



Early-career outcomes and gender: can educational interventions make a difference?

Early-career
outcomes and
gender

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Nan S. Langowitz

Management Division, Babson College, Babson Park, Massachusetts, USA

I. Elaine Allen

*Mathematics & Science Division, Babson College, Babson Park,
Massachusetts, USA, and*

Mary Godwyn

History & Society Division, Babson College, Babson Park, Massachusetts, USA

Abstract

Purpose – Extant research studies document gender differences in career outcomes for middle and advanced career stages. The purpose of this study is to examine potential gender differences in early-career success with a particular focus on whether educational intervention might mediate any potential differences.

Design/methodology/approach – Survey data for recent business college alumni were analyzed using descriptive techniques, linear regression and logistic modeling; the response rate was 25 percent and all data were self-reported. Both objective and subjective measures were used to assess outcomes. A priori, given similar educational training and expectations for managerial careers, we should expect to find similar early-career progress regardless of gender.

Findings – Differences are apparent out of the starting gate for women in early-career stages compared with their male counterparts, by both objective and subjective measures. Results also suggest an opportunity to improve outcomes through educational interventions. Limitations of the findings include the use of self-reported data and a modest response rate.

Practical implications – The findings of this study highlight the importance that integrated leadership development programs may play in supporting women's early-career success and the need to advise young women to negotiate more assertively for salary and leadership opportunity at the immediate start of their careers. For educational institutions, the findings suggest that concerted focus on support for women students' development may enhance their early-career outcomes.

Originality/value – By focusing on early-career outcomes, the paper seeks to contribute to the gender and careers literature by highlighting results that may set up the patterns seen among women in mid-career and senior level managerial careers. In addition, the paper demonstrates the educational interventions may be of value in reducing the impact of stereotype threat on women's career outcomes.

Keywords Career development, Women, Gender, Early-career, Educational intervention, Stereotype threat, Satisfaction, Salary, Promotion, Education

Paper type Research paper



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Introduction

Many studies of gender differences on career success have focused on senior executive women (Catalyst, 2004b; Barsh and Cranston, 2009; Carter and Silva, 2011) yet with the Millennial Generation entering the workforce there is a need to understand how their careers are being shaped at the early stages. The proportion of women completing college degrees in the USA has been steadily rising and with that their entrance into the workplace (Aliprantis *et al.*, 2011). Are the documented gender differences in career outcomes at later stages prevalent early on? Is there anything that might be done to limit these differences? Critiques of past research on gender differences recommend consideration of how the socio-cultural context may impact individual actors and outcomes; that is, that the organization or social context itself may be an influence with respect to gender differences (Yoder and Kahn, 2003; Ely and Padavic, 2007). Education, a significant dimension of human capital, has been found to be an important predictor of career success (Judge *et al.*, 1995). And yet education is itself a social context that shapes individual performance. Studies have documented how college level educational interventions can shift performance outcomes by encouraging individuals to reframe their social context and self-perceptions (Treisman, 1992; Steele, 1997; Margolis and Fisher, 2001). We wondered whether interventions in the college education process might influence the early-career success of graduates with respect to gender. The purpose of this study was to examine early-career success with a particular eye toward whether gender-focused educational interventions may influence potential gender differences in outcomes. First, we wanted first to look for any potential differences by gender in early stage career success. Given the argument in the careers and gender literature for expanding definitions of career success beyond compensation (Judge *et al.*, 1995; Kirchmeyer, 2002; O'Neil *et al.*, 2008) we included both objective outcome measures, such as salary or promotion, and subjective measures, such as satisfaction with one's career path or a sense of empowerment at work. A meta-analysis by Ng *et al.* (2005) provides a valuable overview of the incorporation of both objective and subjective measures for assessing career success in extant research. Next, since we are looking at career outcomes for recent graduates, we note education theory which finds that making students more aware of the influence of gender in professional settings may make a difference to graduates' ability to navigate organizational life more effectively (Gracia, 2009). Steele's (1997) work suggests that educational interventions may influence the stereotype threat underlying some gender differences with respect to career outcomes and the careers literature argues that differences in human capital may influence career outcomes. Our second objective was to test whether educational interventions might impact career outcomes, particularly with respect to gender.

Our research looked at graduates from a private business college in the years 2003-2007, prior to the recent economic recession. A priori, given similar educational training and expectations for managerial careers, we might expect to find similar progress for graduates regardless of gender. On the other hand, given participation in gender specific educational activities, such as a women's leadership development program or gender studies courses, it may be that such human capital interventions shift the pattern of gender differences. Our findings show that gender differences exist with respect to both objective and subjective early-career outcomes. Further, we find that educational interventions do significantly moderate those gender differences.

By focusing on early-career outcomes, we seek to contribute to that body of work by highlighting results that may set up the patterns seen in mid-career and senior level managerial careers. With an increasingly high proportion of women enrolled in undergraduate business programs, understanding the potential differences young women and men may experience in the early stages of their careers will be informative and important not only for their hiring organizations but for the institutions that educate them. There is also an opportunity to improve outcomes through educational interventions.

Theoretical background

Career outcomes model

A framework for understanding career outcomes has traditionally divided outcomes into objective and subjective measures (Hughes, 1958). Heslin (2005) provides a valuable overview of the operationalization of objective and subjective career success while calling upon scholars to look for new ways to conceptualize career outcomes. In the absence of an accepted new frame, we look to extant research for a model of the antecedents that may predict these outcomes. Judge *et al.* (1995) looked at individual characteristics as predictors of career outcomes which included demographics, human capital, and motivational measures in addition to organizational and industry characteristics including sector and organizational size. Melamed (1996) focused on human capital attributes and looked also at career options, including occupational choice and career move decisions, as well as opportunity structure, which included macro-societal dimensions as well as micro-occupational measures such as promotion opportunities. Tharenou (2001) also looked at promotional opportunities as well as advancement encouragement from within the organization. Melamed (1996) and Tharenou's (2001) work solely used advancement or promotion as the measure of career success, and both studies reported that gender had a moderating effect on predictors of success. Judge *et al.* (1995) used both objective and subjective measures, however gender, while included as a variable, was not a central focus to the study's focus or findings. Similarly, Mohd Rasdi and Garavan (2011) included gender within demographic attributes considered as predictors of career success in a study of public sector employees, but found that demographic variables were not a strong determinant of objective or subjective career success. While Judge *et al.*, Melamed, and Mosdi *et al.* treated gender as a demographic variable of human capital, Tharenou (2001) and more recently, Orser and Leck (2010) explicitly use a gender interaction model in order to more fully capture the potential moderating effect of gender on career outcomes. Following on this work, our model included personal predictors such as education, gender, and work experience characteristics and explicitly looked for any moderating effects of gender.

