

**Gender Differences in Climbing up the Ladder:
Why Experience Closes the Ambition Gender Gap**

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Abstract

Women are unequally represented in the highest positions in society. Beyond discrimination and bias, women are missing from the top because they are less likely to pursue high-ranking opportunities. We propose that experience is a critical moderator of gender differences in pursuing leadership opportunities, with low-experience women being particularly unlikely to seek higher-level positions. Field analyses of 96 years of U.S. Senator and Governor elections examined male and female politicians' propensity to run for higher political offices. As predicted, among those with little political experience, women were less likely than men to run for higher office, but experience closed this gender gap. A preregistered experiment among U.S.-based adults replicated the field findings and revealed that it is the increased self-confidence of experienced women that reduces the gender gap. The findings suggest experience, and the self-confidence that comes with it, is one lever for closing the gender gap in seeking to climb professional hierarchies.

(153 words)

Keywords: gender, ambition, status

Statement of Relevance

Women remain underrepresented in the highest positions in America, representing only 11% of Fortune 500 CEOs, 31% of board members, 25% of U.S. Senators, and 24% of Governors. The current research explores gender differences in seeking to climb the professional ladder. We propose that professional experience serves as one pathway for closing the gender gap in pursuing higher positions. Using a comprehensive dataset of decisions to run for the highest U.S. state-wide political offices (Senator and Governor), we found that political experience mattered more for women than for men, with women less likely to run early in their careers. A preregistered experiment replicated the effect of low-experience women being less likely to pursue higher-level positions and found that experience increased women's decisions to run by boosting their self-confidence. The results speak to the importance of women's expectations of success, with experience being one lever for closing the ambition gender gap.

(150 words)

Gender Differences in Climbing up the Ladder: Why Experience Closes the Ambition Gender Gap

Women remain unequally represented in top-level positions in American society. In Fortune 500 companies, women currently represent only 11% of CEOs and 31% of board members (Elting, 2023; Leech, 2022). In the political realm, women are similarly missing from top offices: just 25% of Senators and 24% of Governors are women (Center for American Women and Politics, 2023) and there has yet to be a female President.

One explanation for these gender disparities focuses exclusively on demand-side biases, whereby women are evaluated less positively than men (Amanatullah & Tinsley, 2013; Bauer, 2016; Botelho & Gertsberg, 2022; Bowles et al., 2007; Foschi, 2000; Fulton, 2012; Huddy & Terkildsen, 1993a, 1993b; Rosen & Jerdee, 1974). For example, women need to outperform men to receive comparable evaluations, particularly in male-dominated contexts (Abraham, 2020; Botelho & Abraham, 2017; Foschi, 1989, 2000). In politics, some evidence suggests that only female candidates who outperform male candidates receive similar levels of fundraising (Jenkins, 2007). Gender biases also affect recruitment by party leaders (Crowder-Meyer, 2013; Sanbonmatsu, 2006) and create obstacles for women once elected into office, including harassment (Krook, 2018). Despite some evidence that male and female candidates perform equally well among voters (Darcy & Schramm, 1977), this equivalence may only occur because female candidates are better qualified than their male counterparts (Fulton, 2012; Pearson & McGhee, 2013).

Beyond the direct effects of these demand-side biases, women are also less likely to actively *pursue* higher-level opportunities in both politics (Fox & Lawless, 2004, 2005, 2014b; Lawless & Fox, 2005, 2010; Thomsen & King, 2020) and organizations (Brands & Fernandez-

Mateo, 2017; Fernandez-Mateo & Fernandez, 2016). Importantly, career pursuit decisions are not solely based on an individual's preferences; people make 'constrained choices' that integrate a host of factors (Bourdieu, 2006; Heilman, 1983), and thus, gender differences in pursuing higher-level positions are not necessarily independent from demand-side processes. Rather, demand-side processes may have *indirect* effects on women's supply-side decisions that contribute to gender differences in the opportunities women pursue.

There are two distinct mechanisms through which demand-side barriers may indirectly impact women's supply-side decisions to pursue higher-level opportunities. The first is by leading women to *anticipate* they will face common demand-side barriers—irrespective of whether these barriers are at play in a given context. Consistent with this, women are less likely than men to seek employment with organizations and industries where they expect to be treated unfairly (Abraham & Burbano, 2022; Barbulescu & Bidwell, 2013; Brands & Fernandez-Mateo, 2017). Women are also more averse to competitive contexts because they perceive these contexts as imposing gender-based disadvantages (Niederle & Vesterlund, 2007). In the political domain, a simulated experiment found women were reluctant to run in elections unless the outcome was determined randomly (Kanthak & Woon, 2015). Thus, awareness of demand-side biases—represented in beliefs about others' expectations of one's success—can affect the supply-side decisions of women and deter them from seeking higher-level opportunities.

A second way demand-side processes may lower women's propensity to seek higher-level opportunities is by shaping their *own* expectations of success. That is, women may not run because they have reservations about their own ability to succeed in these roles. In general, women tend to hold negatively biased views about their ability (Correll, 2001), especially their ability to succeed in male-typed domains (Beyer, 1990, 1998; Beyer & Bowden, 1997; Coffman,

2014), and this underconfidence¹ stems at least partly from women psychologically internalizing many of the demand-side biases facing them. Socialization processes lead women to perceive themselves as less qualified than equivalent men, even when direct biases may not be present. In politics, for instance, gendered self-perceptions may underlie the tendency for women to view themselves as less qualified to become a first-time candidate than men (Fox & Lawless, 2004; Lawless & Fox, 2005, 2010). Furthermore, personal experiences may reify women's concerns about their ability to succeed in higher-level positions. For instance, losing an election deters female more than male novice politicians from subsequently running (Wasserman, 2023).

Women may also internalize female stereotypes of warmth and communality (Eagly & Karau, 2002), which conflict with expectations surrounding what it takes to be successful in high-ranking positions (Eagly & Karau, 2002; He et al., 2019), including in political offices (Schneider et al., 2016). These stereotypes can skew women's subjective perceptions of their abilities even when they receive concrete feedback indicating they are competent (Coffman et al., 2023). Indeed, gender stereotypes are so pervasive that they are held by both men *and* women (Baldiga & Coffman, 2018; Ridgeway et al., 1998; Ridgeway & Erickson, 2000; Spencer et al., 2016; Wynn & Correll, 2017), and matter because individuals are often averse to behaving in gender incongruent ways (Bem & Lenney, 1976).

To the extent that either beliefs about others' expectations of one's success or self-expectations of success drive gender differences in seeking higher-level opportunities, we propose that gaining experience may serve as a lever for reducing, or even closing, the gender

¹ While our arguments center on women's *underconfidence*, or lower expectations of ability and success, a parallel argument relates to *overconfidence* in men, which has been documented in existing research (Barber & Odean, 2001; Cortes et al., 2021; Soll & Klayman, 2004). Our decision to focus on underconfidence in women is based on the larger body of research pointing to women's tendency to undervalue their ability and we consider this distinction more fully in the General Discussion.

gap in pursuing top positions. First, experience likely both reduces anticipation of facing bias and boosts self-confidence by giving the self and others repeated opportunities to observe objective evidence of one's (successful) performance. Even in male-dominated domains, gender biases are typically reduced when there is indisputable evidence of competence (Bohren et al., 2019; Botelho & Abraham, 2017; Heilman et al., 1988; Koch et al., 2015).

Second, experience will likely shape other- and self-expectations because of the greater power and status it brings (Henrich & Gil-White, 2001; Magee & Galinsky, 2008; Phillips & Zuckerman, 2001; Podolny, 1993; Rucker et al., 2018). For instance, the power and status of incumbents reduce gender bias in political elections (Pike & Galinsky, 2021). Power and status also make people more confident in their choices (Briñol et al., 2007), more accountable and productive (Botelho & Gertsberg, 2022), more optimistic (Anderson & Galinsky, 2006), and more proactive (Galinsky et al., 2003), especially in competitive interactions (Magee et al., 2007). The current research builds on work establishing *baseline* gender differences—in both expectations of bias and in self-expectations of success—by exploring how gaining experience offsets these beliefs, thereby making women less reluctant to pursue higher-level opportunities. Specifically, we propose that relevant professional experience will matter more for women than for men in shaping their supply-side career decisions.

We test this core hypothesis using two multi-method studies. To examine the effect of experience on women's choices to pursue top positions, we designed both studies to allow for an examination of gender differences in career pursuit decisions while minimizing gender differences in demand-side outcomes. Our first study examined real-world decisions by elected officials to run for higher-ranking political offices across a 96-year period. While we cannot fully rule out demand-side barriers on running for office (e.g., external support of one's candidacy),

our focus on successfully elected officials reduces the likelihood that the direct effects of demand-side barriers are the primary driver of any observed gender differences. Since this field study cannot establish causality, fully eliminate demand-side barriers, provide direct evidence of psychological mechanisms, or offer generalizability outside of politics, we also conducted a preregistered experiment. We manipulated experience within an organizational context and gave participants a choice to pursue a higher-level organizational opportunity. The organizational context parallels the political one in that both require one to gain and maintain support from key stakeholders in order to be successful (Kahn & Huberman, 1988; McGinn & Milkman, 2013).

