine their racial and gender identities with their science identities.... [so they can participate] comfortably, without compromising valued parts of themselves, without being seen as outsiders” (Johnson et al., 2011). Four elements of WEBS are central to the creation of such a counterspace and its transformative impact on participants: (1) strictly confidential discussions; (2) common social identity among participants (i.e., career stage and gender); (3) sharing perspectives and strategies across career stages; and (4) establishing a national network and peer cohort of female biologists. First, confidentiality and trust are central tenets of WEBS. Participants and senior scientists are required to attend the symposium in its entirety to facilitate community building and trust. Creating a space to freely share fears, concerns, and anecdotes allows participants to grapple with professional issues that have no other outlet (Johnson et al., 2011). Second, the shared female identity at WEBS allows for open conversations about science, career aspirations, career strategies, concerns, and being women in biology that are seldom found in other settings. While many career management issues may seem gender neutral on the surface, gendered expectations can play a role in an individual’s experience (Chafetz and Valian, 1999; Etzkowitz, 2000; Xie and Shauman, 2003). These elements allow the exchange of personal stories and a powerful community experience. Third, cross-career-stage personal narratives are central to the WEBS model. Participating in WEBS provides an outlet to recognize how gender and gendered expectations impact career issues, hear multiple perspectives of how the senior female scientists who serve as symposium panelists address these issues, and confirm that one’s experience is not entirely unique. The WEBS symposium places advice and tips within the context of personal narratives and individual reflections—in contrast to more traditional professional development approaches common across universities to provide new faculty support—because narrative interventions have proven successful in improving the experience and performance of individuals from underrepresented groups (Steele, 2010). Spending 4 days engaged with personal and professional stories from people who

**TABLE 1 | Demographics of the 2007 and 2008 combined applicant pools for WEBS.**

	Participants (n = 55)		Non-Participants (n = 53)		Full Sample (n = 108)	
	n	%	n	%	n	%
<b>RACE</b>						
African American/Black	0	0.00%	0	0.00%	0	0.00%
Asian Indian (Indian Subcontinent)	1	1.80%	1	1.90%	2	1.90%
Asian (e.g., Chinese, Filipino, Japanese)	3	5.50%	3	5.70%	6	5.60%
Pacific Islander	0	0.00%	0	0.00%	0	0.00%
Native American/Alaska Native	1	1.80%	0	0.00%	1	0.90%
White/Caucasian	50	90.90%	50	94.30%	100	92.60%
Other	4	7.30%	1	1.90%	5	4.60%
Missing	0	0.00%	0	0.00%	0	0.00%
<b>ETHNICITY</b>						
Hispanic	7	12.70%	3	5.70%	10	9.30%
Not Hispanic	48	87.30%	50	94.30%	98	90.70%
<b>MARITALSTATUS</b>						
Single	14	25.50%	19	35.80%	33	30.60%
Married	34	61.80%	27	50.90%	61	56.50%
Partnered	4	7.30%	6	11.30%	10	9.30%
Divorced/Separated	3	5.50%	1	1.90%	4	3.70%
Widowed	0	0.00%	0	0.00%	0	0.00%
<b>PARENTALSTATUS</b>						
Has children	23	41.80%	10	18.90%	33	30.60%
Does not have children	32	58.20%	43	81.10%	75	69.40%
<b>DISABILITYSTATUS</b>						
Has disability	0	0.00%	1	1.90%	1	0.90%
Does not have disability	55	100.00%	52	98.10%	107	99.10%
<b>CURRENT POSITION</b>						
Research Technician	0	0.00%	0	0.00%	0	0.00%
Lab Manager	0	0.00%	0	0.00%	0	0.00%
Postdoctoral Researcher	27	49.10%	35	66.00%	62	57.40%
Research Scientist/Staff Scientist	1	1.80%	5	9.40%	6	5.60%
Lead Research Scientist/Staff Scientist	0	0.00%	0	0.00%	0	0.00%
Lecturer	2	3.60%	2	3.80%	4	3.70%
Assistant Research Professor	1	1.80%	1	1.90%	2	1.90%
Associate Research Professor	0	0.00%	0	0.00%	0	0.00%
Research Professor	0	0.00%	0	0.00%	0	0.00%
Assistant Professor (tenure track)	19	34.50%	12	22.60%	31	28.70%
Associate Professor	0	0.00%	0	0.00%	0	0.00%
Full Professor with tenure	0	0.00%	0	0.00%	0	0.00%
Head/Chair of Department	0	0.00%	0	0.00%	0	0.00%
Other	7	12.70%	1	1.90%	8	7.40%
<b>TYPE OF INSTITUTION OF CURRENT EMPLOYMENT</b>						
Biotechnology Company	0	0.00%	0	0.00%	0	0.00%
College	5	9.10%	3	5.70%	8	7.40%
Consulting Company	0	0.00%	0	0.00%	0	0.00%
Engineering Company	0	0.00%	0	0.00%	0	0.00%
Government Institution/Agency	3	5.50%	4	7.50%	7	6.50%
Publishing Company	0	0.00%	0	0.00%	0	0.00%
Non[governmental Organization (NGO)	1	1.80%	1	1.90%	2	1.90%
Research Institution	2	3.60%	7	13.20%	9	8.30%
University	44	80.00%	40	75.50%	84	77.80%
Not currently employed	0	0.00%	0	0.00%	0	0.00%
Other	6	10.90%	1	1.90%	7	6.50%