There is a long history of argument calling for the inclusion of subjective measures for career success in addition to the traditional objective measures of salary, promotion, or managerial level. Gallos (1989) argued that women may conceive of success differently from men and that broader definitions would enhance our understanding of career outcomes. Indeed the careers literature has acknowledged the changing patterns of careers and the need to rethink how we evaluate them. In particular, Arthur (1994), Hall (1996) and more recently Mainiero and Sullivan (2005) have proposed new models for thinking about how individuals envision their careers and the varying patterns that career development may take over time. While full discussion of the range of career

models is not within the scope of this paper, Sullivan and Baruch (2009) provide a valuable overview of this research. Subjective measures have become an accepted measured outcome (Greenhaus *et al.*, 1990; Turban and Dougherty, 1994; Kirchmeyer, 2002) with a typical questionnaire response statement of “I am satisfied with the success I have achieved in my career.” Indeed changing patterns in the nature of careers has only highlighted the importance of using an individual’s perception of success for assessing career outcomes (Greenhaus, 2002; Hall and Chandler, 2005) in addition to objective measures like salary or job level. In conducting our research, we included multiple objective and subjective outcome measures.

Building on the discussion outlined above and particularly following on the conceptual work of Judge *et al.* (1995), Melamed (1996) and, more recently, Orser and Leck (2010) we conceptualized that personal predictors, career choice predictors, and structural predictors might impact career success by gender. Thus, we worked from the model shown in Figure 1.

Using this model as the framework for our study leads to the following hypotheses:

- H1. Personal predictors influence early-career success outcomes.
- H2. Career choice predictors influence early-career success outcomes.
- H3. Structural predictors influence early-career success outcomes.
- H4. Gender moderates the influence of personal, career and structural predictors on early-career success outcomes.

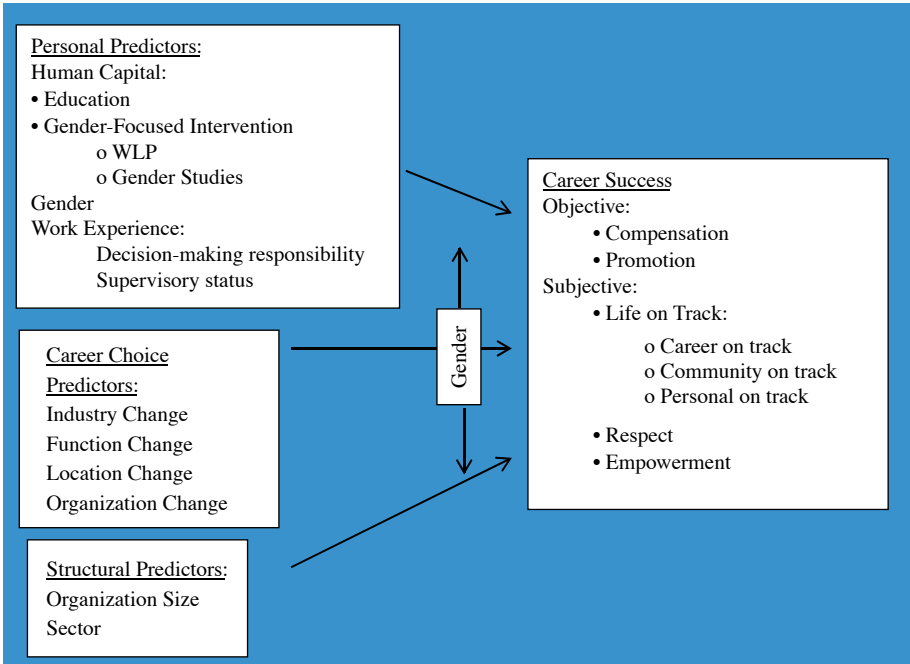


Figure 1.
Career outcomes model

Source: Adapted from Judge *et al.* (1995) and Orser and Leck (2010)

Early-career outcomes

In this research, we were particularly interested in examining the early-career outcomes of business college graduates, crafting our study around a convenient sample of recent alumni from the classes of 2003 to 2007 who attended the same private business college. Our study asked about first post-graduation job and the current job, providing the opportunity for analysis of early-career progress and satisfaction. We also wanted to look at the question of gender differences at this early-career stage. Research on outcomes and gender in the early-career entry years is limited. Those studies which have been done have tended to focus on a highly heterogeneous population which makes interpretation difficult. Some studies have examined predictors of early-career success suggesting gender connections despite not being specifically focused on the impact of gender. Eby *et al.* (2003) looked at a broad sample of recent graduates from a public university with a focus on dimensions of “know how,” “know why” and “know whom” as attributes that might lead to early-career success. While they found no main effects connected to gender in their results, a *post hoc* analysis suggested potential interaction effects related to gender. Rode *et al.* (2008) investigated personality factors as predictors of early-career success among a more homogeneous group also without a specific focus on gender. Nonetheless, that study indicated that gender was among the three significant predictors of salary as an outcome measure in the early-career stage. A study by Abele and Spurk (2009) looked particularly at self-efficacy and career advancement goals as potential predictors of career success, using both objective and subjective outcomes. This study of recent graduates from a German university included a wide range of educational preparation across the university and found gender differences among objective salary outcomes but not among subjective satisfaction outcomes. In a recent American Association of University Women (AAUW) study which looked at career patterns and potential gender differences for recent college graduates, significant gender variation was noted in the focal area for college majors, with men predominating in the business/management major. Full-time pay was found to be lower for those graduating in majors dominated by women, however even within the same major, women tended to earn less than their male counterparts. Further, the differential in the gender pay gap was found to widen over time and as quickly as one year following employment (Dey and Hill, 2007). Taking these findings into account, we might expect to see a gender difference in the objective outcomes at the early-career stage. This leads to the following hypothesis, as follows:

H5. Early-career objective success outcomes will vary by gender.

