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*Published in:*  
Journal of applied social psychology

*DOI:*  
[10.1111/jasp.12750](https://doi.org/10.1111/jasp.12750)

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2022

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Meeussen, L., Begeny, C. T., Peters, K., & Ryan, M. K. (2022). In traditionally male-dominated fields, women are less willing to make sacrifices for their career because discrimination and lower fit with people up the ladder make sacrifices less worthwhile. *Journal of applied social psychology*, 588-601. <https://doi.org/10.1111/jasp.12750>

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# In traditionally male-dominated fields, women are less willing to make sacrifices for their career because discrimination and lower fit with people up the ladder make sacrifices less worthwhile

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## Funding information

Financial support was provided by the European Research Council (Consolidator Grant, ERC-CoG 725128, awarded to M.K.R.). The funders had no role in study design, data collection, analysis, or manuscript preparation. Secondary funding was provided by the British Veterinary Association (BVA Vet Futures Project Grant, awarded to M.K.R.) and the Research Foundation of Flanders, Belgium (postdoctoral fellowship 12X4718N, awarded to L.M.)

## Abstract

Women's lower career advancement relative to men is sometimes explained by internal factors such as women's lower willingness to make sacrifices for their career, and sometimes by external barriers such as discrimination. In the current research, positing a dynamic interplay between internal and external factors, we empirically test how external workplace barriers guide individuals' internal decisions to make sacrifices for the advancement of their careers. In two high-powered studies in traditionally male-dominated fields (surgery,  $N = 1,080$ ; veterinary medicine,  $N = 1,385$ ), women indicated less willingness than men to make sacrifices for their career. Results of structural equation modeling demonstrated that this difference was explained by women's more frequent experience of gender discrimination and lower perceptible fit with people higher up the professional ladder. These barriers predicted reduced expectations of success in their field (Study 1) and expected success of their sacrifices (Study 2), which in turn predicted lower willingness to make sacrifices. The results explain how external barriers play a role in internal career decision making. Importantly, our findings show that these decision-making processes are similar for men and women, yet, the circumstances under which these decisions are made are gendered. That is, both men and women weigh the odds in deciding whether to sacrifice for their career, but structural conditions may influence these perceived odds in a way that favors men. Overall, this advances our understanding of gender differences, workplace inequalities, and research on the role of "choice" and/or structural discrimination behind such inequalities.

## 1 | INTRODUCTION

We [women] hold ourselves back in ways both big and small, by lacking self-confidence, by not raising our hands, and by pulling back when we should be leaning in.

Sheryl Sandberg, COO, *Facebook*

Women are still strongly underrepresented in leadership positions. For instance, in the European Union and the United States, less than one quarter of board members and only 5% of CEOs are female (Catalyst, 2017; European Commission, 2016). The above quote by Sandberg (2013) from her book "*Lean in: Women, work, and the will to lead*" implies that this underrepresentation of women in leadership positions--but also speaking to women's overall tendency toward

less career advancement—may be due to women's own behavior and choices. It suggests that women do not show the necessary behaviors nor make the necessary sacrifices to climb the organizational ladder.

Indeed, several statistics and findings would suggest that women make fewer sacrifices for their careers than men. For instance, men more often work full-time than women (OECD, 2017) and among full-time workers, men on average do more hours of paid work per day and do more overtime than women (Statista, 2019; US Bureau of Labor Statistics, 2019). Moreover, men more often travel for work and miss out on time with their family because of work, whereas women more often switch to a less demanding or more flexible job and refuse overtime or more responsibility at work (Becker & Moen, 1999; Dahm et al., 2019; Keene & Reynolds, 2005).

