

Can a Workshop Make a Difference?

Influencing Promotion-Seeking Behaviors of Women Associate Professors

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Abstract

We evaluate a mid-career development workshop (MCW) focused on increasing the promotion intentions and behaviors of STEM and SBS women associate professors as part of a National Science Foundation (NSF) ADVANCE Institutional Transformation (IT) grant. Using the Theory of Planned Behavior as a conceptual framework within a retrospective qualitative study, we explored how participants' (n=15) intentions about pursuing promotion to full professor were impacted as a result of the workshop. Our findings suggest that while our workshop affirmed their intentions to pursue promotion, the more significant impact was in participants' increased promotion-seeking behaviors and how they attributed these actions to increased agency over the promotion process and in disrupting gatekeepers and gendered networks. We confirm our results with institutional data that shows a marked increase in the number of women associate professors, particularly Black and Latinx women, promoted to full professor in the years following their workshop participation. We offer research and practical suggestions for utilizing developmental workshops as a career advancement intervention.

Keywords: program evaluation, faculty development, career agency, mid-career faculty advancement

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In *Success After Tenure*, Baker et al. (2019) describe the faculty mid-career stage as the time from tenure award up to 10 years before retirement. The authors describe this stage as particularly challenging for women associate professors given increased service, research, and work-life demands with fewer resources to continue their advancement toward promotion to full professor. While gender parity at the full professor rank differs across disciplines, women faculty are least represented in science, technology, engineering, and math (STEM) at 28 percent with slightly greater representation in social and behavioral science disciplines at 34 percent (NSF, 2019). Because the notion of the “ideal” STEM academic scientist (Fox, 2001) is still overwhelmingly male and White, non-majority groups disproportionally experience bias in how they are evaluated and the resources they receive and are often subjected to more micro-aggressions and questions about their expertise than their male colleagues (Terosky et al., 2014). These challenges are compounded for STEM and SBS Black and Latinx women full professors (who compose <1% and 3%, respectively) are likely to experience additional career progression demands, also known as the minority tax (Mahoney, et al. 2008), of mentoring diverse students and serving on diversity-related committees and projects during their midcareer stage (Johnson & Lucero, 2003). The gradual impact of these accumulated barriers can derail many STEM and SBS associate professors from progressing to senior ranks, limit diverse role models in senior faculty roles, and stall the number of representative scientific innovations (Stewart & Valian, 2018; Williams et al., 2014).

The increasing demands for mid-career women faculty to succeed post-tenure are also compounded by not receiving similar structural or developmental resources that they had as pre-

tenure faculty (Hart, 2016; Matthews, 2014). Using an evolutionary approach to study how engineering faculty mentoring networks changed along their career, Long et al. (2018) found that women associate professors experienced “problematic shrinking” within their post-tenure developmental networks as mentoring resources were shifted to tenure-track faculty (p. 140). In a mixed methods study assessing full-time tenure-track faculty perceptions of their work environment (N=854) at a public land-grant university, Lennartz and O’Meara (2019) found that women associate professors reported significantly higher levels of dissatisfaction and ambiguity (compared to male associate professors) in service and workload distributions, work-life balance, resource availability, and professional networks. Women associates also reported significantly lower sense of agency, defined as perspectives and actions taken to achieve career goals, when developmental opportunities and promotion performance and procedural criteria are lacking (O’Meara & Campbell, 2011). Scholars have noted that ambiguity in institutional practices concerning performance can produce greater bias and inequity in the work environment, thus further complicating women associate professors’ sense of agency, job satisfaction, and their intentional actions to advance to full professor (Terosky et al., 2014). Many scholars are now describing the slower advancement of women mid-career academics as representative of a foggy pipeline (as compared to a leaky pipeline) where women face disproportionate barriers to promotion to full professor based on inconsistent resources, gender and racial bias, and unclear performance criteria (Banerjee & Pawley, 2013; VanMiegrot et al., 2019).

The cumulative effect of these challenges can disproportionally influence women associate professors’ attitudes, efficacy, and persistence in their careers (compared to their male counterparts) suggesting that early and continuous interventions are important to strengthen their career intentions (Evers & Sieverding, 2015). To address this issue, academic institutions have

increasingly used developmental interventions such as trainings and mentoring to ensure that women faculty progress along their career trajectory (for a full review, Williams et al., 2014). We examine the utility of one such intervention, a mid-career workshop (MCW), to influence STEM and SBS women associate professors' intentions toward pursuing promotion to full professor at an urban Carnegie designated research-intensive university. Using the Theory of Planned Behavior, we explore (a) in what ways did the MCW workshop impact STEM and SBS women associate professors' promotion intentions to full professor, and (b) if, and in what ways, did STEM and SBS women associate professors take action toward pursuing promotion to full professor. The MCW was part of the University of Houston's ADVANCE Institutional Transformation (IT) program award (2014-2019), an NSF-funded initiative to increase diversity and inclusiveness of the STEM academic workforce. In the next sections, we review the TPB framework and the research context and design.