share a common social identity allows participants to reshape their own personal narratives, feel empowered, and confident in their career decisions, and identify with successful senior scientists and with one another. Finally, WEBS addresses both career-stage and social identity isolation through establishing opportunities for ongoing peer networking and mentoring after the symposia (Thomas et al., 2015). A cohort of peer scientists becomes more and more rare as one advances up through the ranks of academia. The WEBS model fosters both within and cross-cohort community and networks to counter isolation and increase sense of belonging to the field.

These program elements are woven into a format of panel discussions with senior female scientists, personal reflections, and interactive skill-development workshops to create a community-centric professional development experience. This integrated approach provides participants with perspectives on how to navigate their career in academic science. By juxtaposing skills acquisition, discussion of central career issues, and a broad definition of a productive scientist, participants leave WEBS able to successfully implement the skills and concepts when they return back to the hectic pace of life at their home institutions. The common problem of being inspired by a professional development workshop only to return to one's pre-workshop life without implementing new skills is overcome through follow-up emails from the WEBS team to the WEBS community listserv and personal "letters to self" and symposium-generated list of tips and tools that are mailed to participants in the months following their symposium experience. In addition, and perhaps most importantly, the symposium tone and structure foster strong connections among participants and panelists, and these personal connections allow for accelerated implementation of skills and concepts to participants' professional lives. WEBS participants continue to connect with one another long after their involvement in the symposium experience though the listserv and informal gatherings at annual meetings such as those of the Ecological Society of American and the Society of Evolution.

## ASSESSING THE IMPACT OF WEBS

Here we highlight the importance of programs for women in STEM that go beyond training in scientific skills and traditional professional development to include approaches and opportunities that create a sense of community and empowerment for women and other underrepresented groups in STEM. We use data collected from evaluation surveys to assess the longitudinal impact of the WEBS symposium on the participants (see Supplementary Material for WEBS Application). We administered surveys at the time of application, and 6-months and 18-months after the symposium. Numerous studies have found evidence supporting the use of self-reported metrics (Hough et al., 1990; Agho et al., 1992). Within the context of evaluating WEBS, self-reported metrics are both justifiable and necessary to assess constructs that are self-referential respondent perceptions such as job satisfaction and career self-efficacy (the

"belief one has in being able to execute a specific task successfully" (Bandura, 1986). However, as this discussion relies on self-reported metrics, there is a possibility of social desirability bias impacting our results.

Fifty-two participants responded to the surveys from the 2007 and 2008 participant cohorts. Due to our participant selection criteria, non-accepted applicants are not an ideal comparison group, and we were unable to follow-up with the non-participants due to funding constraints. The surveys measured self-reported skill development, mentoring relationships, networking activity, and career satisfaction and progression. The surveys contained several open-ended questions, asking respondents to describe both their current career trajectories and the impact of the symposium on their careers. Most responses were long and detailed, explaining the transformative impact of WEBS on their career skills, satisfaction, and their overall career perspectives. Thus, the WEBS surveys are a rich source of qualitative data about the experiences of pre-tenure track female faculty and postdoctoral scientists and the processes they undergo in the decision to pursue an academic path. These qualitative data were analyzed using *a priori* coding based on the program's goals while also allowing for emergent coding (Strauss, 1987; Strauss and Corbin, 1998). We used a grounded theory approach of open coding to identify new concepts through the participants' narratives (Strauss, 1987; Strauss and Corbin, 1998). Coding was performed in an iterative fashion as follows: every code uncovered in the analysis was at first considered provisional until it was found to be repeatedly present in the survey responses. In later iterations, codes were grouped into categories; these categories were carefully defined in regards to their relationship to the evolving WEBS theory of change. Categories were compared, to ensure precision (grouping of like and only like phenomena) and consistency (always grouping like with like). Theoretical memos were developed throughout the coding process to assist in integration of the overall analysis. Emergent categories from this coding included job change expectations, career progression, and empowerment and self-efficacy.