Gender and career

Reskin and Bielby (2005) provide a valuable overview of the mechanisms by which social stratification based on sex may occur and the impact this may have with respect to career outcomes. Sex has been shown to be a factor in the occupations that attract and hire women versus men as well as a factor in the rewards that women and men receive. Those occupations with a higher proportion of men have higher compensation (Booras and Rodgers, 2003). Higher authority has also been shown to be associated with male roles (Smith, 2002). The negotiations literature points to differences by gender in the outcomes of negotiations for compensation, both salary and benefits. Bowles and McGinn (2008) have noted that negotiation is one of the micro-mechanisms

by which gender inequities in the workplace may be constructed or dissolved. Since gender is socially constructed, then social interactions such as negotiations become not only the determinants of negotiated outcomes, e.g. pay or hiring start date or assignment, but of status and position in the organization. Deaux and Major (1987) point to proximal causes of gender which constitute the situational factors that trigger self-concept and behavioral expectations (Ridgeway, 1997). Women have been shown to ask for less and to compromise more easily when negotiating for themselves (Babcock and Laschever, 2003). Further, women can be caught in a double-bind when negotiating as their behaviors are interpreted through the lens of gender stereotype (Rudman and Glick, 2001). The social construction of gender may also play a role with respect to leadership authority, valuing of contributions, and promotion. Ely (1995) focuses on this social construction for women at work. Eagly and Johannesen-Schmidt (2001) note the role incongruity that women may experience in taking on leadership roles that contradict the social constructed expectations for women's social behavior. Eagly and Carli (2007) extensively review and diagnose the intersection of gender and organizational life. Taken as a whole, extant research points to significant evidence of the impact of the social construction of gender roles and expectations, including potential stereotype threat, for women seeking career success in the business arena. Indeed, despite many years of research and changing social norms, studies find that the persistent stereotype "think manager – think male" remains entrenched (Schein, 2007) and behaviors continue to be interpreted differently in the workplace based upon gender and minority status (Westphal and Stern, 2007). Notwithstanding the findings of Abele and Spurk (2009), these studies have documented the impact that gender may have on women's self-perception and subjective self-assessment, leading to the following hypothesis:

H6. Early-career subjective success outcomes will vary by gender.

Critiques of past research on gender differences recommend consideration of how the socio-cultural context may impact individual actors and outcomes; that is, that the organization or social context itself may be an influence with respect to gender differences (Yoder and Kahn, 2003; Ely and Padavic, 2007). This connects, then, to the research on educational interventions. In examining education as an aspect of human capital and antecedent to career success, we were interested in whether specific educational experiences such as gender studies coursework or a women's leadership development program might influence career outcomes.

Using educational interventions to influence outcomes

Education literature suggests that making students more aware of the influence of gender in professional settings may make a difference to graduates' ability to navigate organizational life more effectively (Gracia, 2009). In a European study, Moreau and Leathwood (2006) note that ignoring the influence of gender in employability shifts responsibility for employment success away from organizations onto individuals. A study at the University of Malta examined what responsibility the institution had for the career outcomes of its graduates, looking at gender as one dimension of the analysis (Debono *et al.*, 2002). Similarly, Isaac *et al.* (2012) argue that multilevel interventions are both needed and can be effective to counteract the pervasive stereotypes that women face in the academic science, technology, engineering, mathematics and medicine fields.

Looking to the literature of social psychology, we know that intervention can impact the influence of stereotype threat which Steele describes as “the social-psychological threat that arises when one is in a situation or doing something for which a negative stereotype about one’s group applies” (Steele, 1997, p. 614). Several studies have demonstrated that simple interventions can dramatically shift interpretive frames and results, despite the persistence of socially embedded stereotypes. In their overview of this work, Godwyn and Stoddard (2010) cite the work of Steele (1997, 2003), Gonazales *et al.* (2002) and Treisman (1992). Most recently, Boucher *et al.* (2012) manipulate stereotype threat conditions with respect to mathematics outcomes by gender, finding that the timing of educational interventions can make a difference to re-framing and outcomes. While Steele does not discuss career outcomes nor business organizations, workplace diversity studies point to the question of outcomes based on organizational diversity and the business case for achieving them (Catalyst, 2004a; Webb, 2006; Herring, 2009). With respect to women entrepreneurs and stereotype threat, Godwyn and Stoddard (2011, p. 86) suggest that interventions may influence performance outcomes by:

[...] neutralizing the stereotype because it changes the interpretive framework, the social context, in which women perceive themselves [...] The change can be described as women shifting identification from belonging to a group of people considered deviant and incompetent, to belonging to a group that is recognized as normative and competent.

Findings by Isaac *et al.* (2012) also suggest that educational interventions may make a difference for shifting stereotype threat for women with respect to career outcomes. Our research design held general education background constant – all study participants obtained a bachelor of science in business from the same institution – but included the possibility of two educational interventions, gender studies coursework and a women’s leadership development program, each potentially specific to frame shifting with respect to gender stereotype in careers. Our final hypothesis then follows:

H7. Gender-focused educational interventions influence early-career success outcomes.

Research methods

Sample and procedure

Data were collected from an online survey conducted from June through August of 2009 of Babson College undergraduate alumni. The college is a private business school and all undergraduates receive a bachelor’s of science degree in business. A priori, given similar educational training and expectations for managerial careers, we should expect to find similar progress for graduates regardless of gender. All undergraduate alumni from the classes of 2003 to 2007 (five years) were contacted by e-mail with cooperation of the alumni office (and approval of the institutional review board) and invited to participate in the research study yielding a survey population of 1983 individuals contacted. The 2009 survey was designed after a pilot survey ran in summer 2008. The final survey asked questions on outcomes such as salary and career placement, on career progress since the initial job after leaving college, and on attitudes, such as satisfaction, sense of respect from peers and leadership empowerment (see below for information on specific measures). In addition, descriptive data was collected including industry, geographic location, employment hours, *inter alia*. Where possible, descriptive data questions

mirrored those used in the college's graduating senior career survey so that comparison might be made from the survey sample to the general population.

There were 398 complete surveys and an additional 89 partial surveys representing a 25 percent response rate, i.e. 487 responses out of 1983 surveyed. A review by Baruch and Holtom (2008) of recently published organizational research finds an average e-mail survey response rate of 54.7 percent with a very large standard deviation of 23.9. They note that individual survey response rates tend to be lower (52.7 percent on average) than organizational response rates, and also find lower response rates in the education sector (49 percent on average); standard deviations are comparable to the overall e-mail average. In this context, the 25 percent response rate of the study reported upon here is somewhat low but remains within the norm and is similar to those reported in other early-career studies cited herein. The sample included males and females and classified them in terms of their enrollment in Gender Studies courses (such as Gender Theory, Gender Studies, or Women's Studies, among others) or, for the females, membership in the Women's Leadership Program (WLP) run by the college's Center for Women's Entrepreneurial Leadership (CWL). Candidates for the WLP are recommended by the admissions staff that looks for evidence of leadership potential in the regular application for admission. Candidates who have been admitted to the college are then invited to interview for the opportunity to participate and receive scholarship support. First-year women also have an opportunity to apply to join the WLP. Approximately 25 students per class are WLP members. In addition to the standard business curriculum, they are engaged in gender specific co-curricular leadership development programming. This programming includes mentoring by experienced women business professionals, talks by women leaders and entrepreneurs, volunteer service activities, and discussions; all of which provide an opportunity to consider issues around women's leadership and careers, as well as a strong social connection. This variable is labeled CWL.