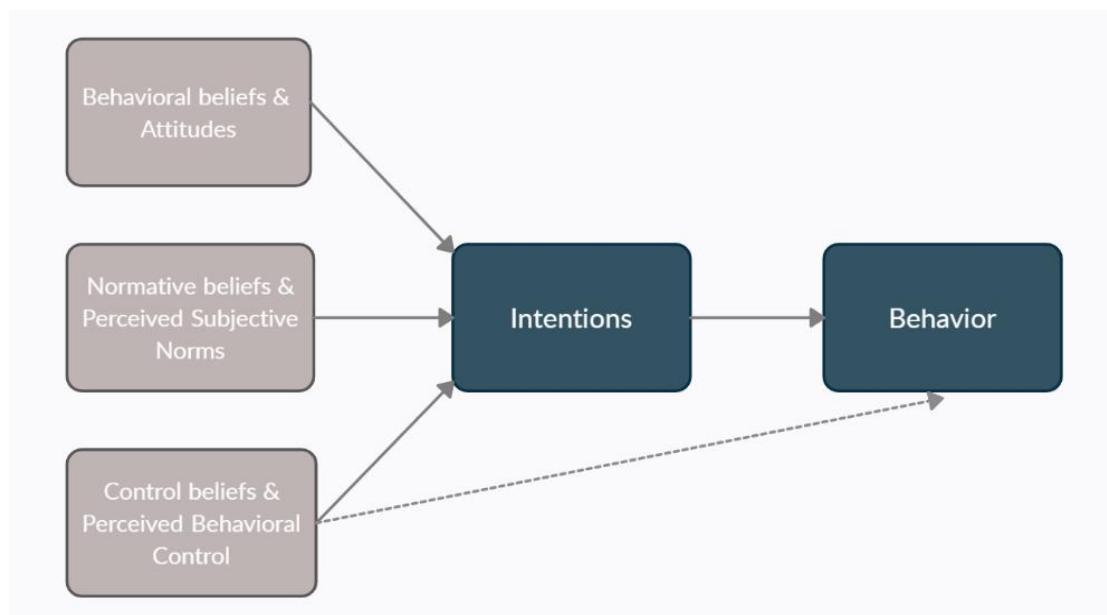
Theory of Planned Behavior

Developed as a theory to predict an individual's intention to engage in a behavior at a specific time and place, the Theory of Planned Behavior (TPB; Ajzen, 1985, 1991, 2011) has been used to explain a wide range of health-related behaviors and interventions (e.g., smoking, drinking, health service usage). Fishbein and Ajzen (1975) derived the TPB from the Theory of Reasoned Action (TRA) to describe how an individual's attitude toward the action (e.g., obtaining a health screening), rather than toward the object (health and wellbeing), is a much better predictor of performing that behavior. As Ajzen (1991) stated, "Intentions are assumed to capture the motivational factors that influence a behavior, are indicators of how hard people are willing to try, and of how much effort they are planning to exert in order to perform the behavior" (p. 181). Intentions are a conscious pursuit of goals as compared to habituation or

automatic responses. The TPB extended the TRA with an additional construct—perceived control over the behavior—which clarified the role that agency has on behavioral intentions. According to the TPB, the more favorable a person’s attitude is toward the behavior (behavioral beliefs), the more perceived social pressure to perform the behavior (normative beliefs), and the greater their perceived agency (control beliefs) over the behavior will increase their intention to perform the behavior (Figure 1).

Figure 1

Theory of Planned Behavior (Ajzen, 1985, 1991)



Note: The research team used the TPB variables as a conceptual study framework.

Contemporary applications of TPB have expanded from health disparities research to include career intentions such as student persistence in STEM careers (Lee et al., 2015), predicting entrepreneurial intentions for start-up businesses (Barnir et al., 2011; Kautonen & Gelderen, 2015), and exploring nurse communication practices within a healthcare setting (Omura et al.

2018). However, few studies examined TPB relative to academic faculty (Carraher et al., 2014) and no studies we found examined the influence of a developmental workshop intervention on faculty career advancement intentions. The few studies that have examined career intentions have primarily focused on gender differences of early career faculty (i.e., seeking an academic career after graduation) or turnover intentions. In a survey study, Evers and Sieverding (2015) found that TPB factors (attitude, social norm, self-efficacy) explained 87% of the gender difference in academic career intentions of early career faculty. Their results indicated that male faculty had a more positive attitude, perceived greater support from their social environment, and had a higher self-efficacy than women immediately after completing their doctorate work, which were strongly predictive of their intention to advance within their first academic faculty position. Although the follow-up (time 2) assessment occurred within a year of their first academic position, the authors suggested strengthening women faculty's early career intentions through developmental programs may increase the likelihood of persistence and advancement.

In our study, we used the TPB to provide a framework for understanding the socio-cognitive factors influencing STEM women associate professors' intentions and subsequent actions to pursue promotion to full professor because of attending a developmental workshop. In addition to exploring if the workshop influenced the number of STEM women associates seeking promotion, the TPB allowed us to understand how the workshop may have altered their attitudes, normative beliefs, and ability to exert control (agency) on their career trajectory. Following the TPB, faculty intentions will be strongest when they have a favorable attitude toward achieving full professor, perceive positive support from referent groups, and feel they have influence over factors that may inhibit or facilitate the promotion process. Because researchers have identified that women faculty often stall in their career advancement when they are unclear about their own

promotion readiness, perceive that others do not support their advancement, and do not feel they know enough about the process to act, the TPB allowed us to explore how their salient beliefs and behaviors may have changed when exposed to new information about the promotion process (Ajzen, 2011). Our study contributes to an ongoing focus on increasing women faculty agency in their career advancement decisions (cf. Lennartz & O'Meara, 2019; O'Meara & Campbell, 2011) sheds light on the complexities of their decision-making process.

Research Context and Methodology

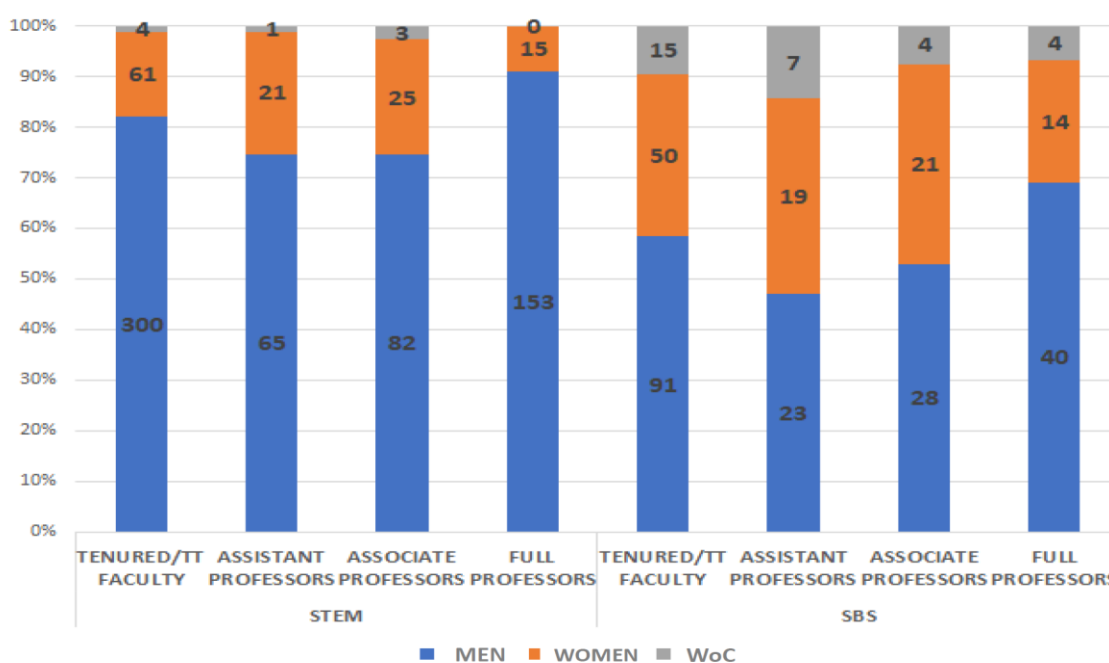
Our study includes participants who attended a mid-career workshop (MCW) between 2016-2018 at the University of Houston, an urban Carnegie 1-designated research university. The MCW was one of twelve interventions supported by University of Houston's Center for Advancing Faculty Success (UH-ADVANCE, <https://www.uh.edu/advance/>, 2014-2021), an NSF ADVANCE Institutional Transformation (IT) grant awardee. The NSF ADVANCE program provides multiyear funding for projects that address the underrepresentation of STEM and social behavioral science (SBS) women faculty by discipline and across groups (e.g., by race/ethnicity, disability status, sexual orientation, foreign-born and foreign-trained status, and faculty appointment type; ADVANCE at a Glance, 2015). Similar to other ADVANCE-funded institutions, UH-ADVANCE identified systemic issues in faculty recruitment, retention, climate, promotion, and advancement opportunities that disproportionately impacted STEM and SBS women faculty success. UH-ADVANCE comprised five (5) colleges and twenty-three (23) departments that included STEM and SBS disciplines (psychology, sociology, political science, economics, cultural comparative studies, human development).