Given these findings, it is important to study where these gender differences in sacrifices for one's career come from. In this article, we probe the question of *why* women may be less likely than men to make sacrifices for their career, which is tethered to a key factor that is important in anyone's decision-making process: the potential that making a particular sacrifice will yield some success, that is, will “pay off” or be beneficial to the individual. We argue that men and women use similar decision-making processes—taking into account the potential success for their career when deciding whether to make such sacrifices. Yet, we expect that the external circumstances under which these decisions are made may be gendered: women's more frequent experiences of discrimination at work, and their perceptible lack of fit with those higher up the ladder, ultimately signal to women that making sacrifices for their career may not result in some success (i.e., benefit their career) and thus reduces their willingness to make such sacrifices.

### 1.1 | Why do women make fewer sacrifices for their career?

The statistics outlined above suggest that women make fewer sacrifices for their career than men. Such findings are often used to argue that women hold themselves back from climbing the organizational ladder: they *choose* not to make the same sacrifices for their career that men make. This “choice” rhetoric is reflected, for instance, in the famous article “The opt-out revolution” (Belkin, 2003), which contends: “*Why don't women run the world? Maybe it's because they don't want to.*” Similarly, in a recent blog post discussing the gender wage gap (Perry, 2018): “*...marriage and motherhood have a significantly negative effect on women's earnings; but those lower earnings don't necessarily result from labor market discrimination, they more likely result from personal family choices about careers, family friendly and flexible workplaces, commute time, child care, and the number of hours worked, etc.*” This type of rhetoric suggests that if women choose not to make sacrifices for their career, then, the persistence of gender inequalities like the wage gap or the underrepresentation of women in higher status positions are due to *internal* factors such as women's lower motivation, ambition, or interest in career advancement,

dismissing explanations based on external factors such as discriminatory processes in the labor market.

Yet, such an either or distinction between internal and external factors behind women's lower career advancement is oversimplified. It fails to recognize that “internal” personal choices are strongly shaped by our “external” environment. For instance, a large body of research demonstrates that men and women are socialized differently—with men encouraged to focally invest themselves into work, and with women encouraged to focus on family and caring roles (Eagly & Wood, 2012; Eagly et al., 2000). It is this socialization that affects their aspirations and choices in life (Brown & Diekmann, 2010; Ellemers, 2018). Thus, stressing that women independently “choose” not to pursue career advancement overlooks the gender normative processes that lead men and women into different paths, along with those processes that actively punish individuals who deviate from these gendered paths (Morgenroth & Heilman, 2017; Rudman & Glick, 2001; Rudman et al., 2012).

Moreover, this “choice rhetoric” implies that women who want to advance their careers have the same opportunities to do so as do men. This ignores the well-documented structural inequalities women often face in the labor market (Ellemers, 2014; Ellemers & Barreto, 2015; Heilman, 2012; Stephens & Levine, 2011; Van Laar et al., 2019). Critiques to this choice rhetoric in workplace inequalities indicate that it is not about either individual choices (internal factors) or about contextual barriers (external factors), but rather that choices are enabled or constrained within a context (Vinkenburg et al., 2015). The current research adds to this line of work by empirically investigating whether structural workplace barriers reduce the likelihood that women will “choose” to make sacrifices for their career, and hence, that such choices are not fully free or autonomous, but rather are constrained by external factors.

### 1.2 | Gendered perceptions of potential success of sacrifices

Deciding how much to sacrifice for one's career is a decision like any other. As outlined by theories of decision making (Peterson, 2009), people weigh the odds when deciding whether or not to do something: What are the potential costs and benefits of a certain choice? What are the chances of failing or succeeding? Thus, we expect that in deciding whether or not to make a sacrifice for their career, both men and women will weigh the extent to which such a sacrifice will successfully benefit their career. Yet, while this process of decision making is likely to be the same for men and women, the degree to which men and women can expect success may be markedly different, particularly in workplaces where gender inequalities are still prevalent, including in traditionally male-dominated fields where stereotypically masculine qualities are highly valued or where various manifestations of gender bias persist). To illustrate: in an organization where women are less likely than men to receive credit for their work accomplishments (Heilman & Haynes, 2005), women may

be less inclined than men to take on extra work tasks because the expected benefits of such behaviors for their career advancement appear to be low. A gender difference in taking on extra tasks would then be the product of the same rational decision process carried out by both men and women, yet with disparate—that is, gendered—likelihoods of success. This ultimately leads to gendered decisions and behaviors. Thus, we predict that in workplaces where gender inequalities are still prevalent (e.g., traditionally male-dominated fields), women are less willing to make sacrifices for their career than men, and that this difference can be explained by gender differences in the expected success in advancing their career.