The sample held a relatively even distribution across the five years of graduation. Respondents were 59 percent female and 41 percent male, nearly the inverse of the typical Babson undergraduate population in the timeframe of attendance, which was approximately 58 percent male and 42 percent female. The difference in the response rate may be due to initial language in the invitation indicating that the survey would be used to understand career outcomes for women compared with men but the data were analyzed by gender and there were sufficient responses for males and females to examine the hypotheses stated in the paper. About 13 percent of respondents were participants in the WLP (women only) while 35 percent of respondents had taken at least one gender studies course (both men and women, though weighted toward women 20-80, respectively). There were no significant differences in industry, geographic, or functional representation from the general college population. The survey response closely followed the diversity statistics at the college with 77 percent of the respondents indicating they were Caucasian and the remaining 23 percent non-Caucasian (Asian, African-American, Hispanic, or Native American). All alumni responses indicated full-time employment and all respondents reported that they were childless. While the sample may represent a self-selected response group of only those who held full-time jobs this seems unlikely as we would expect that most young graduates of a private business school education pursue full-time employment in their initial years after graduation. Similarly the lack of parents in the sample is not surprising given an average age of 25 at first birth in the USA as reported by the National Center for Health Statistics (Mathews and Hamilton, 2009).

Finally, the salary results from the survey were compared to those produced by the college's career office and no significant differences were found.

Predictor measures

Personal predictor measures were captured through demographic questions as noted above. To measure work experience, we looked at decision-making responsibility and supervisory status in the respondent's first post-college job with ordinal response questions. Respondents were asked to characterize their decision-making responsibility as none, some, or significant and to categorize their supervisory responsibility as none, one to four people, or five or more people.

Career choice predictor measures were dummy variables that captured changes from the first post-college job to the second in terms of industry, function, location or organization change.

Structural predictor questions asked about industry sector and organizational size, using the sector and size categories provided by the college's career center. Organizations were categorized as fewer than 25 employees, 25-99 employees, 100-500 employees, or greater than 500 employees.

Outcome measures

The survey asked respondents to report salary for their initial post-graduate role as well as in their current role. In addition, information on promotion, both internally to the same organization as well as to a new organization, was collected. The objective measures of success used in our analysis were salary in the current role (SalaryNow) and a dummy variable for promotion of any kind (Promotion).

Subjective measures of career success were based on responses to five-point Likert scale questions with respect to comfort, respect, leadership, and empowerment at one's job. Sample items include: "At work my contributions and work effort are respected by my peers" and "At work I feel empowered to take initiative and make decisions." Two measures combining responses were created by summing over the scalar data to capture Respect (two items) and Empowerment (three items). Another set of subjective measures focused on whether one's personal, career, and community life were on-track. The three items were: "I feel my career is on track for where I wanted it to be at this point in my life," "I feel my community involvement is on track for where I wanted it to be at this point in my life," and "I feel my personal life is on track for where I wanted it to be at this point in my life." An overall "Life on Track" variable was created by combining the three items.

Analytical approach

Univariate and bivariate descriptive statistics were calculated using means ($\pm$ SD) and medians for continuous data and frequencies and percents for categorical data. Bivariate analyses by gender, WLP membership, and gender studies were analyzed using χ^2 statistics. Comparison of mean starting salaries and salaries now by gender and WLP status used one-way analysis of variance.

Logistic models were fit to the dichotomous outcome of Promoted or Not and linear models were fit to the outcomes of SalaryNow and Empowerment. Models were fit adding all the variables simultaneously as well as in blocks using Gender, WLP membership, and Gender Studies as moderator variables. Models were evaluated using R^2 for regression models and pseudo R^2 (Nagelkerke) for binary logistic models (WLP membership is noted as CWL in all models).

Results

Descriptive findings

Results from our sample show that early stage women experience a statistically significant gender pay gap in their first jobs upon graduation, and that gap widens over time. Those students who experienced a women's leadership development (CWL) intervention began their careers relatively at par with their male counterparts, earning 94 cents on average compared with male graduates while other female students earned only 85 cents on average for every dollar their male counterparts were paid. This gap widened to 85 cents for CWL women and 80 cents for non-CWL women with time in the workplace beyond college graduation. The only exception to the pattern is in the initial year of the CWL women's leadership development program, 2003, which may be attributed to its start-up experimentation with a pilot group of 13 students (Table I).

In initial post-graduate roles, there are no significant differences in the supervisory responsibility of men and women. On average, nearly 75 percent of students had no supervisory responsibility in their first jobs post-graduation, however men were more likely to have a first job with a supervisory role (30 percent of men versus 22 percent of women had some supervisory responsibilities). Differences in supervisory responsibility are significant ($p = 0.014$) in the current role, with only 32 percent of males with no supervisory responsibility in their current roles compared with 46.9 percent of women. Further, 23.5 percent of men supervise five or more employees compared with 17 percent of women. Our analysis (see discussion below) shows mixed results regarding supervisory status as a contributing human capital influence (personal predictor) with respect to differences in outcomes by gender. There were no significant differences in the decision-making responsibility in the first or subsequent jobs by gender, with approximately two-thirds of the sample holding some decision-making responsibility in their initial roles.

Most respondents began their careers in large organizations with 500 or more employees (Table II).

The most heavily represented sectors for employment in both initial job and current job were financial services, consulting and accounting, with most graduates finding employment in the Northeast region of the USA (Table III).

Finally, as seen in Figure 2, while volunteer activity is high among all graduates, we see significant differences in the level of volunteer activity by gender, with more women volunteering for community activities at least once a year compared with men. Women who participated in the WLP were the most frequent volunteers.

Analytic findings – objective measures

We used both multiple regression and logistic modeling to test our hypotheses, depending on whether the outcome measure we were analyzing was continuous (e.g. SalaryNow) or categorical (e.g. gender, life on track). The SalaryNow outcome measure is continuous and therefore regression was the method of choice whereas logistic modeling was appropriate to the Promotion outcome measure and the subjective outcome measures of Life on Track, among others, which are discontinuous. We will first discuss findings relevant to the objective outcome measures.

The base regression model for the objective measure of SalaryNow is presented in Table IV.