The year prior to the MCW launch (2015), women faculty comprised 31% (321/1025) of all UH tenure-track/tenured faculty across campus. Across the 23 ADVANCE departments,

tenured and tenure track White and Asian women and women of color (WoC; defined for UH-ADVANCE and this study as women who identify as Black/African American, Latinx, or multi-racial identities) were far less represented in STEM disciplines than for SBS. For STEM departments, White and Asian women faculty represented 20% (61/365) of faculty compared to <1% for WoC faculty (Figure 2). STEM women faculty (in general) were most underrepresented in full professor positions (9%, White and Asian women; 0% WoC). For the SBS ADVANCE departments, White and Asian women faculty composed 24% and WoC faculty represented 7% of full professor positions.

Figure 2

STEM and SBS Faculty Counts – Gender, Rank, STEM/SBS



Note: Institutional Research, University of Houston, 2015. Women of color (WoC) are largely underrepresented across faculty ranks and in STEM and SMS discipline areas. This is more prevalent in STEM departments and at the full professor rank.

The first two authors were members of the ADVANCE project team: the lead author was a co-PI and the second author was a member of the ADVANCE project evaluation team. Both authors were involved in conducting and evaluating the MCW workshop. The second author conducted all interviews and transcribed and organized the data in separate files without personal identifiers. The third author was invited on the project after data collection to increase the analysis reliability and rigor. Participants were informed that the evaluation study was part of the ADVANCE grant work.

Mid-career Workshop (MCW) Intervention

UH-ADVANCE supported twelve interventions that included programmatic, policy, and climate changes to increase diverse representation and equity among the faculty ranks. The MCW was based on research derived from focus groups, interviews, and a Collaborative on Academic Careers in Higher Education (COACHE) survey that indicated women associate professors were the least satisfied with the clarity of promotion criteria, mentoring and departmental support for promotion, and leadership development opportunities compared to White men across ranks and tenure-track White women. Associate faculty of color also reported experiencing both racial and gender bias in being assigned more service requirements and teaching responsibilities. Although promotion materials (policy, process, requirements, timeline) were available on the department, college, and university websites, the use of workshops or other interventions and resources were variable and unevenly used across campus. Associate professors also decide when they want to apply for promotion for full professor rather than being nominated. In addition, the MCWs were supported by the provost (who was also the UH ADVANCE Center Managing Director and Co-PI) and many college deans and chairs. Most of

the participants responded to the direct invitation from the ADVANCE Center rather than being told about it from their department colleagues.

The MCW goals included enhancing women associate professors' attitudes and intentions toward applying for promotion, clarifying the support of referent groups (administration, department chairs, deans, ADVANCE Center), and providing resources to help support their promotion application process. Each MCW was offered in a half-day session and was advertised to all tenure-track and tenured women faculty at the University of Houston (n=321). The agenda included opening remarks from the provost, a keynote speaker, panels discussions that comprised discipline-specific breakout panels and speakers from the university promotion and tenure committee (Table 1).

Table 1

Workshop Agenda

Time	Focus	Speaker, Panelists
11:30	Introductions	UH-ADVANCE Managing Director
11:40	Welcome and Keynote	Provost, ADVANCE Center Director
11:50-12:15	Keynote and lunch	Keynote Speaker
12:30-1:30	Perspectives from UH P/T Committee Chair or Member Break-out STEM & SBS Full Professor Panels	
1:30-2:15	Small Group Discussions (rotating topics): Increasing Research Visibility in the Digital Age, Increasing Foundation and Industry Funding, Communicating Your Value, Negotiation Skills	
2:15-2:45	Promotion Process Planning and Action Steps	
2:45-3:00	Closing Reflections and Evaluation	

Note: UH-ADVANCE Midcareer Workshop – Roadmap to Full Professor

Workshop participants (n=97) attended one of three workshops offered between 2016-2018 and were comprised of women associate professors from STEM (35%, 34) and SBS (21%, 21). Other disciplines represented included liberal arts (13%, 12), pharmacy, nursing and optometry (13%, 12); social work (5%, 4), education (5%, 5), library (6%, 6), and business (2%, 3). Ten women (almost 10%) were Black and Latinx with the remaining 87 identified as White, Asian, or did not disclose. At the end of each MCW workshop, just over half of the participants (51% response rate) completed a 14-question survey developed by the UH-ADVANCE evaluation team that included Likert-scaled (1-5) agreement items assessing reaction to the MCW content, location, activities, and intentions to apply the workshop skills in the future. The majority of responding participants (93%) perceived the MCW workshop had enhanced their ability to assess their readiness for promotion and increased their awareness of promotion resources. Participants (95%) also expressed their intention to seek promotion as a result of participating in the MCW.

Sample and Data Collection

Approximately two months after the third workshop, we contacted former MCW participants who were tenured STEM and SBS associate professors (n=54) affiliated with one of the ADVANCE departments for an interview. Fifteen (15) participants responded and were invited to participate in a 45-minute semi-structured interview. We developed an interview protocol following Montaña and Kasprzyk's (2008) suggestions for developing elicitation interview questions to identify participant's relevant attitudes (thoughts and feelings about seeking promotion to full professor), behavioral beliefs (perceived benefits and drawbacks of seeking promotion to full professor), normative referents (situational factors—individuals,

groups, resources—that would/would not facilitate seeking promotion to full professor), and perceived control (the importance and likelihood of the facilitating and challenging factors influencing seeking promotion). We also asked participants about their promotion intentions and promotion-seeking behaviors. We employed a retrospective qualitative design involving participants reflecting on their thoughts and behaviors prior to and after the MCW intervention at the same time. A benefit of a retrospective study is to minimize response shift bias or where a participant alters their internal frame of reference of the construct being studied between data collection times (Pelfrey & Pelfrey, 2009). Applying a retrospective lens to a qualitative study also allows participants to describe their own process of change as a result of the intervention and has been increasingly used in program evaluation research as an alternative to the pre- post-test design (Nimon et al., 2011; Pratt et al., 2000).