Open Practices Statement

We describe our sample, all data exclusions, and all collected measures. All data and analyses can be found on OSF

(https://osf.io/w8e35/?view_only=44278a39c71f458aaf0bd13f41470818). Study 1 was not preregistered; Study 2 was preregistered.

STUDY 1: Gender, Experience, and Running for Higher Political Office

Method

Study 1 tested the impact of gender and experience on attempts to climb the political ladder using field data of decisions to run for the highest state-wide legislative and executive offices (U.S. Senator and Governor).

Sample

We developed a risk pool that consisted of existing politicians in lower political offices that often serve as pipelines to higher state offices. We then identified all the opportunities each sitting risk-pool member had to run for higher office (i.e., each year an election occurred), and coded whether or not they ran for higher office in that general election (Brace, 1984; Johnson et

al., 2012; Rohde, 1979). We analyzed gender differences in running for the two offices of U.S. Senator and Governor because they are the highest state-wide elected offices and have identical electorates. We started our observation period in 1920—when women first gained the right to vote—and ended our observation period in 2016.

We constructed our risk pool from every sitting member of the next-highest federal legislative and state executive offices, U.S. House Representatives ($N = 4,060$), Lieutenant Governors ($N = 789$), state Attorneys General ($N = 863$) and state Secretaries of State ($N = 727$) (i.e., risk pool offices).² We selected these offices for two related reasons. First, they include individuals who are similarly well-qualified to run for U.S. Senator and Governor and have similar opportunities to do so. Second, demand-side barriers that disproportionately inhibit women’s candidacies cannot be perfectly observed in field data. However, our focus on these highly qualified individuals who have already successfully entered into political offices just below Senator and Governor minimizes the effect of these barriers.³ In total, our sample represents 6,439 risk-pool members (5,900 males, 539 females), who make up 21% of all unique individuals who ran for U.S. Senator and Governor.

We made two choices in structuring our data to best align it with our theoretical predictions. First, we primarily expected our theory to hold for first-time runs for higher-office; it is unclear how a previous run for these higher-level state offices—in which the individual would have most likely lost—would affect their subsequent likelihood of running for higher office, particularly given some evidence that women are more deterred by negative feedback (Coffman, Araya, et al., 2021), job rejections (Brands & Fernandez-Mateo, 2017), and—most relevantly for

² These numbers represent the first office each individual held, in the event that an individual held multiple offices.

³ We acknowledge, however, that this method has limitations: It could still be the case that these similarly situated women and men face differential barriers when running for higher office. We return to this point and attempt to rule it out using an experiment in Study 2. We also discuss this point in the General Discussion.

the current context—election losses than men (Wasserman, 2023, but see also Wasserman, 2021). Thus, we focus our analyses on first-time runs only, such that individuals are excluded from our analyses after their first run for Senator or Governor.

Second, we do not expect the same candidate to run for multiple elections in the same year (e.g., if a Senate election and a Governor election occurred in the same year for the same state, or if a Special Election occurred in the same year as a General Election). First, election laws often prohibit multiple candidacies in the same election year (e.g., running for Senate and Governor at the same time), and second, running for election is costly and it would therefore be difficult to run for multiple state-wide offices even if it was technically legal to do so. Consistent with this prediction, only seven members of our risk pool emerged as a candidate in two elections in the same year.⁴ Thus, we constructed our dataset at the person-year level, such that each individual has one observation for each calendar year that any election in which they could have chosen to run for higher office occurred.

With this data structure, the risk-pool members in our dataset collectively had 25,646 opportunities to run for higher office (male risk-pool members had 23,859 opportunities, and female risk-pool members had 1,787 opportunities).⁵

Our sample consists of individuals who have already self-selected to persist in politics, and this selection effect offers a conservative test of our core hypothesis. The women in our sample have even more political experience than the general population of women, which—based on our theory—should mean both that there will be a smaller gender discrepancy in

⁴ Results are robust to excluding these seven person-year observations from our dataset (see OSF). In our main analyses, we included these observations and simply coded our dependent variable as 1 for them (thus, our dependent variable represents having run in *at least* one election that year).

⁵ These numbers exclude opportunities to run that occurred during “early bird” or “lame duck” years of a risk pool member’s current office; see Supplemental Material for more information about this and other inclusion criteria.

pursuing these state-wide offices among the men and women in this sample, and that increases in experience will matter less among those in this sample, than among the broader population.

Consistent with this reasoning, unpublished research finds that winning an election can reduce the gender gap in political ambition among first-time candidates for lower political offices (Brown et al., 2023). In contrast, by holding initial wins constant and examining whether gaining years of relevant experience (from 1-20+ years) closes the gender gap in pursuit of higher-level offices, our design provides a deeper understanding of the effect of experience, above and beyond the discrete effect of winning for the first time.

Dependent Variable: Running for Higher Office

Our main dependent variable is whether a candidate ran (coded as 1) or did not run (coded as a 0) for higher office when they had the opportunity, i.e., they were a general election candidate in any year when an election for higher office occurred in a state where they were eligible to run. If there were multiple opportunities to run for Senator or Governor in the same year (e.g., a Senate and Governor election occurring in the same year, or multiple Senate elections due to Special Elections, and so on), we coded this variable as 1 if the individual ran in *any* election that year, and 0 otherwise.

Our dependent variable captures actual decisions to run for higher political office, rather than self-reported intentions. In contrast, most research aiming to document gender differences in supply-side behavior has relied on self-reported intentions to pursue a higher position, particularly in the political context (Burt-Way & Kelly, 1992; Carroll, 1985; Costantini, 1990; Elder, 2004; Fox et al., 2001; Fox & Lawless, 2004, 2005, 2010, 2014a; Fulton et al., 2006; Lawless & Fox, 2005, 2010; Sapiro, 1982). While offering key insights into gender differences in intentions, this focus is limited given that self-reported attitudes do not always predict actual

behavior (Bostyn et al., 2018; Quintane & Kleinbaum, 2011; Tenbrunsel et al., 2010). Similarly, it is often difficult to identify and observe the career pursuit decisions of men and women who are situated in similar positions and possess similar qualifications. Our study takes advantage of the political context, in which the decision to become a candidate can be directly observed and separated from the ultimate election outcome. This feature of our dataset allows us to examine the effect of gender and experience on pursuing a promotional opportunity prior to the ultimate outcome of that election. By allowing us to compare similarly qualified potential male and female candidates, this dataset allows us to examine the extent to which gaining experience in relevant lower-level political offices more strongly shapes women's decisions to run for higher office than men's.

Independent Variable: Female

Our independent variable captures the gender of each individual in our dataset. "Female" takes the value of 1 for women and 0 for men. We coded each candidate's gender based on publicly available resources. For risk-pool members who served in the U.S. House of Representatives, we referenced Congress' official roster (United States House, 2016). For all other risk-pool members, we conducted Google searches using the candidate's name, state, and lower office held and/or higher office sought, and coded gender according to the information available online. We were able to identify gender for all but 2 risk-pool members. Neither of these individuals ran for higher office. We excluded these observations from analysis.

Moderator: Years of Experience

To test whether the effect of gender on propensity to pursue higher-ranking offices varied with experience, we coded the number of years of experience risk pool members had in any risk pool office at the time of each opportunity to run for higher office. Risk pool members' first year

in office is coded as one year of experience and incremented by one for each subsequent year they were in a risk pool office. Thus, if an individual were a House Representative, left elected office for two years, and then returned as Lieutenant Governor, we would not count the intervening two years between offices as experience—only the years that they held a risk pool office would be included.

Though experience is apt to positively affect a potential candidate's propensity to run, the effect of experience is unlikely to be linear. For instance, if an individual holds a risk pool office for 30 years, we would not necessarily expect their likelihood of running for a higher office to increase monotonically with each subsequent year of relevant experience. Instead, those who have already held office for a long time without ever running for higher office may be entrenched in their current office, or were uninterested in running to begin with, and thus, are no more likely—and maybe even *less* likely—to run for higher office with each subsequent year of experience after a certain point. Consistent with this reasoning, we observed a descriptive curvilinear relationship between experience and likelihood of running for higher office. Thus, we also included experience squared in our models.

Individual-Level Control Variables: Current and Prior Risk Pool Offices Held

Which office a risk-pool member holds (e.g., House, Lieutenant Governor) at the time of a U.S. Senator or Governor election may influence how qualified or likely the risk-pool member is to emerge as a candidate for U.S. Senator or Governor. To account for differences in the base-rate of candidate emergence by risk-pool office, we include three binary control variables indicating the office that an elected official held at the time of each opportunity they had to run

for higher office (Lieutenant Governor, state Attorney General, and state Secretary of State, with U.S. House member set as the reference group)⁶.