**Hypothesis 1** *In traditionally male-dominated fields, women are less willing to make sacrifices for work than men.*

**Hypothesis 2** *Women's lower willingness to make sacrifices for work than men can be explained by women's lower expected success.*

### 1.3 | Expected success of sacrifices is informed by perceived workplace inequalities

Estimations of the potential success one can have when sacrificing for one's career are likely to be informed by one's experiences in an occupation or organization. In workplaces where women experience more barriers to advancement in their career than men, we thus predict that women will expect less success to come of their sacrifices for their career, thereby reducing their willingness to make such sacrifices.

In the current research, we empirically test the extent to which gender differences in willingness to sacrifice for one's career are explained by gender differences in workplace experiences. We focus on two key indicators of gender inequality in the workplace: experiences of gender discrimination and a perceptible lack of fit with those higher up the occupational ladder. We expect these barriers to work in tandem to shape women's (compared to men's) expectations that making sacrifices for their career will be beneficial, as they capture both the more immediate, everyday barriers that women see (gender discrimination), along with those they can see up ahead (a perceptible lack of fit with individuals further up the ladder).

#### 1.3.1 | Gender discrimination at work

Decades of research have evidenced the discriminatory processes women may encounter at work (see Barreto et al., 2009; Ellemers, 2014; Heilman, 2012; Van Laar et al., 2019). Gender stereotypes lead to the expectation that women are less agentic, competent, and assertive than men (Haines et al., 2016; Hentschel et al., 2019; Prentice & Carranza, 2002). These qualities are highly relevant in work settings. They may create implicit or explicit bias and discrimination against women at work, with women receiving less positive performance evaluations, less recognition for their

work, and fewer job opportunities compared to men (e.g., Begeny et al., 2020; Davison & Burke, 2000; Heilman, 1995; Heilman & Haynes, 2005; Koch et al., 2015). Moreover, when women do display high levels of agency, competence, or assertiveness, they may face penalties or “backlash” for showing gender-atypical behaviors (Rudman, 1998; Rudman & Glick, 2001; Rudman et al., 2012). Thus, we know that discrimination creates “external” barriers for women to advance in their career.

Yet, less is known about how experiences of discrimination in the workplace have an impact on “internal” choice processes, of deciding whether or not to make sacrifices for one's career. We expect that those who perceive (gender-based) discrimination to be at play in their fields or organization, or who have themselves experienced it at work, will be less likely to believe that the sacrifices they would make for their career will successfully increase their chances for career advancement. Given this lower potential success of making sacrifices, we then expect that such individuals will be less willing to make them. Supportive of this prediction, a recent study found that those who voluntarily left their jobs in the technology industry—often women and cultural or sexual minorities—frequently reported unfair treatment as a major factor in their decision (Kapor Center for Social Impact, 2017). Furthermore, we predict that the above general decision-making processes explain, at least in part, gender differences in willingness to make sacrifices for one's career in workplaces where gender inequalities persist, and hence, women experience more discrimination compared to men.