The interview participants were from STEM (7) and SBS (8) disciplines, were at the associate rank an average of 5 years, attended an average of two MCW workshops, and represented four ethno-racial categories: White (8), Asian (5), Black (1), and Latinx (1). We did not collect demographic data relative to gender identity. The interviews were conducted between August 31 and October 15, 2018, by the second author who was also a member of the ADVANCE evaluation team. Four participants were interviewed over the phone with the remainder in a face-to-face private setting. All interviews were recorded and transcribed verbatim for later coding and analysis.

Interview Analysis

Except for clarification prompts, all participants were asked the same questions on the interview protocol. In the data file, participant responses were ordered differently for each question to avoid any identifiable patterns that might be associated with a participant response

style. The research team engaged in a flexible coding approach (Deterding & Waters, 2018) by applying index codes to the data based on the interview protocol questions. We then individually reviewed and noted respondent and cross-case reflections (or thematic memos) to capture both a priori per the TPB framework, emergent analytic codes, and our own reflections. To process these data collectively, we discussed how our grouped analytic codes were represented across the data set in the forms of trends, alternative explanations, and negative cases. This process allowed us to elaborate more on the representative codes and consider how, if at all, these were representative of the TPB framework. After multiple group review sessions as a team, we agreed on a complete set of grouped codes and representative quotes.

Researcher Positionality and Reflexivity

To recognize our positionality in the analysis, we acknowledge our perspectives could have been influenced by our own experiences as institutional members (two faculty, one staff), as women with diverse racial identities (Asian, Latinx, White) and our association with the MCW workshop. Because the first and third authors were faculty who recently had been promoted to full professor by the time of data analysis, we intentionally noted any insights based on our own promotion experiences by bracketing (Giorgi, 2009) and discussed them in team meetings. Our intention was to avoid confirmation bias and the tendency to look intentionally or unintentionally for participants' statements that supported our perspectives about the promotion process given our connection to the MCW intervention (Creswell & Creswell, 2018). That the first two authors played a primary role in conducting the workshop and designing the evaluation plan initially presented an interesting challenge to the third author as the latter had to analyze the interview data that she was not part of designing and collecting. In one way, it presented a limited sense of interpretive power to the third author; however, it prompted a deeper explicit

individual (first and second author) and collaborative (all three) reflection and peer-debriefing process for the final analysis. Finally, we grounded our findings using prior research studies on mid-career faculty developmental interventions and faculty diversity and inclusion.

Findings

Given our retrospective research design, we first describe the behavioral beliefs and intentions that participants recalled having prior to attending the MCW to establish their initial behavioral intent of pursuing promotion to full professor. We then describe our analysis of participants' beliefs (behavioral, normative, control) and intentions as a result of attending the MCW to compare if, and in what ways, these were influenced. Finally, we explore resources that participants deemed important from the MCW to increase their readiness to apply for promotion. Interestingly, a closer examination of the responses revealed that some answers showed a more complex understanding and views of the participants toward the promotion process. We use the discussion section to present and further discuss some of these complexities.

Pre-Workshop Beliefs and Intentions

Behavioral Beliefs and Attitudes. Consistent with the TPB framework, a person's attitude toward a behavior (e.g., seeking promotion to full professor) is a function of their beliefs and the relative consequences of that behavior (Ajzen, 2011). Overwhelmingly, we found that most MCW participants believed that pursuing promotion to full professor was a career goal and planned to apply in what they considered a "timely" manner (e.g., 6 or more years at the associate rank). However, participants expressed confusion and frustration with the inconsistent messages they received around timeliness, promotion criteria, and process mostly from department chairs and some colleagues as described below:

I was prepared to do so [seek promotion to full professor] and it was already part of my plan, so I knew that I was going to do it because I felt as though I had achieved what I thought I needed to achieve...I was discouraged at multiple levels...the general trend is to wait, don't go too early because you are likely to fail. What I was surprised to learn was that nobody told me to go forward and when I had inquired the year before. My chair told me to hang back. (White SBS Associate)

I got mixed messages about when to go [up for promotion] . . . some mentioned how going up early is positive because you have a long time to really benefit, that there are full professorship-related benefits. But at the same time that it [promotion] is something that you can do anytime later, so you don't have to rush. People said that once you wait too long, then you may not be keeping up with the productivity meanwhile, so I've been receiving mixed messages. (Asian SBS Associate)

A few participants mentioned receiving unclear or confusing information concerning their overall readiness from their department chairperson. Participants perceived the guidance received from their department chairperson was either inaccurate or inconsistent in that they did not receive regular performance feedback about their promotion readiness. In the absence of consistent and transparent feedback, many participants described a general mistrust of how the promotion process was described and supported.

Concerning their perceived benefits of seeking promotion, participants mentioned base salary increase as the most salient benefit perhaps because it is a clearly identifiable outcome associated with a promotion. Other answers referred to benefits such as increased "recognition," "stature," "gravitas," "more options to go more administrative," "better chances of larger

funding,” or “increased freedom to do research.” The participants also believed that achieving full professor status would give them greater influence in departmental decisions and directions.

A Latinx STEM Associate mentioned:

The benefits are that I can get funding for center proposals and have a better chance of getting funded for larger funding sources, which I knew that as an associate or assistant you cannot because they do not think that you are ready to actually be a leader in those types of things. Also, I have options in going more administrative or really staying in my career, but people see (you) better if you are a full professor, you get better chances of other things.

Many other participants simply saw the promotion to full professor as a natural progression (i.e., “this is just what you do”) of their career trajectory.

When asked about possible drawbacks of seeking promotion, participant’s answers were almost evenly distributed among “no drawbacks,” “more services /responsibilities [as full],” and “additional work” needed to put the application together as well as anxiety during the review. One White STEM Associate mentioned a “reduced marketability” (i.e., limiting prospects of moving to another institution) as a drawback. The issue of service was mentioned both as a benefit (“opportunities for higher levels of service”) and drawback (“request for more service”) by the participants. This interesting conflict seems to be related to the participants’ career goals. Participants interested in administrative leadership positions considered a promotion to full professor as beneficial, while others who would want more time for research perceived that it might interfere by adding more service or administrative responsibilities.

Promotion Intentions and Behaviors. When asked about their intentions and actions taken toward pursuing promotion before attending the MCW workshop, most of the participants

seemed to have general ideas of what “keeping up my record” post-tenure included, such as continuing to publish and procure externally funded grants. The majority of the participants answered, “no steps taken” or they were “continuing with the criteria used for their tenure and promotion to associate professor.” Both could be interpreted as no new or different steps were taken for the plan for full promotion and they continued the work that was required during their first promotion review.