Additionally, previous political experience in other risk-pool offices may also influence the relative qualifications and opportunities a risk-pool member has to run for higher office. Therefore, we include four dummy variables (one for each risk-pool office) to capture whether a risk pool member previously held a risk-pool office different from the one they currently hold.

Opportunity-Level Control Variables: Election Type, Number of Election Opportunities, Incumbency, and Year

Theoretically, we do not make different predictions for the propensity to run in Senate versus Governor elections, as both are statewide-elected higher offices of roughly equal status. However, to ensure that there is no meaningful heterogeneity in running between each type of office, we included a control variable for whether the election that year was a Senate election (1) or not (0, i.e., a Governor election).⁷

Given that multiple elections in a given state could have occurred within the same year—and having more election opportunities should make one more likely to run in at least one election that year—we also include a control for the total number of election opportunities in that year. In our data, the maximum number of elections that ever occurred within one year in a given state was four, so this variable is coded between 1 and 4.⁸

⁶ To make sure that pooling our analysis across offices does not obscure important heterogeneity in effects, we tested the interaction between gender and risk-pool office held when predicting running for office. These interactions were not significant, p 's > .379.

⁷ If multiple elections occurred in the same year, this measure would simply capture whether any of these elections was a Senate election or not. This measure does not distinguish between multiple Senate elections in one year (in the case of Special Elections) versus just one Senate election, but our control for the number of opportunities in a given year accounts for this.

⁸ The vast majority of observations had one or two opportunities to run in a given year. Out of the 2,211 state-year election opportunities in our data, 1,206 had one election opportunity that year, 943 had two, 60 had three, and 2 had four.

Elected officials are also particularly strategic about their choice to run for higher office and may seek to avoid unwinnable or particularly challenging races. In particular, candidates are keen to avoid running against an incumbent because incumbents hold a dominating advantage (Ansolabehere & Snyder Jr., 2002; Ban et al., 2016). Given races against incumbents are expected to elicit significantly lower candidate emergence among sitting officeholders, we include a control variable indicating whether an incumbent ran in the race. This variable takes on a value of 0 if there were no incumbents in any race that year, and otherwise takes on the value of the total number of incumbents in all races that year (e.g., 1 if there was one incumbent, 2 if there were two races held that year and both had incumbents, and so on).

Finally, we also included a control for the calendar year in which the election took place to account for unobserved heterogeneity across years, such as differences in political climate.

Fixed Effects: U.S. State

State-level characteristics may influence the expected likelihood that a person emerges as a candidate for higher office. For example, we may expect less competition in smaller states because there are fewer individuals who hold other political offices (e.g., U.S. House representatives). Thus, we include state fixed effects to account for state-level heterogeneity.

Analytic Approach and Estimation

All analyses were conducted using R (version 4.3.1). All analyses include the full set of controls and fixed effects unless otherwise stated.

Because we are examining the effect of gender and experience on the propensity for risk pool members to run for higher office in any year in which they could have run, the choice to run for office, by definition, can only occur at discrete moments in time when there is an election. As a result, discrete time event history models are most appropriate for our analyses (Fukumoto,

2009; Kelly, 2003; Peterson et al., 2003). In addition, it is far less common in our dataset that individuals run in an election opportunity compared to not running, making our focal outcome relatively rare. We therefore use the complementary log-log model, which is most appropriate for these circumstances. Note, however, that our results are also robust to using a logit model (see Supplement).⁹

The regression specification takes the following form:

$$L_{ei} = \beta_0 + \beta_1 F_{ei} + \beta_2 E_{ei} + \beta_3 E_{ei}^2 + \beta_4 F_{ei} * E_{ei} + \beta_5 F_{ei} * E_{ei}^2 + I_{ei} + O_e + S_e + \epsilon_{ei},$$

where e represents a given election opportunity for individual i , the unit of analysis; L represents the likelihood of running for higher office in election opportunity e for individual i ; F takes the value of 1 for female risk-pool members and 0 for male members; E and E^2 respectively represent the number of years of experience, and number of years of experience squared, in a risk-pool office at election opportunity e for individual i ; $F * E$ represents the interaction between female and experience, and $F * E^2$ represents the interaction between female and experience-squared, at election opportunity e for individual i ; I and O are vectors of controls at the individual level (I) and the opportunity (O) level (detailed in the control variables sections); S represents state fixed effects; and ϵ represents the error term. Because our dataset involves repeated observations for a given individual (i.e., each election year that a given individual could have chosen to run), we used clustered standard errors at the level of the individual in all models.¹⁰

⁹ Some have argued that a logistic model may be more appropriate for modeling events that can only occur at discrete time intervals (Allison, 1982; Kelly, 2003). Beck, Katz, and Tucker (1998) demonstrate that the logit model very closely approximates the cloglog when the probability that $y = 1$ is relatively low. Accordingly, as noted, our results are robust to this alternative model specification (see Supplement).

¹⁰ This method would treat any individuals who have the exact same full name as part of the same cluster; however, our naming scheme, which often includes middle names or initials, ought to make such cases relatively rare. Our results are also robust to running the model without any clustering.

Results

Descriptive Analyses

Table 1 provides key descriptive statistics by gender for all independent variables, control variables, and our dependent variable. This table reveals that at each election opportunity, men have more experience than women on average, and more men (than women) are current House members or state Attorneys General whereas more women (than men) are Lieutenant Governors or state Secretaries of State. On average, men also have more election opportunities in a given year than women. With respect to our dependent variable, there is no overall gender difference in likelihood of running for higher office pooling across levels of experience.

As an initial examination of whether experience affects men's and women's propensity to run for higher office differently, we constructed two descriptive plots to visualize our data. First, we constructed a Kaplan-Meier failure plot (Figure 1) to show the descriptive overall cumulative likelihood of running for higher office by gender and experience. We have limited this plot to a maximum of 36 years of experience, which is the most experience of any female member in our dataset. However, caution should be used in interpreting the results at the highest levels of experience, as only 19% of the observations in our overall data had more than 14 years of experience, and no woman with more than 20 years of experience ran for higher office. The Kaplan-Meier plot provides initial evidence that at low levels of experience, men are more likely than women to run for higher office, but that as risk-pool members gain experience, this gap closes. This descriptive plot thus offers initial evidence consistent with our main prediction: Experience seems to have a larger effect on women's career pursuit decisions than on men's. Importantly, although these descriptive results suggest that women may become *even more likely*

to run than men at higher levels of experience, determining whether this pattern reflects a significant difference requires further analyses.

Second, we constructed a descriptive plot in which we divided the number of years of experience into quintiles (i.e., the lowest 20% of values of experience are labeled the first quintile, the second 20% are labeled the second quintile, and so on) because—as described above—the distribution of our experience measure is rather skewed. We then plotted the frequency of running for higher office by each quintile of experience and gender. This plot allowed us to 1) examine the pattern in the data without undue influence of the skew at the highest levels of experience, and 2) relax the assumption of linearity to ensure that our model specification is appropriate. As Figure 2 shows, we once again see evidence that at the lowest quintiles of experience, women are less likely to run than men, but this gap closes at about the third quintile of experience (which consists of 5-8 years of experience). We also observe the curvilinear nature of the relationship between experience and running for higher office for both men and women.

Inferential Analyses

Next, we formally test whether political experience had a heterogeneous effect on running for higher office by gender (Table 2). As described above, we include both the interaction between gender and experience as well as the interaction between gender and experience-squared. Model 1 in Table 2 displays these results.

The negative and significant coefficient on *Female* reveals that among the lowest-experience potential candidates, women are less likely than men to run for higher office. The positive and significant effect of *Experience* indicates that the propensity to run for higher office among potential male candidates increases with experience, while the negative and significant

effect of experience-squared indicates that experience only increases men's propensity to run for higher office up until a point, and then diminishes their propensity thereafter. The negative and marginally significant interaction between gender and experience-squared ($p = .071$) suggests that the curvilinear relationship between experience and likelihood of running declines at roughly the same rate for men and for women, though perhaps this decline is slightly more rapid for women than for men.

Next, we describe the two key tests of our core hypothesis. The first focuses on whether the average effect of experience on propensity to run varies for men and women in our study population. Although this is a quadratic model, the interaction between gender and experience-squared was not significant. Therefore, the linear interaction between female and experience offers initial insight into whether the average effect of experience differs by gender. Consistent with our main arguments, we find that the positive effect of experience is significantly larger for women than for men on average, as indicated by the statistically significant linear interaction term (*Female * Experience*), $p = .012$.

Our second test directly examines whether the marginal effect of each additional year of experience on the propensity to run varies by gender at each level of experience. To assess this, we computed the derivatives of our model with respect to experience for women and for men at each level of experience (up through 20 years of experience, the last point at which a woman in our dataset runs for higher office). We then tested whether these derivatives statistically differed by gender. Given that our model is quadratic, comparing derivatives in this fashion allows us to more precisely estimate whether the effects of experience vary by gender—and if so, at what levels of experience this is the case.