Here we highlight self-reported data from WEBS participants that describes the program's impact with representative responses from the follow-up surveys administered after the 2007 and 2008 WEBS symposia. Quotations were selected based to represent overall trends found in the data, providing an opportunity to present the impact of the program in the participants' own words. This is a widely used method for describing trends in the data (Sandelowski, 1994; Corden and Sainsbury, 2006). The 2007 cohort was comprised of 30 participants; of these, 28 responded to each of the follow-up surveys and 26 individuals responded to both follow-up surveys. The 2008 cohort was comprised of 28 individuals; of these, 26 responded to the first follow-up survey, 24 responded to the second follow-up survey, and 22 responded to both follow-up surveys. Thus, the response rate ranged from of 64 to 93% depending on cohort and time point with all of the participants, in both cohorts, responding to at least one follow-up survey. None of the survey indicators predicted future survey response likelihood (i.e., no individual-level characteristics as measured on the surveys were associated

with whether an individual completed to the follow-up surveys); thus, the two follow-up samples are representative of the original group. The qualitative data from these responses allow us to use the participants' own words to capture the transformative impact of WEBS. The WEBS content and program did not differ substantially between the 2007 and 2008 cohorts, and no significant differences between the cohorts emerged from the survey data; thus these cohorts are treated as one group.

## WEBS PROGRAM FRAMEWORK

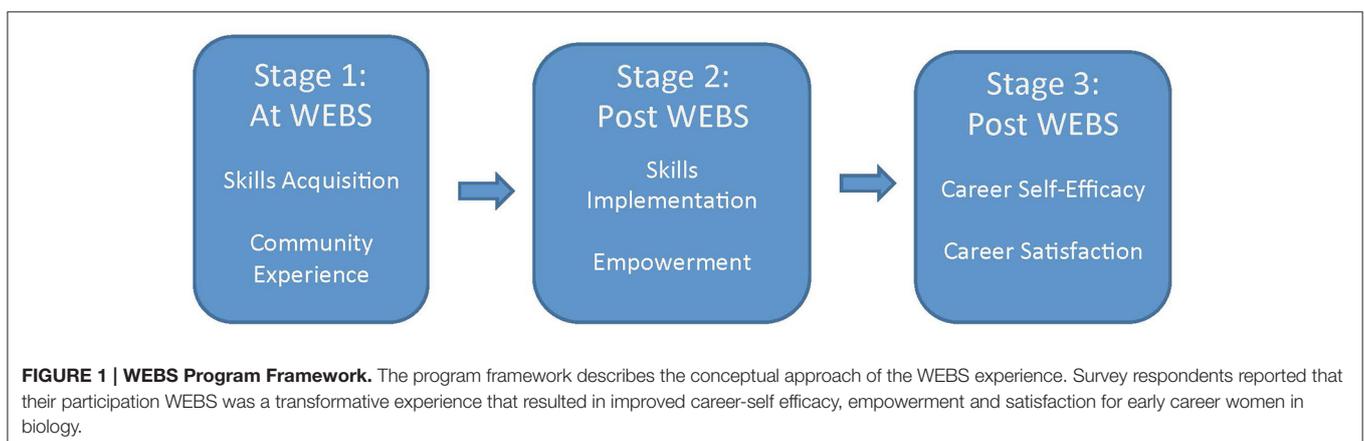
Career behavior is a result of interactions among self-efficacy, outcome expectations, and goals (Lent et al., 1994). The WEBS symposium creates a space for participants to feel empowered and increase their confidence in pursuing their chosen career (i.e., career self-efficacy Bandura, 1986), better estimate what course of actions they need to take to achieve their intended career outcomes (i.e., career outcome expectations, Bandura, 1997), and take measures to implement the skills and activities needed to achieve their career goals. The WEBS program framework (Figure 1) describes our conceptual approach to providing a sense of community and empowerment for participants. After experiencing WEBS (Figure 1, Stage 1), participants report that they can successfully implement the skills from WEBS and also feel more empowered in pursuing the career and life they desire (Figure 1, Stage 2). These actions result in increased empowerment, career self-efficacy, and satisfaction (Figure 1, Stage 3). The evaluation data from the surveys reflect this program framework, demonstrate the transformative experience, and highlight the far-reaching impacts of participation. Our approach also illustrates that it takes more than just skills acquisition and professional development to support the career success and retention of women in EEB. Cultivating community connections and a sense of empowerment are critical to retention efforts.