Post-Workshop Beliefs and Intentions

Behavioral Beliefs and Attitudes. When asked if their beliefs and attitudes changed as a result of participation in the MCW workshop, over half (9/15) of participants reported that they learned more about the process and felt increased motivation to pursue promotion. A common pattern in their responses was that the MCW helped to clarify misinformation around the time required in the associate rank before applying for full professor. A White STEM Associate who had participated in more than one workshop stated, “The workshops have evolved in a good way over time... I felt, as a result of participating in those workshops, very informed and that I shouldn’t let things stand in my way if I felt that I was ready to go up for promotion to full.”

When asked the same question, a Latinx STEM Associate emphatically responded

I always wanted to [apply for promotion]. I knew there was something I needed to do.

The workshops helped me think about what I should be focusing on to build my portfolio and to make it strong for going up for promotion. It was more guidance on what to do and what not to do and how to plan things so that you stay on track to achieve those goals.

Another White STEM Associate described how the workshop saved her time in getting promotion information:

The midcareer workshops provided answers to a lot of questions in a more efficient way. I didn't have to seek out as many people to ask all these different questions and then see if I got the different answers from the different people. Then trying to decide what that meant in terms of what I should actually do. I had to seek out a lot less individual support because I got a lot of support from the workshops.

About a half of the participants responded initially that there was "no change" in their beliefs and attitudes after participating in the workshops. Specifically, a few participants answered "no [change in the thoughts or feeling]" but simultaneously expressed "feeling validated, confirmed, and encouraged" as a result of attending the workshop. A few participants shared that the MCW experience deepened their belief that becoming a full professor is important to increasing faculty diversity representation in the senior faculty ranks:

I think it strengthened my plan to apply at some point by shining some light on the importance of it, not just at a personal level but higher levels for women and minorities and so on. It can have positive effects at higher levels. In some ways [the MCW] strengthened and encouraged that for me. (White STEM Associate)

We deduced that some participants did not consider their enhanced confidence and motivation as a change in their feelings or thoughts. In such cases, the participants' response of "no change" could be interpreted as the MCW did not change their commitment to pursuing promotion to full professor. Others seemed to have counted the new information and more accurate information as a "change" by answering "yes." In this regard, we interpreted that the MCW may have helped deepen participants' positive attitudes toward pursuing promotion but did not fundamentally alter their attitude or belief that this was a desirable career advancement goal.

Normative referents and control beliefs. Concerning the normative referents (individuals, groups) that could facilitate or interfere with participants seeking promotion, several participants mentioned that having support from their academic unit (department chair, colleagues), upper administration, and their family were all important in facilitating their decision to apply for promotion. Participants specifically mentioned receiving encouragement and mentoring from the department chair, administrators, UH-ADVANCE, and other colleagues as an important facilitating factor to them in pursuing promotion.

There was someone from the university promotion committee that talked about the promotion processes involved. I would say information, resources . . . that's the most important, as well as just knowing this workshop... and also additional resources . . . I know if I have a question, I can always contact the people outside my department, from the workshop, and ADVANCE group. (White STEM Associate)

To explore participant's control beliefs, we asked about the specific facilitating and interfering factors that would influence participants seeking promotion. Some participants mentioned specific guidance and sharing of personal strategies from MCW panelists who were already promoted as helpful factors. Many participants described that while their department chair's support was vital, they were surprised to learn (from the MCW) that they were not the sole decider in whether they were ready to begin the promotion process.

That [participation in the MCW] made me actually want to get promoted sooner than later. Because before that, I heard rumors that I could only go after five years and a lot of full professors were telling me, even in my department, saying that you can only go after five years. In the workshop, I actually figured it out, no, I can go as early as three! And so, I ended up talking to other people and they told me like yeah that's right, and I even

talked to my dean as well . . . I did not have to wait that long. If I had all the prerequisites to go, why not go? Right, why wait five years? And actually, I even learned that it's not looked very well upon some faculty to wait that long. Five years is actually very long. Sometimes they prefer that you try at least earlier. So yeah, so I learned that, so I pursued promotion (Latinx STEM Associate)

Participants also noted having access to successful promotion portfolios and connecting with other associate professors as sources of possible research collaboration as benefits of the MCW experience. Participants mentioned specific resources that could help them increase their research and grant output (e.g., research assistant support, course release, research development leave, lab space and funding support), but that many of these issues tended to be mostly available to early career faculty.

I think most of the university resources go to support new young faculty members. They get huge start-ups like triple or quadruple than what we got when we got here. And that, in terms of the money coming from the university, college, and department, and in terms of lab space, in terms of how many free TAs they get that can be their student, associate get nothing. So that's the reality. If you ask for anything, you are not likely to get it. The young, new hires got incredible amounts of resources. And sometimes they take away from established faculty members because there is already limited space in the department or in the college. (White STEM Associate)

Collectively, MCW participants appeared to realize a greater sense of autonomy in enacting influence on the decision to and process of seeking promotion, while also describing the enabling and challenges to seeking promotion.

Promotion Intentions and Behaviors. Although several participants said they had “no change in their promotion intention,” they also mentioned that attending the MCW increased their motivation to seek promotion sooner than they had originally intended. We interpreted this as the impact of the workshop confirmed or, in some cases, strengthened participants’ intentions to pursue promotion resulting in increasing their promotion-seeking behaviors. When asked about actions they had taken toward pursuing promotion as a result of attending the MCW, many participants noted a clearer understanding of the process, review criteria, and general suggestions for making progress toward promotion. For example, a Latinx STEM Associate spoke about the importance of increasing her service visibility:

You want to make sure that you try to get more invited lectures or go to more of the conferences and kind of increase your visibility and college’s visibility because that is more important when you go for full professor than it is for the associate professor level. So, that has kind of helped me look at that part of it and I then started to increase my service level, and again be more visible and not just in my department, but across the college and university.

Other actions included seeking feedback on promotion readiness from the department chair and other senior colleagues, reviewing examples of successful portfolios, identifying a pool of possible external reviewers, and reviewing UH’s promotion guidelines and beginning to assemble their promotion portfolio.

Promotion Resources

We also explored what participants considered the more helpful resources from the MCW. Many participants mentioned clarification of the promotion process and expanded network of colleagues to seek support.

The resources most helpful. I think that's the most important, as well as just knowing that I can go and ask someone who has gone through the process. *I can put a face on it.*

Talking to your mentor and, if I have a question, the people outside my department, from the workshop and ADVANCE group, I can always contact [them] if I have questions.

(Italics added.)

Several participants also mentioned ideas for organizing/protecting time, seeking external reviewers, having access to successful promotion portfolios, and getting feedback prior to submitting their files for promotion.