As shown in Table A1 in the Appendix, we observe that the derivative values for women are significantly greater than for men during the first 9 years of experience, after which the derivatives are not statistically different by gender. In other words, the effect of an additional year of experience on a potential candidate's propensity to run for higher office is greater for women than for men who amass up to 9 years of experience (representing 62.53% of our sample). However, once we consider those with 10 or more years of experience, the effect of an additional year of experience for men and women is statistically indistinguishable. Again, these findings indicate that experience matters more for women than it does for men.

To visualize how the differential effect of experience on men's and women's propensity to run shapes the gender gap in pursuit of higher-ranking offices, Figure 3 depicts the predicted likelihood of running by gender and years of experience. We plot these predicted probabilities up through 20 years of experience (again, since no woman ran with greater than 20 years of experience). As can be seen in Figure 3, women are significantly less likely than men to run at lower levels of experience—specifically in the first 5 years of experience—but become as likely to run as men as they gain experience. These results reveal that the propensity to run becomes substantively identical between men and women once candidates have approximately 8 to 9 years of experience. Although women may appear to be more likely to run than men at higher levels of experience, the overlapping confidence intervals starting at 6 years of experience displayed in this figure indicate that this descriptive difference is not statistically significant. This may be because there are fewer observations—particularly of women—at these higher levels of experience, making it challenging to draw definitive conclusions about the meaningfulness of this reversal pattern. Overall, the results displayed in this figure are consistent with our

hypothesis that women are less likely than men to run when they have little experience, but that subsequent experience ultimately eliminates this gender gap.

Robustness Checks

In addition to our main analyses, we ran robustness checks to address alternative explanations for our main finding that experience closes gender differences in attempts to climb the political ladder and to test different model specifications.

Model Without Controls. Our results are robust to excluding all controls, such that the linear interaction between gender and experience remains significant ($p = .005$) (see Appendix).

Childbearing Age as Alternative Explanation. We also consider reluctance to run during potential childbearing ages as an alternative explanation. To the extent that potential candidates expect bias against working mothers, feel pressure to conform to traditional definitions of motherhood, or anticipate the demands of childcare (Carroll & Sanbonmatsu, 2009; Fulton et al., 2006), politically aspirant women may wait to run for higher office until they are old enough to no longer face child-rearing expectations and demands. Our finding that experience increases women's likelihood of running may be an artifact of the fact that it covaries with aging out of motherhood expectations and responsibilities.

We therefore collected the age of the female risk pool members and tested whether the relationship between experience and running for higher office changes when accounting for candidate age. Comprehensive date of birth data was unavailable for all of our risk-pool members; however, it was most important to test whether the relationship between experience and running for office held when age was included as a covariate specifically among women. Therefore, we focused on manually collecting age for all female risk pool members. We collected date of birth data from the U.S. Congress' official online records, public encyclopedias

(e.g., Wikipedia) and archived newspaper articles for female risk pool members and calculated age for each year we observed them in the dataset. We were able to collect the year of birth for 95% ($N = 513$) of the female officeholders in our dataset. The remaining risk-pool members were excluded from the age-related robustness checks.

If advancement past childbearing age, rather than experience, explains our results, we would expect that including age as a covariate would *weaken* the relationship between experience and running among women. However, analyses reveal that including age as a covariate has little effect on the relationship between experience and running for office among women (Table 3, Model 2). Further, if motherhood concerns affect women less at the beginnings *and* the ends of their careers (when they are less likely to be raising children), one might expect that including age as a quadratic covariate would weaken our results. Once again, however, including age as a quadratic covariate has little effect on the relationship between experience and running for office among women (Table 3, Model 3). One limitation of these analyses is that the typical age of childbearing has changed over the time period we analyzed; however, we would nevertheless still expect to see the effect of experience weaken if age accounted for our effects. Thus, it is unlikely that advancement past childbearing age explains our finding that female potential candidates run for higher office less than men early in their career, but more than men later in their career. By ruling out childbearing age as an alternative explanation, our findings contrast with prior research suggesting that gender differences in career advancement emerge from differences in family obligations or work-family conflict (Cinamon & Rich, 2002; Duxbury & Higgins, 1991; Liff & Ward, 2001).

Limiting to 36 Years of Experience. In our dataset, the maximum number of years of experience for men is substantially greater than that for women (60 years versus 36 years; see

Table 1). To ensure that our results were not being driven by male outliers, we ran our models limiting the data to only those with 36 years of experience or less ($N = 25,512$). As can be seen in Model 2 in Table 2, our results remain robust (the linear interaction term between gender and experience remains significant, $p = .020$).

Temporal Shifts in Opinions Toward Female Candidates. The final robustness check we performed was to control for changes in attitudes toward female candidates over time (Model 3 in Table 2). Given that acceptance of female political candidates has increased since the beginning of the time period in our sample, we tested whether our effects held when controlling for voters' acceptance of female candidates at the time of each election. We used Gallup polling data to determine the proportion of potential voters in a given year who indicated that they would be willing to vote for a qualified female candidate of their party in a presidential election, which we used as an indicator of general attitudes toward female candidates. We mean-centered these proportions for ease of interpretation. We excluded years prior to 1937 in these analyses as no data was available for these years, and for any years after 1937 for which data was unavailable, we linearly interpolated. Our findings were not meaningfully changed when we included an interaction term between gender and acceptance of female candidates in our models, e.g., the linear interaction between gender and experience remains significant, $p = .025$. Further, the interaction between gender and acceptance of female candidates was non-significant ($p = .591$), indicating that changing public opinion of female candidates did not affect women's propensity to run for higher office more than men's. Our finding that experience matters more for women's choices to pursue higher office thus does not seem to be solely because experience offsets expectations of facing biases. As such, these results offer indirect evidence that experience may

increase running for higher office because it boosts women's self-confidence. In Study 2, we directly test these mechanisms.

STUDY 2: The Psychological Processes of Other- and Self-Expectations

Method

Using a comprehensive risk pool of officeholders, Study 1 found that gender differences in seeking higher political office depended on political experience and provided suggestive evidence of the underlying psychological process driving this effect. Our comprehensive dataset overcomes limitations of past research on political candidate emergence by not being limited to a particular U.S. state or timeframe, by capturing actual behavioral choices to run, and by using a continuous measure of experience. Our sample of successfully elected officials also minimizes demand-side discrimination that disadvantages women, e.g., party leader favoritism (Crowder-Meyer, 2013; Sanbonmatsu, 2006) and differences in campaign funding (Jenkins, 2007; but see also Adams & Schreiber, 2011; Uhlaner & Schlozman, 1986; Werner & Mayer, 2007). Although we were unable to fully account for possible demand-side barriers, we note that these factors would have to differ not only by gender, but also by career stage, to explain our results. However, to fully eliminate the role of these demand-side barriers, we designed a preregistered experiment to capture the causal effect of experience as a moderator of the gender gap in seeking higher-level opportunities. Our approach is similar to past work examining election behavior with lab experiment paradigms (Kanthak & Woon, 2015).

Study 1's field data also did not allow us to directly measure the psychological processes that drove decisions to run for higher office. We have proposed two potential mechanisms for why experience might serve to reduce the gender gap in seeking higher-level opportunities—experience may increase women's expectations of others' confidence in their success, or it may

increase their own confidence in their success. Our robustness check involving Gallup opinion polling provides some evidence that more favorable public opinion of female candidates did not affect women's propensity to run for higher office more than men's. Thus, anticipation of bias did not appear to be the primary determinant of women's decision to run for higher office. This raises the possibility that our second proposed mechanism—self-expectations of success—may be more important than other-expectations. Overall, our experiment allows us to eliminate demand-side barriers while also measuring the psychological mechanisms of other- or self-expectations of success in the higher-level position.

We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study. This study was approved by the Columbia University Institutional Review Board.

Preregistration. Our study preregistration is available here:

https://aspredicted.org/W6S_KBY

Design. We randomly assigned participants to one of two experimental conditions: low experience vs. high experience.

Participants. Participants were recruited online via Amazon Mechanical Turk and completed the study in exchange for \$1.20. To ensure adequate power for detecting interactions, we preregistered to recruit at least 400 participants. We used a variety of MTurk restrictions to ensure that our sample only included participants who would be most equipped to consider whether to pursue a higher-level organizational position. To this end, we only included participants between the ages of 18 and 65 who were employed full-time. We achieved this by only allowing participants to partake in our study if their demographic profile indicated that a) their current employment status was employee or business owner, b) they worked at least 36

hours per week c) they worked in one of the defined industries, and d) they worked in one of the defined occupational sectors. We excluded any potential participants who were currently college students or left either the industry or occupational sector questions blank. Consistent with our preregistration, we excluded any participants who did not identify as male or female (as our hypotheses are about binary gender identities; we excluded one participant on this basis), as well as any participants who did not finish the full study, failed the attention and/or comprehension checks, or provided nonsensical responses to a free-response question. After these exclusions, our final sample included 413 participants (42.86% female, 17.68% non-White, $M_{\text{age}} = 41.18$, $SD_{\text{age}} = 9.85$).