**Hypothesis 3** *Women's higher experience of gender discrimination at work explains their lower expected success of making sacrifices, and, in turn, their lower willingness to make sacrifices for work.*

#### 1.3.2 | Fit with those higher up the ladder

Similarly, we argue that perceptible fit with people higher up the ladder in one's workplace plays a role in the estimated success of sacrifices and hence willingness to sacrifice. When people see few individuals from their in-group in leadership positions or are confronted with various cues signaling that the people higher up the ladder are not like them (i.e., experiences a lack of fit with leaders), they may come to think that they cannot become one of them, no matter what sacrifices they might make. Indeed, experiencing fit with those higher up the ladder signals that reaching such a leadership position is attainable (Morgenroth et al., 2015) and may hence lead to the expectation that making sacrifices for one's career is worthwhile. This hypothesized decision process (of fit with those higher up the ladder informing expectations of success and hence willingness to sacrifice) is likely at play for anyone making decisions about sacrifices for one's career. For instance, research has shown that feeling like you fit in in an occupation and are similar to those higher up the ladder is highly important both for men's and women's work outcomes (Peters et al., 2012, 2015). Yet, the levels of perceptible fit with those higher up the ladder are commonly different for men and women.

**TABLE 1** Descriptives of and correlations between Study 1 measures for men and women

	<i>M (SD)</i> <sub>women</sub>	<i>M (SD)</i> <sub>men</sub>	<i>t(df)</i> <sub>gender difference</sub>	1	2	3	4
1. Gender discrimination	4.29 (1.66)	3.34 (1.38)	-10.70 (871.80) <sup>a</sup> ***		-.14***	-.15***	-.06
2. Fit with surgeons higher up the ladder	4.70 (1.21)	5.23 (1.14)	7.94 (970.81) <sup>a</sup> ***	-.19***		.50***	.23***
3. Expected success as a surgeon	4.88 (1.33)	5.17 (1.26)	4.03 (1,359)***	-.17***	.49***		.17***
4. Willingness to sacrifice	4.73 (1.21)	5.04 (1.17)	4.55 (1,354)***	-.12**	.27***	.31***	

Note: Correlations under the diagonal are for women, above the diagonal for men.

<sup>a</sup>Corrected for unequal variances.

\*\* $p < .01$ ; \*\*\* $p < .001$ .

Indeed, research has shown that the pervasive stereotype of a successful leader fits more with the stereotype of men than of women, leading women to perceive lesser fit with leaders than men (Eagly & Karau, 2002; Eagly et al., 1992; Heilman, 2001; Lyness & Heilman, 2006). Also, looking up, women are less likely than men to see leaders from their gender group, as women are still strongly underrepresented in positions higher up (Catalyst, 2017; European Commission, 2016). Therefore, we predict that women will experience lesser perceptible fit with those higher up the ladder compared to men, and that this reduces their expected success of making sacrifices for their career, which in turn reduces their willingness to make these sacrifices.

**Hypothesis 4** *Women's lesser perceptible fit with those higher up the ladder explains their lower expected success of making sacrifices, and in turn their lower willingness to make sacrifices for work.*

## 1.4 | The current research

To our knowledge, this is the first research to empirically test gender differences in employees' willingness to make sacrifices for their career; while directly investigating the structural mechanisms and decision-making processes that underlie potential gender differences. We test these hypotheses in two different traditionally male-dominated fields: surgery and veterinary medicine. We focus on these contexts as we expect gender differences in the tendency to experience discrimination and lack of fit with those higher up the ladder, and thus, the processes following these, as theorized above, will be especially prevalent. Study 1 uses a unique sample of surgical consultant trainees. The field of surgery is still predominantly male. For example, in the U.S. and the U.K. women occupy about 25% of surgical trainee positions and 9% of surgical consultants positions (ACS Health Policy Research Institute, 2010; Murphy, 2019; NHS, 2014). Surgery is still considered a masculine environment not only in numbers, but also in work culture, with "macho" qualities such as toughness and status emphasized (Kellogg, 2012; Peters et al., 2012, 2015). Study 2 surveyed people working in veterinary medicine, a field within which gender representation has recently shifted. For example, in the United States and the United Kingdom

the veterinary profession has shifted from a significant majority of men (95% in 1960) to a majority of women (73% in 2018; The Royal College Of Veterinary Surgeons, 2018; US Department of Labor, 2017). Yet, despite these changes in numbers, women are still underrepresented in leadership positions and gender biases persist within this field (Begeny et al., 2020). The historical and cultural masculinity of both these fields provide highly relevant contexts in which to test our hypotheses looking into gendered experiences of discrimination and fit with those higher up the ladder. At the same time, these fields offer a valuable opportunity to test whether our hypothesized processes function similarly in contexts with marked differences in the current numerical representation of women.