Discussion

Our study utilized the Theory of Planned Behavior (TPB) framework to explore the impact of a mid-career workshop (MCW) on STEM/SBS women associate professors' intentions to apply for promotion to full professor. According to the TPB, salient beliefs are the prevailing determinants of a person's intentions and are influenced by perceived support from others (social referents) and their own sense of agency (behavioral control) to enact the behavior. Our interview findings suggest that STEM/SBS women faculty's intention to pursue promotion to full professor were largely unchanged but certainly strengthened as a result of gaining a clear perspective on the promotion process and criteria, expanding their social support (social referents), and increasing their perceived agency (behavioral control) on their promotion decisions. As a result, MCW participants increased the immediacy and specificity of promotion-seeking behaviors they enacted post-workshop. We discuss three interconnected themes derived from the data in relation to the TPB framework.

Affirming full professor as a career goal

Despite MCW participants believing that promotion to full professor was a desirable career goal, their corresponding attitudes were negatively influenced by a perceived lack of support and mistrust of the guidance received from peers and administrators. In the TPB, an individual's attitude toward a behavior is a function of beliefs about the behavior consequences and the valence (positive or negative) attached to those outcomes. Almost all the women associate professors described feeling stymied in their progress toward promotion because of inaccurate information about the promotion requirements and misleading or incomplete feedback about their overall readiness. The lack of coherent and consistent information (e.g., process, criteria, timeline) and support (e.g., mentoring) seemed to create the impression of additional challenges and uncertainty about the promotion process for many participants. Most participants said the MCW provided greater transparency by demystifying the promotion process which helped them conduct a realistic assessment of their promotion readiness. As a result, some participants realized they actually met or were closer to meeting the promotion requirements than previously assumed.

Ajzen (2011) describes the influence of new information in altering salient beliefs because it can shift attitudes toward the behavior. As for our study, we interpreted the information gained in the MCW as a mechanism that fortified STEM/SBS associate faculty attitudes toward promotion by removing the “fogginess” of misinformation by clarifying promotion criteria, process, and offering instrumental and social support from multiple levels of the organization. Participants also noted that while they initially perceived the benefits of promotion as prestige and a salary increase, a few participants described viewing their promotion as serving a collective benefit by increasing the critical mass of women in senior ranks who

could enact change on systems of inequality and influence the strategic direction of the university. In this way, the workshop influenced some faculty members' belief that promotion to full professor was more than just an individual accomplishment, but also as an intentional act to improve the diversity and equity of university leadership.

Disrupting gatekeepers and gendered networks

The second determinant of intentions—normative beliefs—constitutes the perceived social pressure of a given referent's (individual, group) approval or disapproval of the behavior. Prior to the MCW, participants described the department chair as the central actor in supporting and ensuring their promotion success. Many participants noted that their decision to go up would be initiated when their department chair told them, "They were ready" which was usually described as a fixed amount of time (≥ 6 of years from associate promotion) regardless of their performance record. The role of department chair is one of the more influential gatekeepers in the academic hierarchy that selects, promotes, and makes decisions on performance and merit that directly influences faculty career advancement.

Gatekeepers can perpetuate structural inequities by their conscious or unconscious bias in their evaluation, resource allocation, and feedback to faculty about their promotion readiness. For example, Roth et al. (2012) drew upon expectation states theory (EST) to explain why men were rated higher in their promotion potential than women despite receiving lower performance evaluations. According to EST, gender serves as a diffuse (or indirect) status cue that influences expectations about the knowledge, ability, or influence of a given person. Hart (2016), in her case study research of twenty-five mid-career women faculty, described the experience of providing women with unclear or ambiguous feedback on their promotion readiness as an active racial and gender subtext of devaluing women's performance. In our study, the challenges posed

by gatekeepers were described often from the Latinx and Asian faculty in our interviews rather than from White faculty. These participants noted that hearing encouragement and counter-narratives from other full professors and administrators (provost, keynote speakers, chair of university promotion and tenure committee) about indicators of promotion readiness helped them feel more informed about the process and committed to pursue promotion because they now had an expanded network of supporters and trusted resources. Together with their increased knowledge about the promotion process, MCW participants were able to broaden their referent groups that supported their promotion pursuit and lessen their reliance just on the department chair which, in some cases, was perceived as ambivalent or unsupportive of their promotion.

Emboldening agency

Perhaps the biggest influence of the MCW was the apparent increase in women associate professors perceived behavioral control on the promotion process. In most cases in our study, MCW participants did not feel in control to decide when or under what conditions they would apply for promotion. In line with the TPB, individuals are less likely to act when they do not perceive they have a sufficient degree of control over the behavior—lacking knowledge, power, resources, support—despite having a favorable attitude and belief toward the behavior (Ajzen, 2011). This is indicated in the TPB framework (Figure 1) by a dotted line suggesting that agency may have an indirect path to behavior. Participants attributed the MCW with helping them better understand the promotion criteria and process (i.e., preparing their portfolios, external letters, increasing service visibility) which resulted in participants feeling more in control of the process.

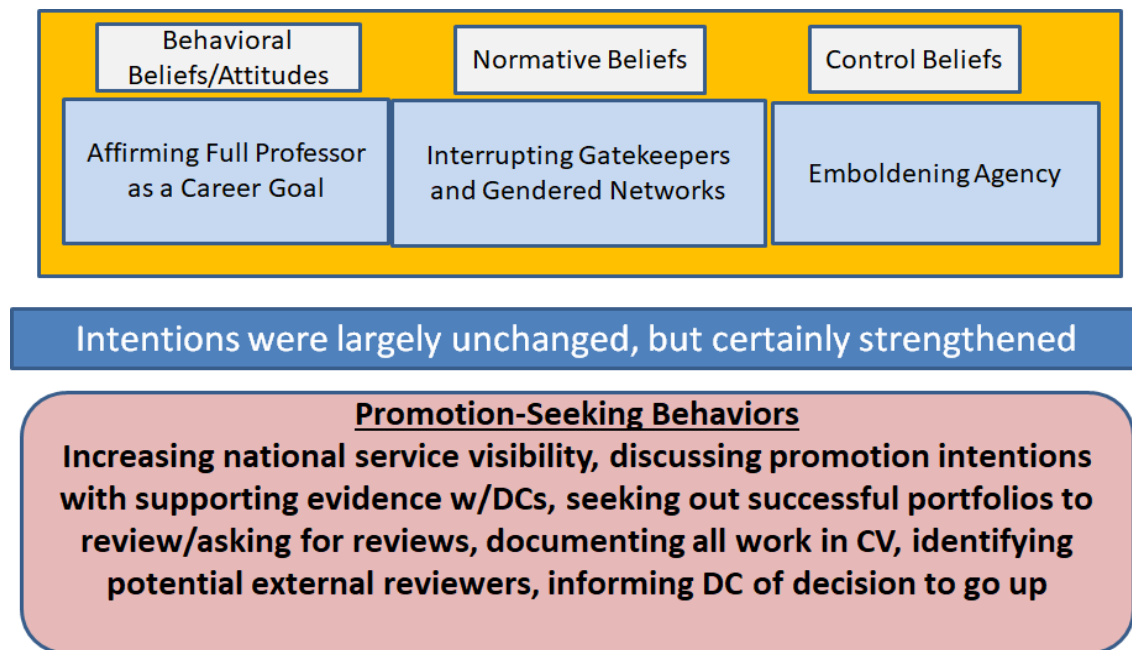
Participants also realized that the promotion decision was their own to enact and that they did not have to be invited nor given approval by the department chair. As previously discussed, many participants viewed their department chair and other college administrators as an inhibiting