Procedure. Participants were instructed to imagine that they worked at a prominent, performance-driven consulting company. This description was used to elicit a decision-making process similar to the performance-based nature of the political context examined in Study 1. Participants were provided with information about their credentials, where we introduced our experience manipulation. See OSF for full study materials.

Experience Manipulation. We randomly assigned participants to either the low-experience or high-experience condition. In the *low-experience condition*, participants read that they had been working at the current consulting company for 3 years. In the *high-experience condition*, participants read that they had been working at the company for 12 years. These manipulations align with our results in Study 1, in which women were substantively less likely than men to run when they had fewer than 9 years of experience—with this gap becoming statistically insignificant among those with 6 or more years of experience. In both conditions, participants also read that they had a BA in economics from a major University.

To ensure that participants had paid attention to our experience manipulation, they responded to a comprehension check question about the number of years they had worked at the current company; if they did not answer this question correctly after the second try, the survey automatically ended.

Decision Context. Participants then proceeded to the next page of the survey, where they read that their company was about to expand into a new area of consulting. The company had created a new position of Department Head to lead this new area. Participants read that the company was looking for a current employee to fill this role, and that any interested employees were being asked to “campaign” for the position and explain why they would be the best candidate to the hiring committee. The selection committee would ultimately vote on which candidate would be named Department Head. We described the evaluation process for selecting the new Department Head in this manner to help participants envision what would be involved if they chose to pursue this opportunity. Furthermore, when seeking a higher-ranking opportunity—both within an organization and in political office—individuals must often convince key stakeholders that they are the right candidate for the position.

Decision to Run for Department Head Opportunity. After reading about the Department Head opening, participants decided whether to put their name forward to “run” for the position. We noted that although this new role offered an exciting opportunity, it also carried risks as the new area might not achieve sufficient growth. We included this information to emphasize the fact that running for the position would involve a tradeoff, as is often the case in seeking higher professional opportunities. Before making their decision, participants were reminded of their credentials, including the experience manipulation of number of years they had been working at the current company.

Participants reported their decision to pursue the position or not with both a continuous measure and a binary measure. For the continuous measure, “How likely are you to run for the Department Head position leading the new consulting area of your company?” (1 = *not at all likely*, 5 = *extremely likely*). For the binary measure, “Would you like to run for the Department Head position or not?” (*yes* or *no*).

Other-Expectations of Success Measure. On a separate page, participants responded to several measures to capture their perceptions of their colleagues’ expectations about their ability to succeed in the Department Head position (all 1 = *not at all confident*, 5 = *extremely confident*): “How confident do you believe your colleagues are that you would succeed as the Department Head?”; “How confident do you believe your colleagues are that you would be well-qualified to serve as the Department Head?”; “How confident do you believe your colleagues are that you would be competent as the Department Head?”; “How confident do you believe your colleagues are that you have acquired enough skills and experience to serve as the Department Head?”; and “How likely do you believe it is that your colleagues would vote to select you as the Department Head?” (for this last question, 1 = *not at all likely*, 5 = *extremely likely*). As preregistered, we combined the other-expectations items into a composite measure ($\alpha = 0.95$).¹¹

Self-Expectations of Success Measure. On a separate page, participants responded to several measures of their own expectations about their abilities to succeed in the Department Head position. These measures paralleled the other-expectation measures but were phrased in terms of participants’ own expectations for themselves (e.g., “How confident do you feel that you would succeed as the Department Head?”). For these measures, we did not include any

¹¹ The results remain substantively unchanged when analyzing on a composite of other-expectations measures that only includes the four items parallel to the self-expectations measures (i.e., without the measure “How likely do you believe it is that your colleagues would vote to select you as the Department Head?”); see Supplemental Material.

parallel measure to the other-expectations measure “How likely do you believe it is that your colleagues would vote to select you as the Department Head?” (i.e., we only included four measures for self-expectations). As preregistered, we combined the self-expectations of success items into a composite measure ($\alpha = 0.94$).

Counterbalanced and Randomized Measures. We counterbalanced the order of the pages that included the decision and expectations measures, such that the decision measures were randomly assigned to appear either before or after the expectations measures, and the other-expectations of success measures were randomly assigned to go either right before or right after the self-expectations measures. Within each page of other-expectations measures and self-expectations measures, the order of the questions was also randomized.

Demographics. Finally, participants reported demographic information (their gender, age, and race), responded to a free-response question to detect any potential bot-like responses, and were optionally allowed to provide any feedback on the study in a free-response box. We coded participant gender as female = 1, male = 0, consistent with that of Study 1.

Results

Successful Randomization. Table A3 in the Appendix provides a balance table of the demographic variables we collected--gender, race, and age. Comparison of these demographics between the conditions indicates successful randomization.

Decision to Run for Department Head Opportunity. To establish whether experience mattered more for women than men when deciding to be a candidate for the higher-level organizational position, we conducted the two sets of analyses set forth in our pre-registration. First, we conducted an omnibus 2x2 analysis involving the main effects and interactions. Second,

we analyzed our focused prediction that women with low levels of experience would express the lowest interest in pursuing the higher-level opportunity compared to the other three conditions.

A two-way ANOVA with experience condition, participant gender, and their interaction as factors on the continuous measure of likelihood to run for the Department Head position revealed a significant main effect of experience. Participants in our high-experience condition ($M = 3.27$, $SD = 1.22$) reported a significantly higher likelihood of running for the Department Head position than the low-experience condition ($M = 2.82$, $SD = 1.17$), $F(1, 409) = 17.15$, $p < .001$, $\eta_p^2 = .04$. There was no main effect of participant gender, $F(1, 409) = 2.01$, $p = .157$, $\eta_p^2 < .01$. More importantly—and replicating our findings from Study 1—there was a significant Experience Condition x Participant Gender interaction, $F(1, 409) = 4.64$, $p = .032$, $\eta_p^2 = .01$ (see Figure 4).

Decomposing the significant interaction, we find that in the low-experience condition, women ($M = 2.58$, $SD = 1.07$) reported lower intentions to run than men ($M = 3.00$, $SD = 1.21$), $t(409) = 2.55$, $p = .011$, $d = 0.36$, but in the high-experience condition, there was no difference between women ($M = 3.32$, $SD = 1.18$) and men ($M = 3.23$, $SD = 1.26$), $t(409) = -0.52$, $p = .606$, $d = -0.07$. When analyzing the other set of pairwise contrasts, experience affected women's intentions to pursue the position, $t(409) = 4.16$, $p < .001$, $d = 0.63$, but had no effect on men's intentions, $t(409) = 1.52$, $p = .130$, $d = 0.20$. Next, we compared intentions to pursue the Department Head position for low-experience women to those in the other three cells by dummy-coding the low experience female cell as 1 and the rest of the cells as 0. This comparison revealed that low-experience women ($M = 2.58$, $SD = 1.07$) reported significantly lower intentions than those in all other conditions, ($M = 3.17$, $SD = 1.22$), $t(159.70) = 4.50$, $p < .001$, $d = 0.50$.

For our binary choice measure, the results paralleled those for the continuous measure. A logistic regression with experience condition, participant gender, and their interaction as factors on our dependent variable, decision to run for the Department Head position, revealed no significant main effect of experience, $b = -0.21$, $z = -0.78$, $p = .438$, no main effect of gender, $b = 0.17$, $z = 0.56$, $p = .575$, and a marginally significant Experience Condition x Participant Gender interaction, $b = -0.77$, $z = -1.85$, $p = .064$. In the low-experience condition, women were less likely to run (45.56%) than men (60.33%), $z = 2.12$, $p = .034$, but among participants with high experience, there was no difference between women (68.97%) and men (65.22%), $z = -0.56$, $p = .575$. Furthermore, experience affected women's decisions, $z = 3.11$, $p = .002$, but not men's, $z = 0.78$, $p = .438$. Finally, comparing low-experience women to the other three cells revealed that women in the low-experience condition were significantly less likely to pursue the Department Head position relative to those in the other three conditions, $b = -0.77$, $z = -3.19$, $p = .001$.

These results replicate our findings from Study 1. Among participants in our low-experience condition, women were less likely to pursue the Department Head position than men. However, men and women were equally likely to pursue the opportunity when they had more experience. We next explored whether other- and/or self-expectations of future success explain this pattern of results.

Other-Expectations of Success. The two-way ANOVA on the other-expectations of success measure revealed a main effect of experience condition, $F(1, 409) = 66.79$, $p < .001$, $\eta_p^2 = .14$, but no main effect of participant gender, $F(1, 409) = 1.09$, $p = .298$, $\eta_p^2 < .01$, and no interaction, $F(1, 409) = 0.43$, $p = .512$, $\eta_p^2 < .01$. Consistent with these results, there was no difference in other-expectations of success by gender either within those with low experience, $t(409) = 1.21$, $p = .226$, $d = 0.17$, or within those with high experience, $t(409) = 0.27$, $p = .786$, d

= 0.04. When testing our specific contrast, low-experience women ($M = 2.87$, $SD = 0.98$) did have significantly lower perceptions of others' expectations of their abilities relative to the other three conditions ($M = 3.41$, $SD = 0.88$), $t(131.70) = 4.73$, $p < .001$, $d = 0.60$. Overall, having more experience increased perceptions of others' expectations of one's success similarly for both men and women.