**Stage 1. At WEBS: Skills Acquisition and Community Experience** Scientific and career skills are necessary but not sufficient for thriving in a scientific career. Connecting to a scientific community is also critical to retention. WEBS participants gained access to both skills acquisition and

community development. First the WEBS symposia provides a community-centric experience and safe venue to connect with peers and senior women scientists, particularly on issues which are often more acute for women than men (McGuire et al., 2012). Eighteen months after WEBS, a participant writes “[I] realized there are a lot more females who are dealing with the same sorts of issues and concerns—inherent in choosing to work in a male-dominated arena. It gave me more confidence to keep plodding ahead, despite obstacles.” Participants are able to explore issues not often openly raised in front of colleagues at their home institutions, and address the broader context of how life and career are tightly intertwined and how guilt, doubt, inertia or isolation hamper changing patterns impeding career satisfaction and progression. A participant notes, six months after attending WEBS, that “WEBS has been a pivotal experience for me. I felt quite isolated prior to WEBS, and having this retreat where so many women from different experiences and levels came together and were able to share so much really gave me much more confidence and insight into how to move forward in life more effectively and more happily.”

Second, participants report that WEBS successfully provided them with a suite of career development skills. Six months after their symposium experience, 98% of survey respondents report positive changes in skills acquired during the symposium. Eighteen months later, 87% still voluntarily mention positive changes in their skills due to WEBS in their survey responses. Participants cite a long list of skills which improved as a result of WEBS, such as mentoring, networking, accessing resources, time management, scheduled writing periods, preparation to progress in their career, conflict management, teaching, self-promotion, grant writing, improved research, and/or teaching statements, contact with research funders, lab management, and developing collaborations. The quality of language used in the responses about skills acquisition and improvement is striking, as this representative statement shows: “WEBS awakened me to new possibilities”; [WEBS] gave me a great skill set that I can now pass along to my group (students and post-docs)... Getting a useful skill set was HUGE.”

**Stage 2. Post-WEBS: Skills Implementation and Empowerment.** It is one thing to acquire new skills; it is



another thing to implement those new skills. An increased sense of empowerment and the career skills in hand for crafting the scientific career one desires is a powerful combination (Bandura, 1986, 1997; McGuire et al., 2012). Stage 2 reflects the participants' evolution to increased career self-efficacy and satisfaction by implementing their newfound skills and feeling empowered to create the careers they desire. The following quotation from a participant 6 months after WEBS illustrates deep impact of skills implementation reported by WEBS participants: *"I have a better understanding of what questions to ask (my department head, the dean...), where to go for information, how people get to where they are in their career, how to be a better mentor and teacher... I took a lot of tools away that I use daily and that I have encouraged my students to adopt."* Tools and skills improvement reported by participants include time management, lab management, self-promotion, and conflict management, among others. Furthermore, the network formed at WEBS serves to support participants in implementing new skills. A WEBS alumna highlights this point years after attending WEBS herself in a reference letter she wrote for a 2013 WEBS applicant. *"I know that [the applicant] will meet a cadre of women at similar type institutions that will learn a great deal from one another. This, I feel, is the hidden jewel of WEBS. The contacts I made have been extremely helpful in continuing what I learned while at the conference."* A 2007 participant noted that the relationships she made at WEBS helped hold her accountable in implementing her newly learned skills: *"I write for 1–2 h every morning now before the rest of my day gets crazy. I have another WEBS participant with whom I check in weekly—that keeps me mindful of my writing goals especially. I have made a point of seeking out a couple research collaborations that have turned into very productive and enjoyable ventures."*

Nearly all respondents report feelings of empowerment six and even 18 months beyond the symposium (92 and 94%, respectively, of survey respondents,  $n = 48$  and  $n = 46$ ). Empowerment in professional development includes the ability to clarify goals, define success for oneself, be more vocal about needs and realize one is not alone. Respondents comment on being a more proactive mentee, realizing the importance of mentoring, discussing gender issues with a mentor, finding a mentor at WEBS, being more proactive in seeking networking opportunities, and feeling less isolated due to networking. This sense of empowerment is described as increased confidence, improved attitude, and redefining success. For example, one participant writes on the 6-month survey, *"I have rewritten sections of my CV and am more positive about my abilities and the statement of what I can (and will do) in the future with my research. I have also started contacting the chair of search committees to ask for advice for future applications. This, for me, takes a lot of courage."*

**Stage 3. Post WEBS: Career Self-Efficacy and Satisfaction.** Because of the career stage targeted by WEBS, most participants are, by definition, in career transition. The time between postdoctoral status and a tenure-track or other permanent position is often fraught with anxiety and uncertainty, and 94% of participants made negative statements about their job satisfaction at the time of their application. These statements range from

comments about lack of career progression, to having no support network, to struggling with time management, to struggling to meet job expectations, to feeling uncertain about the future. Participants report that the WEBS symposia have strong, positive effects on them and reduce these negative feelings by over 50% 6 months after the symposium. WEBS empowers participants to take charge of their career paths and ultimately results in increased career self-efficacy.