factor to the promotion process. Compared to the process for receiving tenure, the process for promotion to full professor lacked clarity to many of the participants who attended the MCW, especially regarding the communication with the department chair. For example, and especially described by Asian and WoC participants, their department chair's information on the minimum "required" years between receiving tenure and applying for promotion to full professor was incorrect. Although this new knowledge provided a sense of empowerment for the participants, many participants still viewed the chair's opinion of the "right timing" played a critical role in the participants' decision to seek promotion since the chair's strong support is one of the critical elements of a successful promotion.

In summary, our findings suggest that participating in the MCWs confirmed women associate professors' behavioral intentions to seek promotion and also increased and expanded their promotion-seeking behaviors. Following the TPB, a workshop can influence salient beliefs about career advancement and remove the "fogginess" of the promotion process by offering explicit guidance, motivation, and support that can, at least in our study, positively influence women associate professors' promotion intentions *and* behaviors (Figure 3).

Figure 3

MCW influences on promotion-seeking intentions and behaviors



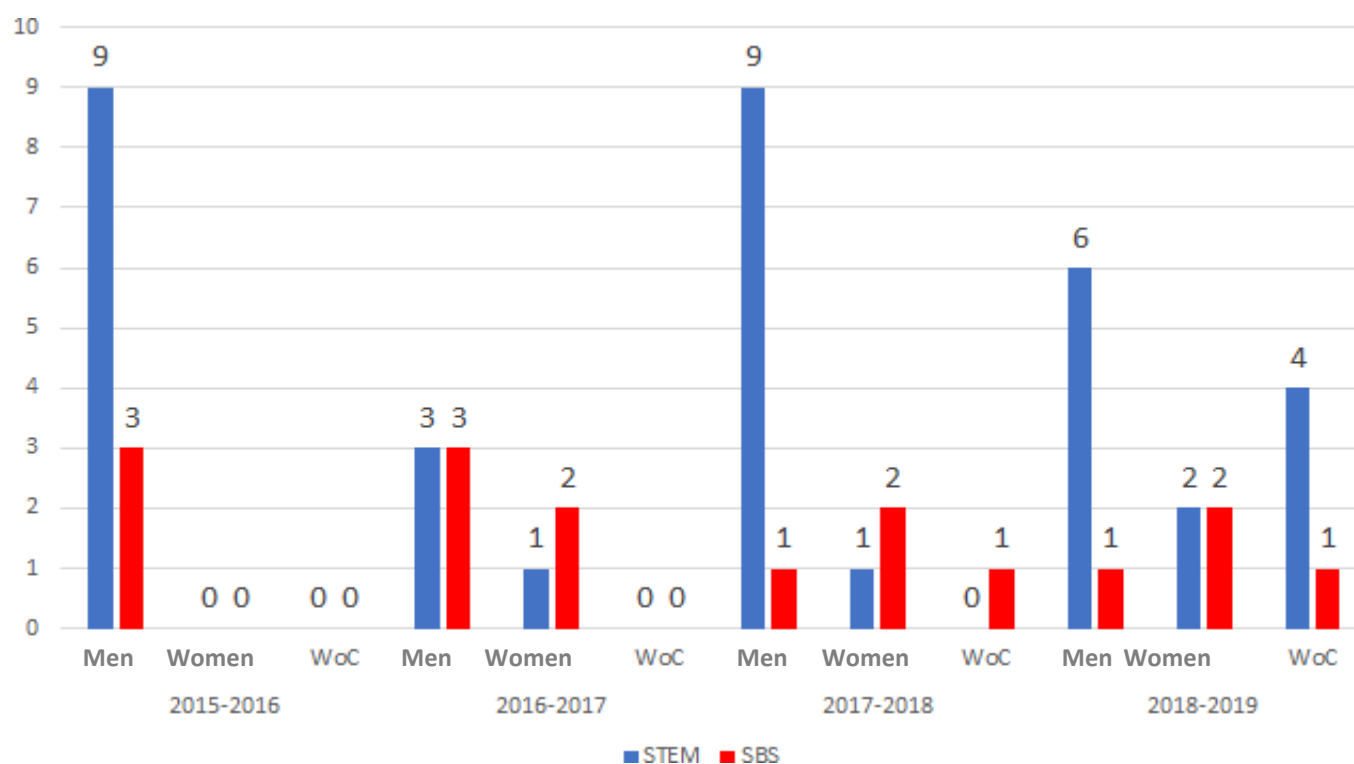
Note: The model represents the study findings situated in the TPB variables resulting from the MCW workshop. We also include the behaviors participants reported in actualizing their promotion intentions.

Our conclusion is further supported in two ways. First, many MCW participants described taking intentional steps after the workshop to increase their readiness for applying for promotion. These steps included increasing their service visibility, discussing promotion intentions and supporting evidence with their department chair and senior colleagues, identifying potential external reviewers, and seeking out successful portfolios to review as exemplars. This contrasts with steps participants shared before the MCW which had been limited to continuing with their research and external funding similar to what they had done when seeking promotion to associate professor. While remaining consistent with their scholarly and funding record is important, many MCW participants reported not taking additional steps to procure feedback and consider other factors important in a promotion to full professor review.

We also support our findings with UH-ADVANCE's institutional data on promotion rates (2015-2019) of full professors since the launch of the MCW workshops.

Figure 4

STEM/SBS Faculty Promotion to Full Professor



Note: University of Houston, Institutional Research, 2015-2019. The total number of women promoted to full professor increased during the time the MCWs were offered.

As noted in Figure 4, there was an increase in the number of White and Asian women (noted in Women) and WOC (Black, Latinx) promoted to full professor between 2015 and 2018 when the workshops were offered. Of those promoted, 62.5% (10/16; STEM=5, SBS=3, other =2) had attended at least one MCW workshop.