Self-Expectations of Success. The two-way ANOVA on the self-expectations of success measure revealed a main effect of experience condition, $F(1, 409) = 39.85$, $p < .001$, $\eta_p^2 = .09$, a marginal main effect of participant gender, $F(1, 409) = 2.98$, $p = .085$, $\eta_p^2 < .01$, and a directional, though non-significant, Experience Condition x Participant Gender interaction, $F(1, 409) = 2.64$, $p = .105$, $\eta_p^2 < .01$. Within the low-experience condition, women ($M = 3.03$, $SD = 1.04$) had lower expectations of their own abilities than men ($M = 3.35$, $SD = 0.97$), $t(409) = 2.39$, $p = .017$, $d = 0.33$, but among participants with high experience, there was no substantive or statistical difference in self-expectations of success between women ($M = 3.78$, $SD = 0.93$) and men ($M = 3.79$, $SD = 0.85$), $t(409) = 0.07$, $p = .943$, $d = 0.01$. Low-experience women ($M = 3.03$, $SD = 1.04$) also had significantly lower expectations of their likelihood of success than those in the other three conditions ($M = 3.62$, $SD = 0.94$), $t(132.83) = 4.86$, $p < .001$, $d = 0.61$. These results suggest that having more experience increases self-expectations for both men and women, but more so for women.

Mediation by Other- and Self-Expectations of Success. To test whether other- or self-expectations of success drove the lower intentions to pursue the Department Head position among low-experience women, we conducted a simultaneous mediation model. We used the contrast code comparing low-experience women versus the other three conditions as the independent variable, other- and self-expectations as simultaneous mediators, and (binary)

decision to run for Department Head as the outcome. Self-expectations of success emerged as a significant mediator, $b = -0.16$, 95% CI = [-0.23, -0.09], $z = -4.37$, $p < .001$, but other-expectations was not a significant mediator, $b = -0.03$, 95% CI = [-0.06, 0.01], $z = -1.34$, $p = .181$. These results point to self-expectations as a key psychological process through which experience affects women's intentions to pursue higher-ranking positions, consistent with the results from our Gallup opinion analyses in Study 1.

One interesting pattern in the data is that experience only affected the decisions of women, but it affected the expectations of success of both men and women. This finding suggests that although having little experience lowers men's expectations for their own success in a higher-ranking position, these lower expectations do not subsequently affect their willingness to attempt to climb the corporate ladder. For women, on the other hand, expectations of success directly translate into their decisions.

General Discussion

The current research offers new insights into gender differences in the pursuit of high-level positions. First, our findings suggest that experience is a lever to reduce gender gaps in seeking these opportunities: Across both our field political context (Study 1) and our experimental business context (Study 2), women were less likely to seek higher-level opportunities than men at lower levels of experience, but there was no gender gap at higher levels of experience. Second, our findings shed light on why experience reduces the gender gap in pursuing higher-ranked positions. Study 2 found that women's self-expectations—more than their beliefs about others' expectations of their abilities—drove their decisions in our experiment. This experimental result is also consistent with the Study 1 finding that Gallup

opinions of female candidates did not interact with gender to predict their candidacy, i.e., female candidates' decisions were not affected by others' expectations of their success.

At first blush, comparing the decision to climb the corporate versus political hierarchy may seem like comparing apples to oranges. However, there are clear parallels in the decisions to become a candidate for a higher-level position across both contexts, such as the need to gain and maintain support from key stakeholders (Kahn & Huberman, 1988; McGinn & Milkman, 2013). We therefore expect the underlying psychology to also generalize across domains (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005).

Theoretically, our work builds on previous research exploring when and how women update their beliefs about their abilities. While past work has examined gendered belief updating in response to failure (Brands & Fernandez-Mateo, 2017; Coffman, Araya, et al., 2021; Wasserman, 2023), less work has examined updating in response to successful or positive experiences. Of the work that has examined reactions to success, some has seemingly found a contrasting effect to ours: that the gender gap in beliefs about ability persists even after the receipt of positive feedback, especially in male-typed contexts (Coffman, Collis, et al., 2021). These different findings highlight that professional experience is different from positive feedback. Unlike a single dose of positive feedback, gaining professional experience represents experiencing repeated and meaningful successes, which appear to have a more powerful effect on belief updating. Overall, our findings extend prior work by showing that relevant professional experience leads women to update their beliefs—counteracting the damaging effects of demand-side barriers that deter women from aspirational career pursuits—which in turn helps to close the gender gap in seeking higher positions.

The current research also offers multiple methodological strengths. Our combination of real-world field data involving actual decisions of political candidates and a pre-registered experiment provides both external and internal validity. Prior research on gender and candidate emergence has been largely based on self-reported intentions to enter into politics (Lawless & Fox, 2005). In contrast, our field analyses capture real-world decisions to run for higher political office among current officeholders. Furthermore, by looking at how a continuous measure of candidate experience affects pursuit of higher-level office, we provide a more comprehensive understanding of how experience helps to overcome gender gaps in pursuit of higher-level opportunities.

Practically, our findings offer insights into how to reduce gender gaps in the highest positions across organizational and political settings. Given our finding that professional experience reduced the gender gap in career pursuits, organizations should ensure that women are given adequate opportunities and encouragement to obtain relevant experience. Our findings also reiterate the need to eliminate the demand-side barriers that women face in the workplace. Not only do discriminatory forces create objective obstacles, but by depriving women of experience, they also contribute to psychological barriers that increase women's reluctance to pursue higher-level positions.

While we have framed our conceptual arguments and practical advice around experience affecting women's *underconfidence*, it is also possible that our findings can be attributed to men's *overconfidence* at low levels of experience—consistent with research documenting overconfidence in men (Barber & Odean, 2001; Cortes et al., 2021; Niederle & Vesterlund, 2007; Soll & Klayman, 2004). One finding in Study 2 sheds some light on this possibility. We found that although low experience reduced men's confidence in their success, it did not deter

them from pursuing higher-ranking positions. This pattern suggests men may tune out experience-based concerns when making decisions about pursuing opportunities.

Our findings point to several interesting directions for future research that were beyond the scope of the current research. For instance, future research should explore how gender intersects with other status-linked characteristics, such as race, to determine supply-side choices to seek higher office (see Supplement for a related analysis). It could be that racial minority women need even *more* experience to seek a higher position than non-minority women, or that the gendered content of racial stereotypes (Galinsky et al., 2013) interacts with a potential candidate's gender to determine the effect on supply-side choices. In addition, even though our findings in Study 2 suggested that self-expectations contributed more strongly than other-expectations to the gender gap in this experimental context, future research should examine whether other-expectations play a role in other contexts. This would be especially valuable given that our experimental design relied on a hypothetical context that may have obscured the full role of others' expectations. Relatedly, future research should also examine whether our findings generalize beyond U.S.-centric contexts; for instance, different cultural expectations of women may moderate our findings.

Future research should also more directly examine the demand-side factors that likely affect decisions to pursue higher-level opportunities. As mentioned, party leaders, key fundraisers, primary voters, and others may support female candidates only when they have amassed significant political experience. While such factors would not be at play in our experiment, they could contribute in the political realm. However, we believe such factors are unlikely to primarily drive our results. Our results indicate that small increases in experience at low-levels of experience significantly reduce the gender gap in pursuing higher-office. Although

these small increments in experience are apt to be notable and impactful for female potential candidates, it seems unlikely that others would be as sensitive to these changes.

Relatedly, it is possible that there is some degree of survivorship bias in why women with more experience become more likely to run—that is, experienced women had to have successfully overcome any gender barriers to reach that level of experience (e.g., Eagly et al., 2003). We believe that the risk-pool design in Study 1 helps to minimize both this and the demand-side biases mentioned above, in that all women in our sample had already overcome the same set of barriers to get into their lower political office in the first place, and likely face significantly fewer barriers to continue in that office (Pike & Galinsky, 2021) or to run for another one. Nevertheless, future research should further investigate the extent to which women who “survive” longer in a given role may be unique in some way.

Overall, the current research sheds light on one key reason why women, despite demonstrated levels of competence, are unequally represented in the highest business and political positions in the land. Our findings suggest experience is one lever for closing the gender gap in seeking to climb political and organizational hierarchies—leading women to keep reaching for the stars.

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Table 1. Descriptive Statistics for Key Variables, by Gender.