							Early-career outcomes and gender
CWL/women's leadership program?			Salary – first job	Salary now	Gender ratio first	Gender ratio now	
2003							
Women	Not CWL	Median <i>n</i>	\$40,500 24	\$75,000 24	1.01	0.84	121
	CWL	Median <i>n</i>	\$35,500 8	\$62,500 8	0.89	0.70	
Men		Median <i>n</i>	\$40,000 27	\$89,000 29			
	2004						
Women	Not CWL	Median <i>n</i>	\$38,000 40	\$70,000 38	0.95	0.74	
	CWL	Median <i>n</i>	\$38,500 8	\$77,000 7	0.96	0.81	
Men		Median <i>n</i>	\$40,000 31	\$95,000 31			
	2005						
Women	Not CWL	Median <i>n</i>	\$37,000 33	\$60,000 35	0.74	0.86	
	CWL	Median <i>n</i>	\$42,500 12	\$66,000 12	0.85	0.94	
Men		Median <i>n</i>	\$50,000 32	\$70,000 32			
	2006						
Women	Not CWL	Median <i>n</i>	\$41,000 35	\$57,000 35	0.80	0.81	
	CWL	Median <i>n</i>	\$54,500 12	\$64,000 12	1.07	0.91	
Men		Median <i>n</i>	\$51,000 33	\$70,000 31			
	2007						
Women	Not CWL	Median <i>n</i>	\$42,000 35	\$49,500 32	0.76	0.76	
	CWL	Median <i>n</i>	\$52,500 10	\$58,000 9	0.95	0.89	
Men		Median <i>n</i>	\$55,000 29	\$65,000 25			
	Average 2003-2007						
Women	Not CWL	Median <i>n</i>	\$39,700 167	\$62,300 164	0.85	0.80	
	CWL	Median <i>n</i>	\$44,700 50	\$65,500 48	0.94	0.85	
Men		Median <i>n</i>	\$47,200 152	\$77,800 148			

Table I.
Early-career salary
outcomes by gender and
developmental support

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As indicated by the descriptive results, the regression model ($R^2 = 0.267$ indicating that the model explained more than 25 percent of the variability in current salary) shows a significant negative influence of gender on salary ($p < 0.000$). Women experience a significant negative penalty on the objective measure of SalaryNow. This applies

equally to those who participated in the CWL women's leadership development program. It is not surprising to see that the number of years since graduation is also significant and negative on this outcome measure, with those in a more recent graduation year receiving a lower salary. Similarly, industry change negatively influences salary, presumably because of lower domain experience. More surprising perhaps is that the human capital factor of having been a decision-maker in one's first job has a negative influence on later salary. That is, if you were a decision-maker in your first job your salary will be lower than average now. This may be because salary began somewhat higher than average as a result of the decision-making responsibility but leveled off compared to others in the sample as their responsibilities increased. Finally, size of the organization in the first job shows a negative influence on SalaryNow but since this variable is coded inversely this indicates that the larger the organization the higher the current job salary. This might be expected as larger organizations may tend to have greater resources for compensation.

Table II.
Early-career employment
by organization size

	More than 500 employees	100-500 employees	25-99 employees	Fewer than 25 employees	Total
First job	226 59%	56 15%	49 13%	52 14%	383
Current job	210 56%	59 16%	43 12%	61 16%	373

Table III.
Early-career employment
by industry and location

	%		%
<i>Industry of your first job</i>		<i>Industry of your current job</i>	
Accounting	11.9	Accounting	9.3
Advertising/public relations	4.9	Advertising/public relations	6.9
Aerospace and defense	2.1	Aerospace and defense	2.4
Consulting	10.9	Consulting	13.8
Consumer products	3.6	Consumer products	4.2
Education	2.1	Education	3.2
Financial services	28.2	Financial services	24.7
Health care	3.4	Health care	3.7
High tech	5.4	High tech	5.8
Hospitality/entertainment	1.6	Hospitality/entertainment	1.9
Insurance	2.3	Insurance	1.6
Other manufacturing	1.8	Other manufacturing	1.9
Other services	9.3	Other services	8.8
Real estate	3.9	Real estate	6.4
Retail	7.8	Retail	5.0
Transportation	1.0	Transportation	0.5
<i>Location of the organization first job</i>		<i>Location of the organization current job</i>	
Mid-Atlantic	4.9	Mid-Atlantic	5.1
Northeast	75.8	Northeast	66.4
South	4.7	South	5.1
West	3.6	West	7.2
Mid-West	2.9	Mid-West	3.2
International	8.1	International	13.1

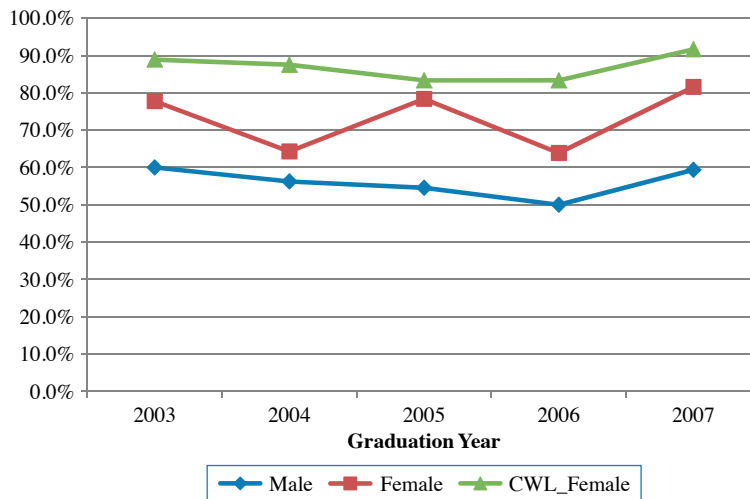


Figure 2.
Volunteer participation
at least one annually,
by gender and
leadership support

Dependent variable = SalaryNow	Unstandardized coefficients		Sig.
	B	SE	
(Constant)	121,642.20	8,479.28	0.000
YearGrad	− 6,443.09	1,665.53	0.000
CWL?	− 1,622.45	6,929.59	0.815
Gender	− 16,945.82	4,768.73	0.000
Decision-maker first job	− 9,237.08	4,921.35	0.061
Supervise anyone first job	− 5,123.05	5,422.20	0.345
Changed industry	− 18,541.16	5,277.03	0.001
Changed function	5,514.21	5,171.95	0.287
Changed location	1,879.36	5,767.14	0.745
Size of organization first job	− 5,634.22	2,251.43	0.013
Size of organization current job	2,109.16	2,236.47	0.346

Note: $R^2 = 0.267$

Table IV.
Base regression model
for salary outcomes

In the second step of the model, we introduce an interaction variable (MaleVsCWL) to capture the potential influence of the WLP intervention. In other words, CWL becomes a moderating variable on Gender. This model has an improved R^2 at 0.419 showing an absolute increase in explanatory power of just over 15 percent and a relative increase of over 50 percent (Table V). We see similar effects to that of the base model but in addition we see the moderating effect that the CWL intervention has, narrowing the gender difference on SalaryNow. In the second step model we find that the salary difference is only \$9,633 less for CWL women versus men compared with \$16,945 in the base model for all women versus men.