Limitations & Implications for Research and Practice

While our findings indicated several benefits for the MCW participants, we also recognize and discuss three limitations with our study. First, our study employed a retrospective study design that can limit true pre-post comparison results given the one-time data collection. Second, we had a low number of Black and Latinx women in our interview sample (2/15) although this represents half (4/24) of the total number WoC STEM/SBS women faculty that attended the MCW. While the project interviewer made several attempts at recruiting more WoC MCW participants, some shared that they were concerned about sharing any feedback about the workshop since they would soon begin the promotion process. Our interpretation of this reluctance suggests WoC are more distrustful of the promotion system than White or Asian women faculty.

In regard to our study title (“Can a workshop make a difference?”), our answer is “yes,” but we also recognize that other factors may have independently or collectively influenced the MCW participants’ promotion intentions. For example, we did not ask participants if their promotion intentions were influenced mainly by the existence of UH-ADVANCE or by other developmental activities in representing tacit support for women associate professor career advancement. According to signaling theory (Spence, 1978), individuals interpret programs, policies, and processes as cues or “signals” of the institution’s commitment and goals. Signaling theory has been particularly important in studying determinants of diversity climate as an organization’s investment in initiatives has been found to function as an overt signal to employees that an organization is committed to supporting diversity and inclusivity (Herdman & McMillan-Capehart, 2010; Saks & McCarthy, 2006). Thus, while we focus on individual intentions and resulting actions, institutions have a critical role in creating policy and providing

support for women faculty to advance in their career. In short, women faculty should not have to work so hard to garner support in their career advancement. Even with the stated limitations and our small sample, the significance of our study findings lies in the unpacking of the complex interplay of numerous components behind a woman associate professor's decision to apply for promotion. We now discuss specific implications to research and practice.

Implications for Research and Practice

In addition to the opportunities for future researchers to address our study limitations, our study makes three important contributions to research and practice to support STEM/SBS women academic faculty career advancement. First, our study makes a unique methodological contribution to utilizing the TPB in assessing the impact of a career advancement workshop focused on women academic faculty. As noted, most TPB studies utilize participant interviews only in the formative stage of data collection to guide the intervention development and determine the content for the post-intervention survey measures (cf. Montano & Kasprzyk, 2008). To our knowledge, our study was the first application of the TPB in a retrospective qualitative study and provided an efficient mechanism for collecting program evaluation outcomes. By exploring participants' pre and post workshop intention beliefs, we were able to present a more robust explanation of the workshop impact than the commonly reported post-outcome only levels (reaction, learning, transfer, results; Kirkpatrick & Kirkpatrick, 2006) used in most evaluation research. Using the TPB as a framework was also particularly helpful in giving voice to marginalized groups in discussing institutional interventions that may go undiscovered or silenced in quantitative inquiry approaches (Museus & Liverman, 2010). However, we do recognize the generalizability of our qualitative study is further constrained by a small sample; thus, we offer our suggestions as preliminary findings. We urge future researchers

and program developers to consider how the TPB might be used to explore intervention outcomes involving larger and more diverse samples.

Second, our study findings also support the utility of institutions offering promotion support and resources to post-tenure women faculty in a workshop format. Although participants' intentions to pursue promotion were certainly strengthened by their MCW experience, we saw the greatest change in their promotion-seeking behaviors from receiving information that helped participants disrupt gatekeepers and gendered networks which appeared to have emboldened their agency in assessing promotion readiness. Drawing from the UH-ADVANCE MCW workshop design (Table 1), we suggest mid-career workshops include explicit and verified promotion criteria that can challenge common myths and biased guidance, have recognized referents (e.g., academic leaders, full professors, P&T committee members) speak to "why" more women are important in senior ranks, and include small group discussions that elaborate on discipline-specific criteria important for promotion success. From our MCW experience, participants requested (in their registration) to have panelists discuss external reviewer selection, increasing scholar visibility, life-work balance, and composing the promotion portfolio.

Career development workshops have been found to positively influence retention efforts and promotion rates (Chang et al., 2016; Van Miegroet, et al. 2019) by helping women adjust to changing individual and organizational demands while also signaling an investment in their career advancement. Thus, we agree with Lennartz and O'Meara's (2019) suggestion to increase agency-enhancing opportunities through individual and group learning experiences that can make the promotion process more transparent for mid-career women faculty. As noted in other extant research, women academics often begin their career with lower advancement intentions

than men (Evers & Sieverding, 2015) and these can further erode when they experience structural and climate barriers to career advancement. This is especially true for WoC women faculty who are often asked to demonstrate their performance (i.e., “prove it again,” Williams et al., 2014) which can lead to their diminishing perception of support and control over the process.

Finally, our findings also underscore the critical need to ensure department chairs and other leaders are knowledgeable of the most current promotion criteria and actively support faculty as they advance in their career. Department chairs are critical and important influencers in shaping the career trajectory for faculty members, yet they are unlikely to receive training on providing developmental feedback in preparing faculty for the promotion process. Given our findings, Asian and WoC participants perceived their department chairs as having more (than White women) of a constraining effect on their promotion intentions particularly around a lack of developmental feedback and unclear procedural information. Research suggests this is more of an issue for WoC which may explain the concerns some of our WoC participants expressed when they declined our invitation to be interviewed. Department chairs can—and should—serve to educate and actively disrupt institutional bias by raising awareness of diversity dynamics, questioning implicit values, and ensuring that review processes are transparent and equitable. Thus, institutions must not leave mentoring and supporting women associate professors only to external programs, like ADVANCE or through academic affairs sponsored programs, but should require department chairs and other faculty leaders to be mutually engaged and knowledgeable of how to support, develop, and sponsor women associates in their career advancement. We urge institutions to both invest in department chair development as coaches and sponsors of faculty career advancement and make this part of their annual leader review.

In her review of diversity interventions focused on improving gatekeepers' decision-making, Vinkernburg (2017) suggests that department chairs would benefit from a participatory modeling (group modeling) exercise that allows participants to visually depict the underlying diversity inequities in their unit. Participatory modeling allows individuals to develop causal loop diagrams that depict gaps and areas of inconsistency within merit, workload, promotion and tenure, and other performance-related decisions. Another example is the Faculty Service and Rewards Project (O'Meara et al. 2021) that provides a template of an action research framework for identifying inequitable service patterns using a department's own workload data. Department chairs can then adopt evidence-based reform practices to ensure equity in how teaching and service is taken up, assigned, and rewarded. Either one of these exercises would be especially useful at helping department chairs identify patterns of inequitable service, teaching, and resource allocations (i.e., a lack of culturally appropriate mentoring; Corneille et al., 2019) that post-tenure WoC faculty often experience.

In summary, our study of women associate professors' promotion intentions suggest that accurate, compelling, and encouraging information can increase the rate and frequency at which women faculty apply for promotion to full professor. Exploring their experiences through the TPB allowed us to identify the different and complementary influences that underscore behavioral intentions toward career advancement.

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