## 2 | STUDY 1

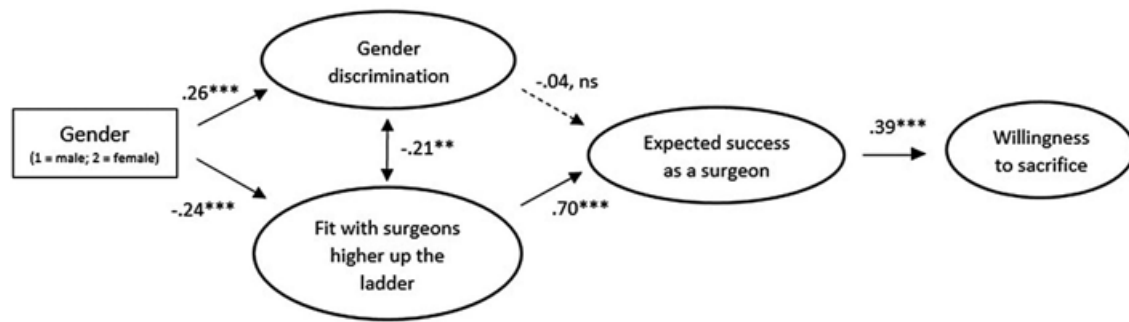
### 2.1 | Methods

#### 2.1.1 | Procedure

An annual online questionnaire was circulated to all surgical consultant trainee members of the English Royal College of Surgeons (to become a surgeon or "surgical consultant," one is required to complete approximately 10 years of specialty postgraduate training). This study was approved by the Ethics Committee at one of the authors' institutions.

#### 2.1.2 | Participants

Between 2009 and 2011, a total of 1,668 participants completed this survey (eligibility for the current study contingent on completing the survey at least once). Some participants did not indicate their gender and were therefore excluded from the sample ( $n = 283$ ). Of the remaining 1,385 participants, 244, 235, and 906 provided responses in 2009, 2010, and 2011, respectively (results replicated for each time point separately). Participants had an average age of 31.68 years old ( $SD = 3.51$ ) and 36.3% were women (reflecting the underrepresentation of women in this field; ACS Health Policy Research Institute, 2010; Murphy, 2019; NHS, 2014). They were in



**FIGURE 1** Study 1 SEM model results (standardized estimates). Factor loadings are omitted for simplicity, but all latent factors predicted their respective manifest indicators at  $p < .001$ ; \*\*\* $p < .001$

their 2nd to 10th year of training, with an average of 5.69 years of training ( $SD = 1.93$ ).

### 2.1.3 | Measures

All items were measured with a 7-point scale from (1) Strongly disagree to (7) Strongly agree. Table 1 provides an overview of descriptives and correlations between all measures for men and women.

#### *Gender discrimination*

Perceived gender discrimination in the field of surgery was measured with three items: "I think that gender discrimination is a problem in surgery," "In general there are more barriers for females who want to be surgeons," and "I think that females and males are given the same opportunities in their pursuit of a surgical career" (reversed). Cronbach's alpha was .83, indicating good reliability.

#### *Fit with surgeons higher up the ladder*

Two items measured perceptible fit with surgeons higher up the ladder (see Peters et al., 2012): "I think that people like me have made it to the top of surgery" and "When I look at successful [surgery] consultants, I have a lot in common with them." The items had a strong positive correlation ( $r = .58$ ,  $p < .001$ ). The survey also had six other items measuring fit in the field of surgery more generally, taken together in a scale of "prototype fit" in (Peters et al., 2012). As the current paper focuses on perceptible fit with those higher up the ladder, we do not make use of the broader items measuring fit with the occupation in general.