In a third step, we introduce Gender Studies coursework as an intervention and test for its potential influence (Table VI). Similar to the second model, we find that adding Gender Studies as a moderating variable on Gender also reduces the gap in SalaryNow, although in this case it is likely moderating both genders as some men do take Gender

Table V.
Modified salary
regression model:
influence of WLP

Dependent variable = SalaryNow	Unstandardized coefficients		Sig.
	B	SE	
(Constant)	126,531.447	10,645.936	0.000
YearGrad	- 7,285.792	2,190.606	0.001
Decision-maker first job	- 16,962.803	6,545.376	0.010
Supervise anyone first job	- 7,175.383	7,253.843	0.324
Changed industry	- 23,511.269	7,144.242	0.001
Changed function	8,880.072	7,029.654	0.208
Changed location	304.358	7,268.617	0.967
Size of organization first job	- 6,683.229	2,851.515	0.020
Size of organization current job	5,125.583	2,651.296	0.055
MaleVsCWL	- 9,633.166	3,511.737	0.007

Note: $R^2 = 0.419$

Table VI.
Final salary regression
model: women's
development and gender
interventions

Model	Unstandardized coefficients		Sig.
	B	SE	
(Constant)	126,847.645	10,688.239	0.000
YearGrad	- 7,112.871	2,224.171	0.002
Decision-maker first job	- 17,069.196	6,562.750	0.010
Supervise anyone first job	- 7,058.990	7,272.992	0.333
Changed industry	- 23,466.867	7,159.761	0.001
Changed function	8,984.679	7,047.670	0.204
Changed location	402.595	7,286.643	0.956
Size of organization first post-Babson job	- 6,696.917	2,857.614	0.020
Size of organization current job	5,014.008	2,666.855	0.062
MaleVsCWL	- 7,122.643	3,674.303	0.014
Gender studies?	- 3,492.595	7,229.100	0.630

Note: $R^2 = 0.434$

Studies courses. Nonetheless, as noted in the sample description, significantly more women than men are enrolled in Gender Studies courses, with slightly more CWL women enrolling ($p = 0.0001$). This final linear regression model has an R^2 of 0.434, an absolute increase of 1.5 percent over the second model and a relative increase of explanatory power of 3.6 percent.

We also examined the objective outcome of promotion in the current job. Using a logistic model (pseudo $R^2 = 0.269$ indicating explanatory power similar to our initial linear regression model), we looked at the potential influence of personal, career, and structural predictors on promotion, with results shown in Table VII. Similar to our earlier regression analysis, we see an influence of the career predictor of industry change and the structural predictor of organization size on Promotion as an outcome. Change in industry has a positive influence on promotion, whereas it has a negative influence on salary. In other words, by changing industry at the early-career stage you may gain a more positive status in terms of role but you may not immediately reap financial reward. Again recalling that organization size is an inversely coded variable, results from this model show that the smaller your initial organization (SizeOrg0) the more likely you

Table VII.
Logistic model for
promotion outcome

	Sig.	Exp(B)
SizeOrg0	0.092	1.219
IndChg(1)	0.002	2.363
FunctionChg(1)	0.694	0.897
LocationChg(1)	0.326	1.317
SizeOrgNow	0.003	0.729
Gender(1)	0.819	1.063
CWL(1)	0.831	1.072
GenStudies(1)	0.512	0.845
Decison0(1)	0.456	1.224
SupOthers0(1)	0.076	1.571

Note: Pseudo $R^2 = 0.269$

were to be promoted. In addition, you were more likely to be promoted if you moved to a smaller organization (SizeOrgNow). Of particular note for our research interests, neither gender nor gender related educational intervention (CWL women's leadership development program or gender studies) has a significant effect on the objective outcome measure of promotion.

Overall and in keeping with past research, we find that personal, career and structural predictors influence the objective career success outcomes of SalaryNow and Promotion, partially confirming *H1-H3* and *H5*. Gender plays a moderating role with respect to SalaryNow but not to Promotion, thus we have inconclusive evidence with respect to *H4* and *H5*. Further, the educational interventions of participating in a women's leadership development program or gender studies courses moderate gender differences in SalaryNow but have no significant influence on Promotion, contributing some positive confirmation to *H7*.

Analytic findings – subjective measures

Among several subjective outcome possibilities, our survey sought information with respect to self-perceptions of respect and empowerment in the workplace. We found no differences by gender with respect to empowerment and respect however there was a significant difference by gender with regard to perception of having authority and recognition of leadership at work. Results are provided in Table VIII.

Significantly more men than women completely agree that they have authority and are recognized for their leadership at work. This may relate to supervisory responsibility and our findings that more men than women had supervisory responsibility in their first job and significantly more in their subsequent roles. There were no significant differences in decision-making responsibility by gender and most respondents had some decision-making responsibility in their initial and current jobs. Attempts to create a composite variable to model either empowerment or respect as a subjective measure yielded no conclusive results.

Past studies have used satisfaction as a subjective measure for career outcomes, and we followed suit. Our survey asked individuals to self-assess whether their career life, community life, and personal life was on track for where they wanted it to be. A composite variable Life on Track was constructed, and we used a multinomial logistic model to evaluate the potential influence of personal, career and structural choice predictors on overall life satisfaction as a career outcome. Because of data constraints,

Table VIII.
Descriptive results:
perceptions of
empowerment and
respect

Gender	Completely disagree (%)	Somewhat disagree (%)	Neither agree nor disagree (%)	Somewhat agree (%)	Completely agree (%)
<i>At work my contributions and work effort are respected by my boss and senior managers</i>					
F	2.3	1.4	3.2	31.4	61.8
M	1.3	3.2	6.4	25.0	64.1
<i>At work I feel empowered to take initiative and make decisions</i>					
F	0.9	4.5	3.1	43.0	48.4
M	1.3	2.6	3.2	37.2	55.8
<i>At work I feel comfortable to express myself and offer my ideas</i>					
F	1.4	1.4	3.2	31.5	62.6
M	1.3	1.3	1.3	31.0	65.2
<i>At work my contributions and work effort are respected by my peers</i>					
F	0.9	1.8	1.8	30.8	64.7
M	1.3	1.9	1.3	29.7	65.8
<i>At work I feel I have authority and my leadership is recognized *</i>					
F	0.9	4.1	15.3	42.8	36.9
M	1.3	7.1	9.0	35.3	47.4