Variable	Female Candidate Opportunities (N = 1,787)				Male Candidate Opportunities (N = 23,858)				T-test
	Mean	S.D.	Min	Max	Mean	S.D.	Min	Max	
Experience	7.18	5.97	1	36	9.12	7.55	1	60	***
Current House Representative	0.61	0.49	0	1	0.78	0.42	0	1	***
Current State Attorney General	0.05	0.22	0	1	0.09	0.28	0	1	***
Current Lieutenant Governor	0.10	0.30	0	1	0.06	0.24	0	1	***
Current State Sec. of State	0.24	0.43	0	1	0.07	0.26	0	1	***
Senate Event	0.77	0.42	0	1	0.76	0.43	0	1	
Number of Incumbents	0.96	0.64	0	3	0.96	0.67	0	3	
Number of Opportunities	1.40	0.53	1	3	1.47	0.56	1	4	***
Likelihood of Running (DV)	0.03	0.18	0	1	0.03	0.17	0	1	

T-test indicates whether differences for female and male candidate opportunities are statistically significant based on two-sided t-tests.

* indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$

Table 2. Interactive Effect of Gender and Experience on Running for Office.

Variables	Model One: All observations		Model Two: Limiting to 36 Years		Model Three: Opinion Data	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Female	-1.48***	(0.43)	-1.41***	(0.43)	-1.88*	(0.89)
Experience	0.17***	(0.03)	0.19***	(0.03)	0.20***	(0.04)
Female * Experience	0.26*	(0.11)	0.24*	(0.10)	0.25*	(0.11)
Experience Squared	-0.008***	(0.002)	-0.009***	(0.002)	-0.01***	(0.002)
Female * Experience Squared	-0.01	(0.006)	-0.009	(0.006)	-0.009	(0.006)
Is Lieutenant Governor	1.49***	(0.11)	1.49***	(0.11)	1.39***	(0.12)
Is Attorney General	0.82***	(0.12)	0.83***	(0.12)	0.81***	(0.13)
Is Secretary of State	-0.12	(0.16)	-0.12	(0.16)	-0.13	(0.18)
Was House Member	0.44	(0.50)	0.45	(0.50)	0.21	(0.56)
Was Lieutenant Governor	0.88*	(0.36)	0.88*	(0.36)	1.04**	(0.38)
Was Attorney General	0.66*	(0.31)	0.64*	(0.31)	0.76*	(0.35)
Was Secretary of State	0.34	(0.27)	0.33	(0.27)	0.39	(0.28)
Calendar Year	0.01***	(0.001)	0.01***	(0.001)	-0.01	(0.008)
Senate Event	0.06	(0.11)	0.05	(0.11)	0.09	(0.11)
Number of Incumbents	-0.77***	(0.06)	-0.76***	(0.06)	-0.80***	(0.07)
Number of Opportunities	0.88***	(0.07)	0.88***	(0.07)	0.91***	(0.08)
State Fixed Effects	Yes		Yes		Yes	
Opinions					0.02**	(0.009)
Female * Opinions					0.006	(0.01)
Clustered Errors	Yes		Yes		Yes	
Number of Observations (Individuals)	25,646 (6,439)		25,512 (6,439)		20,687 (5,047)	
Nagelkerke's R ²	.155		.156		.162	

Standard errors are in parentheses; * indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$, two-tailed tests

Is U.S. House Representative is the reference group for current office held

For current office and previous office, Yes = 1, No = 0

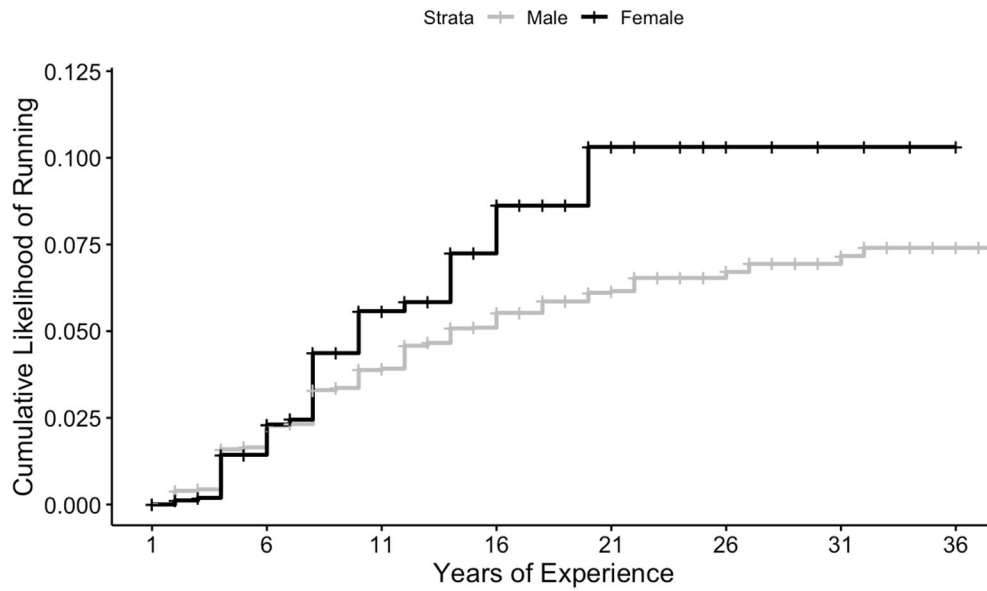
Table 3. Effect of Experience and Age on Women's Likelihood of Running for Higher Office.

Variables	Model One: Tenure, No Age		Model Two: Tenure and Age		Model Three: Tenure, Age and Age Squared	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Experience	0.48***	(0.11)	0.50***	(0.12)	0.44***	(0.13)
Experience Squared	-0.02***	(0.006)	-0.02**	(0.006)	-0.02*	(0.007)
Age			-0.05**	(0.02)	0.47	(0.26)
Age Squared					-0.005*	(0.002)
Is Lieutenant Governor	1.82***	(0.48)	2.00***	(0.50)	1.90***	(0.50)
Is Attorney General	1.88***	(0.55)	1.67**	(0.57)	1.64**	(0.56)
Is Secretary of State	0.01	(0.52)	0.02	(0.49)	0.0007	(0.49)
Calendar Year	0.007	(0.01)	0.009	(0.01)	0.01	(0.01)
Senate Event	0.66	(0.36)	0.64	(0.36)	0.63	(0.36)
Number of Incumbents	-0.91***	(0.23)	-0.91***	(0.23)	-0.91***	(0.22)
Number of Opportunities	0.56*	(0.28)	0.60*	(0.29)	0.62*	(0.29)
State Fixed Effects	Yes		Yes		Yes	
Clustered Errors	Yes		Yes		Yes	
Number of Observations (Individuals)	1,744 (513)		1,744 (513)		1,744 (513)	
Nagelkerke's R ²	.256		.267		.280	

Standard errors are in parentheses; * indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$, two-tailed tests
 Is U.S. House Representative is the reference group for current office held
 For current office and previous office, Yes = 1, No = 0

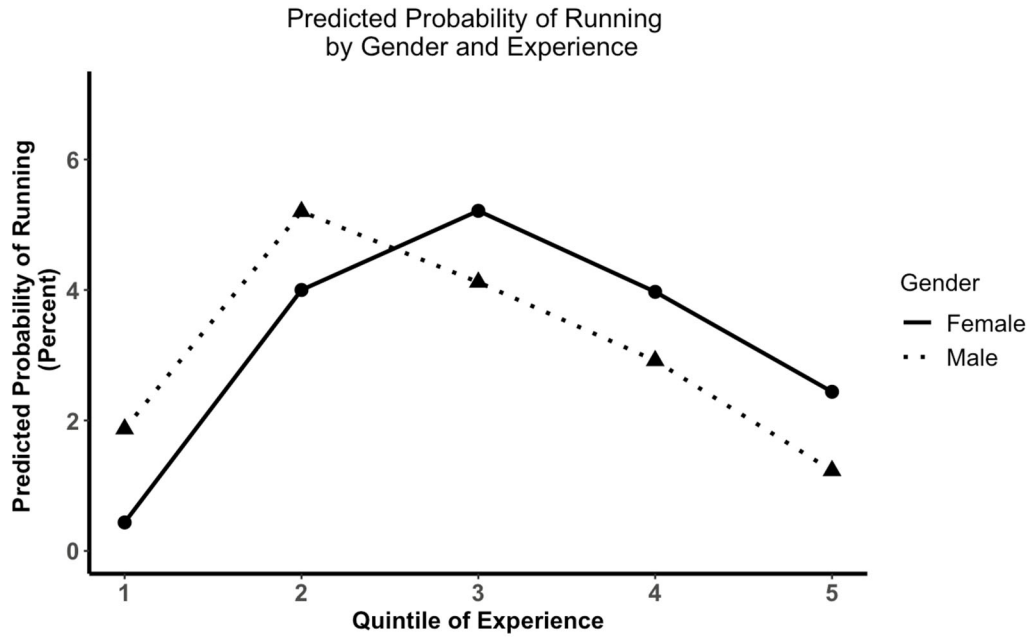
Because there were few observations equal to 1 among females for Was House Member, Was Lieutenant Governor, and Was Secretary of State, and there were zero observations equal to 1 for Was Attorney General, we have excluded these variables from these models. (That is, it was uncommon for women to hold a different risk pool office after having held one of them already.)