Furthermore, one participant notes 18 months post-WEBS that *"I have taken on more leadership roles; WEBS helped me realize that the challenges I faced were not unique to my own experience. I am now also more proactive in charting the course of my own career."* Another response 18 months post-WEBS indicates a similar increase in self-efficacy, *"I especially feel like my confidence and proactive efforts to look for mentorship, collaboration and help outside of my institution have gone way up. This is important in helping me navigate the ups and downs of life in a small department."* Such improvements in self-efficacy have been shown to result in successful outcomes and increases in work-related performance (Bandura, 1997; Cech et al., 2011).

Participants report that WEBS directly impacts their career satisfaction, self-efficacy, and development and empowers them to navigate a path suitable for their unique career and life satisfaction. One participant illustrates this sentiment on the 6-month follow-up survey, writing *"Since WEBS, I have been exploring options and thinking about what I want for my career, and my current (post-WEBS) path feels much more like me, and much more satisfying... it was a profoundly life-changing experience for me."* Another participant illustrates implementing concrete skills and strategies by saying, *"I called my program officer! (This was one of the tips that got a lot of emphasis at the conference). I am now developing an NSF proposal with another junior female researcher, and we have both benefited from the guidance on grant-writing and preparation that I got at WEBS. I have been much more proactive about emailing potential collaborators and making contacts. I have started using a writing/work log and the working in small chunks of time strategy to try and improve my productivity."*

In sum, WEBS transforms participants through long-term positive impacts on their career satisfaction, empowerment, and self-efficacy. WEBS alumnae report enhanced feelings of empowerment, resulting in continued implementation of the skills and strategies learned at WEBS for at least one-and-a-half years post-WEBS. Such increased career self-efficacy leads to increased productivity, satisfaction, and commitment to science (Brown and Lent, 1996; Lent et al., 2000; Cohen et al., 2009). By offering participants opportunities to share and reshape personal narratives, build a community with other women scientists, and learn career skills—all the while keeping the broader context of career and life in full view—WEBS is changing lives. As one participant noted 18-month after her WEBS experience, *"[I] cannot pinpoint one particular improvement or one specific challenge but I strongly feel that WEBS increased my professional skills broadly, heightened my awareness of the intricacies of academia, and fundamentally boosted my confidence and courage to advance in my field."*

## CONCLUSION

Community and empowerment are necessary for individuals to leverage their scientific training, skills, and expertise into successful and impactful careers. To advance diversity in STEM, we must change the ways we support female scientists and scientists from other underrepresented groups as they embark on their careers, and we must develop strategies that create a sense of community and empowerment. WEBS does exactly this and is a program readily adaptable to a variety of fields and individuals from other underrepresented groups. In fact, we have successfully adapted it into a program to advance diversity in neuroscience (see BRAINS: Broadening the Representation of Academic Investigators in Neuroscience, <http://www.brains.washington.edu> Margherio et al., 2016) and are currently adapting it to women in engineering (see <http://www.advance.washington.edu/lattice>). By creating opportunities to foster community building and empowering all our early-career scientists, especially women and underrepresented minorities, we can foster a scientific culture in which all our scientists can thrive.

## AUTHOR CONTRIBUTIONS

MH was the PI of the NSF ADVANCE grant funding this work and co-developed and facilitated the program with JY and SF. She was the lead writer for the manuscript. JY was a co-PI and co-developed and facilitated the program with MH and SF. She was actively involved in analyzing data and editing the manuscript. PM was the lead program evaluator and managed the data and overall data analysis and contributed to editing the manuscript. CM worked with PM to analyze the data and edit the manuscript. SF was a co-PI and co-developed and facilitated the program with MH and JY. She was actively

involved in analyzing data and editing the manuscript. All authors contributed to the design and interpretation of data, drafting the manuscript, approving the final manuscript, and agree to be accountable for the work in its entirety. PM and CM were also responsible for the acquisition of data.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <http://journal.frontiersin.org/article/10.3389/fevo.2016.00119>

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**Conflict of Interest Statement:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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