#### *Expected success as a surgeon*

Participants' expected success as a surgeon was measured with the two items "My future career in surgery looks bright" and "I don't think that I am very likely to reach the top of surgery" (reversed). The items (after reversing the second) had a strong positive correlation ( $r = .57$ ,  $p < .001$ ).

#### *Willingness to sacrifice*

Participants rated their willingness to make sacrifices for their career on the two items "I will give up other things in my life if it helps me

get ahead in my career" and "I am not prepared to make sacrifices to be the best surgeon that I can" (reversed). The items (after reversing the second) had a moderate positive correlation ( $r = .42$ ,  $p < .001$ ).

## 2.2 | Results

Data were analyzed using structural equation modeling with latent variables representing each construct (each significantly predicting their respective items/manifest indicators) and MLR estimations. To test our first two hypotheses, we modeled the relationship between gender and willingness to sacrifice with expected success as a surgeon as a mediator. Model fit was high with CFI = .998; TLI = .99; RMSEA = .02; and SRMR = .01.  $R$  square indicated that the model explained 13.4% of the variance in willingness to make sacrifices for one's career ( $p < .001$ ). Confirming Hypothesis 1, results showed a significant relation between gender and willingness to sacrifice for one's career such that women in surgery indeed indicated lower willingness to make sacrifices for their career than men ( $\beta(SE) = -0.10$  (0.04),  $p = .005$ ). Moreover, this gender difference was significantly mediated by expected success as a surgeon (indirect effect  $\beta(SE) = -0.09$  (0.03),  $p = .004$ ). Women expected lower success as a surgeon than men ( $\beta(SE) = -0.12$  (0.03),  $p < .001$ ) and this in turn related to willingness to make sacrifices ( $\beta(SE) = .34$  (0.05),  $p < .001$ ). Thus, Hypothesis 2 was also confirmed.

To test Hypotheses 3 and 4, gender discrimination and fit with surgeons higher up the ladder were then added as mediators between gender and expected success as a surgeon (Figure 1). We also specified a correlational path between these mediators in the model as a more rigorous test of their independent roles (results fully replicate without this path; in fact, the hypothesized relationship between gender discrimination and expected success becomes significant, thus, offering support for Hypothesis 3). Power analyses (Soper, 2020) for this full model, specifying a medium anticipated effect size, power of .80, and a probability of .05, indicated a necessary sample of 991 participants, which was well exceeded in our study ( $N = 1,385$ ). The model showed good fit with TLI = .94 and CFI = .96 exceeding the .90 criterion (Bentler, 1990) and with RMSEA = .05, 90% CI [.05; .06] and SRMR = .04 at and below the .05 criterion (Browne & Cudeck, 1992; Hu & Bentler, 1998).  $R$  square indicated

that the model explained 15.4% of the variance in willingness to make sacrifices for one's career ( $p < .001$ ).

As depicted in Figure 1, results showed that women indicated a higher degree of gender discrimination in surgery ( $\beta(SE) = .26 (.03)$ ,  $p < .001$ ) and they experienced lesser fit with successful surgeons compared to men ( $\beta(SE) = -.24 (.03)$ ,  $p < .001$ ). Contrary to our predictions, gender discrimination was not significantly related to expected success as a surgeon ( $\beta(SE) = -.04 (.04)$ ,  $p = .225$ ), yet, as expected, perceptible fit with successful surgeons was positively related to expected success as a surgeon ( $\beta(SE) = .70 (.03)$ ,  $p < .001$ ). In turn, expected success as a surgeon was positively related to willingness to sacrifice for one's career ( $\beta(SE) = .39 (.05)$ ,  $p < .001$ ).