Note: Significant difference at: * $p = 0.05$ comparing male and female responses

we tested the model using the predictors which had a significant influence on the objective outcome measures of SalaryNow and Promotion. The model is presented in Table IX. The multinomial logistic model is like a logistic model but allows for more than two outcomes. This allowed us to evaluate the composite of three five-point Likert scale questions with values summing from 3 to 15. In the model each composite response value is compared to sum = 3 (Not on Track). Exp(B) is the odds compared to the lowest group (Not on Track) so this means that a number >1 is likely to be more satisfied (i.e. lower numbers mean less on track).

Results in the model shows that gender is significant, with females showing a dramatically higher level of satisfaction than men. The educational intervention of a women's leadership development program also shows a significant influence, with those women not experiencing that intervention (Not CWL) significantly less satisfied than other women.

In our overall results the perception of not being on track was relatively rare, that is most respondents are satisfied to some extent, however if you experienced the CWL development program you were the most likely to perceive that your life was on track in all three components of the subjective outcome measure. Indeed in Table X we see significant differences ($p = 0.039$) between women who experienced the CWL leadership development intervention and those who did not.

Further, in Table XI we see significant differences when comparing the responses of men, non-CWL women, and those women who experienced the CWL leadership development program with respect to non-career focused self-perceptions of life satisfaction. There are significant differences with respect to community life on track ($p = 0.040$) and personal life on track ($p = 0.045$) with women being significantly more satisfied than men and CWL women being the most satisfied. This may connect to the higher level of volunteer activity exhibited by women, as noted earlier.

Our analysis of subjective career outcomes indicates confirmation of *H6* as the subjective career success outcome of satisfaction clearly varies by gender. Further, we have

Life on Track: each value as compared to sum = 3 (Not on Track)	Exp(B)	95% confidence interval for Exp(B)	
		Lower bound	Upper bound
5.00			
GradYear	0.695	0.342	1.414
Organization size	1.458	0.565	3.760
Male ***	8,840,339.009	147,199.008	530,924,731.006
Female ***	82,991,366.721	1,623,968.246	4,241,195,581.325
Not CWL ***	0.00000021	0.00000005	0.00000087
Change industry	0.369	0.046	2.933
Not a decision-maker	0.222	0.031	1.589
7.00			
GradYear	0.765	0.421	1.392
Organization size	1.762	0.795	3.904
Male ***	5,609,055.895	175,430.933	179,338,429.586
Female ***	32,589,836.914	847,716.214	1,252,892,715.763
Not CWL ***	0.00000102	0.00000031	0.00000342
Change industry	0.277	0.048	1.596
Not a decision-maker	0.583	0.125	2.730
9.00			
GradYear	0.666	0.369	1.203
Organization size	1.391	0.627	3.083
Male ***	28,297,889.709	924,737.376	865,943,761.262
Female ***	68,890,166.255	1,878,021.407	2,527,050,538.007
Not CWL ***	0.00000058	0.00000018	0.00000183
Change industry	0.550	0.096	3.171
Not a decision-maker	0.461	0.100	
11.00			
GradYear	0.659	0.373	1.165
Organization size	1.281	0.590	2.779
Male ***	85,234,266.203	3,393,359.236	2,140,911,005.559
Female ***	345,074,378.232	10,883,950.504	10,940,542,817.790
Not CWL ***	0.00000067	0.00000029	0.00000152
Change industry	0.331	0.061	1.781
Not a decision-maker*	0.285	0.066	1.238
13.00			
GradYear	0.544	0.305	0.972
Organization size	1.567	0.718	3.418
Male ***	43,185,088.491	1,543,865.694	1,207,975,457.682
Female ***	149,005,545.899	4,313,426.450	5,147,335,411.175
Not CWL ***	0.00000100	0.00000034	0.00000299
Change industry	0.428	0.077	2.373
Not a decision-maker	0.315	0.070	1.414
15.00			
GradYear	0.777	0.439	1.374
Organization size	1.408	0.651	3.045
Male ***	66,513,062.818	2,937,155.046	1,506,215,183.128
Female ***	361,262,663.317	12,284,988.092	10,623,592,870.523
Not CWL ***	0.00000043	0.00000043	0.00000043
Change industry	0.298	0.055	1.603
Not a decision-maker	0.230	0.053	1.001

Notes: Significant at: * $p \leq 0.1$, ** $p \leq 0.05$ and *** $p \leq 0.001$; pseudo $R^2 = 0.489$

Early-career
outcomes and
gender

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Table IX.
Logistic model for
satisfaction outcomes

GM 28,2			
	Life on Track	No	CWL? Yes
128	<i>Sum of Career + Community + Personal on Track</i>		
	3.00	2	0
		1.1%	0.0%
	5.00	5	4
		2.8%	7.7%
	7.00	22	4
		12.5%	7.7%
	9.00	17	5
		9.7%	9.6%
	11.00	46	12
Table X. Comparison of women's satisfaction by leadership development intervention		26.1%	23.1%
	13.00	29	5
		16.5%	9.6%
	15.00	55	22
		31.3%	42.3%
Note: $p = 0.039$			

	Male	Male, female or CWL Female	CWL
	<i>Career on Track yes-no</i>		
	No	44	46
		27.3%	25.6%
	Yes	117	134
		72.7%	74.4%
			75.5%
	<i>Community on Track * yes-no</i>		
	No	105	100
		65.2%	55.6%
	Yes	56	80
		34.8%	44.4%
			52.8%
	<i>Personal on Track ** yes-no</i>		
	No	46	45
		28.6%	25.0%
	Yes	115	135
		71.4%	75.0%
			79.6%
Note: Significant at: * $p = 0.040$ and ** $p = 0.045$			

confirmation of *H1*, *H4* and *H7* concerning subjective career success outcomes. Gender does mediate perceptions of career success and educational interventions can positively shift those perceptions. With respect to *H2* and *H3*, we do not see evidence of a particular influence of career choice and structural predictors on subjective career success outcomes.

Table XII provides a summary of the findings based on our hypotheses.