Figure 1. Kaplan-Meier Failure Plot of Cumulative Likelihood of Running for Higher Office Over Years of Experience (No Additional Controls)



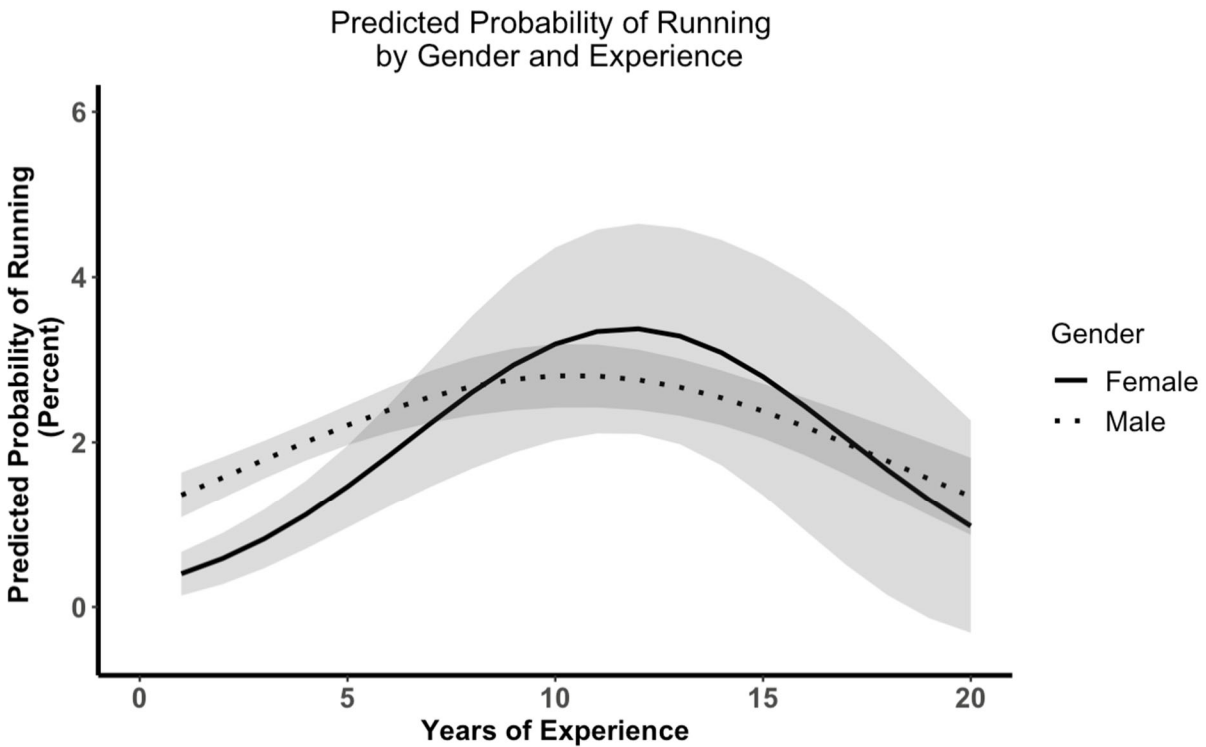
Note: This figure reveals that at low levels of experience, men are more likely than women to run for higher office, but this gap closes (and descriptively, ostensibly reverses) as potential candidates gain more experience.

Figure 2. Frequency of Running for Higher Office by Gender Within Each Quintile of Experience (No Additional Controls)



Note: This figure reveals that at low quintiles of experience, men are more likely than women to run for higher office, but this gap closes (and descriptively, ostensibly reverses) in the higher quintiles of experience.

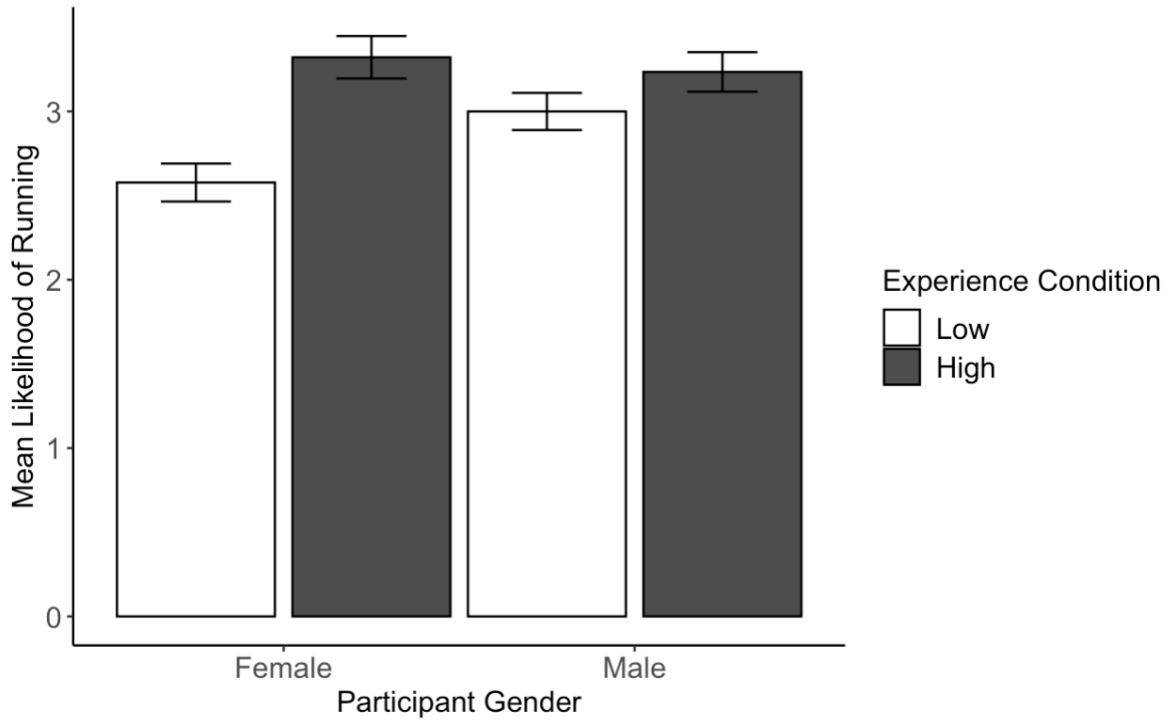
Figure 3. Predicted Probabilities of Running for Higher Office by Gender and Experience (Based on Model with Full Controls)



This graph takes the average values of all control variables. Shaded regions represent 95% confidence intervals.

Note: The figure shows that women are less likely to run than men at low levels of experience (with a significant difference observed through the first 5 years of experience), after which point they become statistically equally likely to run as men.

Figure 4. Participants' decisions to run in Study 2. Error bars represent ± 1 standard error.



Note: This figure reveals that at a low level of experience, men are more likely than women to run for a higher office, but women and men are equally likely to run when they have a higher level of experience

Appendix

Table A1. Derivative values at each level of experience (from 1-20 years) for women and men, along with the standard error of the difference and a statistical test of their difference.

Year of Experience	Female Derivative Value	Male Derivative Value	Standard Error of Difference	T-test
1	0.40	0.15	0.09	*
2	0.36	0.14	0.08	**
3	0.32	0.12	0.07	**
4	0.29	0.10	0.06	**
5	0.25	0.09	0.05	**
6	0.21	0.07	0.04	**
7	0.18	0.06	0.04	**
8	0.14	0.04	0.03	**
9	0.10	0.02	0.03	**
10	0.07	0.01	0.03	
11	0.03	-0.01	0.04	
12	-0.01	-0.03	0.05	
13	-0.04	-0.04	0.05	
14	-0.08	-0.06	0.06	
15	-0.12	-0.07	0.07	
16	-0.15	-0.09	0.09	
17	-0.19	-0.11	0.10	
18	-0.23	-0.12	0.11	
19	-0.26	-0.14	0.12	
20	-0.30	-0.16	0.13	

T-test indicates whether derivative values for females and males are statistically significantly different from each other at each level of experience based on two-sided t-tests.

* indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$

Table A2. Main model with no control variables.

Variables	<i>b</i>	<i>SE</i>
Female	-1.29**	(0.41)
Experience	0.11***	(0.03)
Female * Experience	0.30**	(0.11)
Experience Squared	-0.007***	(0.002)
Female * Experience Squared	-0.01*	(0.006)
Clustered Errors	Yes	
Number of Observations (Individuals)	25,646 (6,439)	
Nagelkerke's R ²	.020	

Standard errors are in parentheses; * indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$, two-tailed tests

Table A3. Balance table for participant attributes in Study 2.

	Low Experience Condition <i>N</i> = 211	High Experience Condition <i>N</i> = 202	Difference
Gender (Female)	42.65%	43.07%	<i>ns</i>
Race (Non-White)	16.59%	18.81%	<i>ns</i>
Age	41.66	40.67	<i>ns</i>

Percentages show the proportion of participants within each condition who are female or non-White, respectively. Age numbers represent the average age of participants within each condition. Significance tests are based on a chi-squared test (gender and race) or a t-test (age) testing differences between conditions.