Discussion and implications

Overall, our findings point to important differences out of the starting gate for women in early-career stages compared with their male counterparts. While most new

				Early-career outcomes and gender
Hypothesis	Objective outcome findings	Subjective outcome findings	Overall findings	
<i>H1.</i> Personal predictors influence early-career success outcomes	Yes	Yes	Yes	129
<i>H2.</i> Career choice predictors influence early-career success outcomes	Yes	No	Partial	
<i>H3.</i> Structural predictors influence early-career success outcomes	Yes	No	Partial	
<i>H4.</i> Gender moderates the influence of personal, career and structural predictors on early-career success outcomes	Yes	Yes	Yes	
<i>H5.</i> Early-career objective success outcomes will vary by gender	Partial Yes, on salary No, on promotion	Yes	Yes, most findings	
<i>H6.</i> Early-career subjective success outcomes will vary by gender		Yes	Yes	
<i>H7.</i> Gender-focused educational interventions influence early-career success outcomes	Partial Yes, on salary No, on promotion	Yes	Yes, most findings	
				Table XII. Summary of hypotheses and findings

graduates did not hold supervisory responsibility, of those who did, men were significantly more likely to be supervisors and to supervise a larger number of people. Men were also more likely to perceive they have authority and recognition for their leadership at work. Women also exhibit a higher level of volunteerism than men.

Looking at objective early-career outcomes, women experience a gender pay gap which widens over time. The most prevalent industries in which those in this sample held first and subsequent jobs were financial services, consulting, and accounting, all industries which have devoted considerable attention to gender issues in their workplaces. While we found no specific influence of gender on promotion, it may be that the social context of the workplace remains gendered in such a way, regardless of leadership intent, as to embed salary outcome differences in organizational compensation processes and the managers who enact them. The good news is that we have evidence that educational interventions can have a countervailing impact. Both gender studies coursework and women's leadership support ameliorate the salary differential. In particular, we find that a WLP can significantly narrow the gender pay gap.

Subjective early-career outcome measures also show differences by gender. While most new graduates in our sample are satisfied with their career, personal and community lives, women nonetheless experience significantly higher level satisfaction than men. Those women who experienced a leadership support program are the most satisfied, and significantly more so than their female counterparts. These effects are particularly apparent with respect to career and community life satisfaction.

What might account for the positive influence of the WLP with respect to both objective and subjective career outcomes? One possibility is that the educational intervention has enabled this cadre of women to change the socially constructed frame of the workplace as well as their lives. As noted earlier, educational interventions have the potential to create specific performance enhancement. Preliminary content analysis of qualitative comments in the study survey yields some insights in this regard. All respondents were

asked to comment on the impact of their education with respect to their professional and personal lives. The most frequent keywords and topics for those in the general recent graduates groups focused on feeling prepared, confident, professional, and understanding the big picture; the kinds of themes any undergraduate business program would be pleased to see as takeaways in its graduates. WLP participants' comments focused on networking and empowerment. These are competency areas that may be particularly important to their ability to overcome stereotype threat and cope with potential role incongruity in the workplace. It may also explain why these women have a greater sense of satisfaction with where their lives are at, particularly for their careers and their community lives. Blair-Loy's (2003) work provides a compelling case for the ways in which women construct hybrid frames to merge the oft-times competing social constructs of work and family devotion in order to achieve high satisfaction. In recent work, Ely *et al.* (2011) suggest that women's leadership development should be framed as identity work and that key elements include interpretive reframing beyond the double-bind that women encounter in the business workplace and a focus on role models and enhanced networks to aid the interpretation of feedback and progress. Interestingly, many of these elements are key aspects of the WLP studied here. The intervention of empowering women through a supportive community and developmental opportunities may be the enabler to improved early-career outcomes, both objective and subjective.

Greater qualitative information would be valuable to further explore this hypothesis. In-depth interviews of many of the alumnae of the WLP might help clarify the relationship between satisfaction and the program as an educational intervention. In-depth interviewing might also provide a clearer understanding of the specific elements of the intervention that seemed to make a difference, providing guidance to others creating educational programming to enhance women's early-career outcomes.

This study is of course limited due to the voluntary participation of the study subjects as well as the reliance on self-report for data collection. The result is data that cannot specifically be verified though there is no particular reason to question participants' veracity in responding to the survey. While a 25 percent response rate is good, we do not know what the findings would be had those who did not respond participated. The response rate was significantly higher, nearly 50 percent, among WLP alumnae, which gives some comfort in terms of the conclusions drawn.

Work by Bertrand *et al.* (2009) suggests that the specifics of the coursework taken may influence early-career outcomes; similarly grades achieved might be a predictor of outcomes. The scope of this study did not include specific courses, beyond the question of gender studies courses, nor, due to the anonymity of responses, did we have access to grade point average data, though of course all students met the college's criteria for graduation and had similar entrance qualifications.

More studies focusing on early-career outcomes in business would be valuable for setting context for research such as that reported here. There is often a presumption that gender issues arise only as careers progress, particularly as women may face questions regarding family formation and work-family integration. This research points to the need to understand more about gender issues that may arise at the early-career stage. It also highlights the need for those advising young women to reiterate the importance of self-advocacy early on. Finally, the research evidence suggests that institutions of higher education may be able to design interventions that enhance the career outcomes of their women students.

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About the authors

Dr Nan S. Langowitz is the Management Division Chair and Professor of Management and Entrepreneurship at Babson College. She was the Founding Director of Babson's Center for Women's Entrepreneurial Leadership. Her research is focused on entrepreneurial leadership, focusing especially on women, as well as the challenges and opportunities organizations and managers face developing and leveraging talent. She earned her Doctorate at Harvard Business School and holds an MBA from New York University and a BA from Cornell University. Nan S. Langowitz is the corresponding author and can be contacted at: langowitz@babson.edu

Dr I. Elaine Allen is Associate Professor Emeritus of Statistics and Entrepreneurship at Babson College and she is a Fellow of the American Statistical Association. She has published widely on statistical issues in meta-analysis, analytics and data mining, quality methodology, survey research methods, and clinical research methodology. She earned her Doctorate in Statistics at Cornell University and holds a BA from Skidmore College and a Master's degree from the University of Evansville.

Dr Mary Godwyn is Associate Professor of Sociology in the History and Society division at Babson College. She focuses on social theory as it applies to issues of inequality. Within the field of sociology, her areas of expertise include critical and classical theory, feminist theory and the sociology of entrepreneurship. She studies entrepreneurship as a vehicle for social change through the economic and political advancement of marginalized populations, especially women and minorities. She earned her Master's and PhD in Sociology at Brandeis University and holds a BA from Wellesley College.