Looking into the mediation paths, Hypothesis 3 was not supported: the indirect effect of gender on expected success as a surgeon through gender discrimination was not significant ( $\beta(SE) = -.01 (.009)$ ,  $p = .229$ ), nor was the indirect effect of gender on willingness to sacrifice for one's career through gender discrimination and expected success as a surgeon ( $\beta(SE) = -.004 (.004)$ ,  $p = .235$ ). However, supporting Hypothesis 4, the indirect effect of gender on expected success as a surgeon through perceptible fit with successful surgeons was significant ( $\beta(SE) = -.17 (.02)$ ,  $p < .001$ ), and so was the indirect effect of gender on willingness to sacrifice for one's career through perceptible fit with successful surgeons and expected success as a surgeon ( $\beta(SE) = -.07 (.01)$ ,  $p < .001$ ).

In sum, Study 1 confirmed Hypotheses 1, 2 and 4.

## 2.3 | Discussion

In this first study, we demonstrated that women in the field of surgery were less willing than men to make sacrifices for their career. This effect could be partially explained by women's lower perceptible fit with successful surgeons, which was related to lower expectations of being successful as a surgeon, and thus, a lower willingness to make sacrifices for their career. Thus, a lack of perceptible fit with individuals higher up the ladder may keep women from making sacrifices for their career, because they believe they are not likely to be successful. This provides support for our reasoning that gender differences in willingness to sacrifice for one's career are at least partly externally driven, in that contextual cues signal the potential success one can have in an organization or a field, and this estimation of success will be taken into account (both by men and women) when considering to make sacrifices for one's career.

While women perceived greater gender discrimination in surgery than men, this was not related to expected success as a surgeon and hence did not mediate the effect of gender on willingness to sacrifice for one's career. A potential reason that gender discrimination was not related to expected success as a surgeon is that we measured the extent to which participants perceived gender discrimination to be an issue within surgery in general, rather than asking about their own

experiences of being discriminated against based on their gender. In Study 2, we therefore tested our predictions with a measure of personal experiences of gender discrimination. Moreover, while in Study 1, we measured participants' expected success as a surgeon more broadly, in Study 2, we explicitly asked about participants' expectations that the sacrifices made for their career would result in some success (i.e., benefit their career), which more directly tests our prediction that experienced discrimination and lesser perceptible fit with people higher up the ladder reduces willingness to sacrifice for one's career because the associated cost-benefit analysis of making such sacrifices is more negative.

## 3 | STUDY 2

### 3.1 | Methods

#### 3.1.1 | Procedure

The measures used in Study 2 were added to a broader, semiannual, online survey organized and distributed to men and women in the field of veterinary medicine (U.K.-based) by the British Veterinary Association (BVA) in 2018. Most of the survey questions were for the BVA's own internal use and were unrelated to the current study. Completing the survey was voluntary. This study was approved by the Ethics Committee at one of the authors' institution.

#### 3.1.2 | Participants

A total of 1,661 people completed the survey. As we were interested in the experience of men and women working in veterinary medicine, people who indicated they are not currently working were excluded (579 participants). One person who did not indicate gender was also excluded. This resulted in a final sample of  $N = 1,080$  participants, almost all of whom worked in the United Kingdom (99.7%). Of these, 33.2% were men (reflecting the gender distribution in this field; The Royal College of Veterinary Surgeons, 2020) and the mean age was 42.32 years old ( $SD = 12.27$ ). On average, participants had worked in veterinary medicine for 17.22 years ( $SD = 12.47$ ) and they worked 47.59 hr ( $SD = 15.36$ ) in a typical week (including hours called out). Participants indicated their role in veterinary medicine to be employee (57.9%), manager of other vets (4.2%), self-employed, business owner or partner (35.8%).

#### 3.1.3 | Measures

Unless indicated differently, we measured items with a 7-point scale from (1) Strongly disagree to (7) Strongly agree. In Table 2, we provide an overview of descriptives and correlations between all measures for men and women.

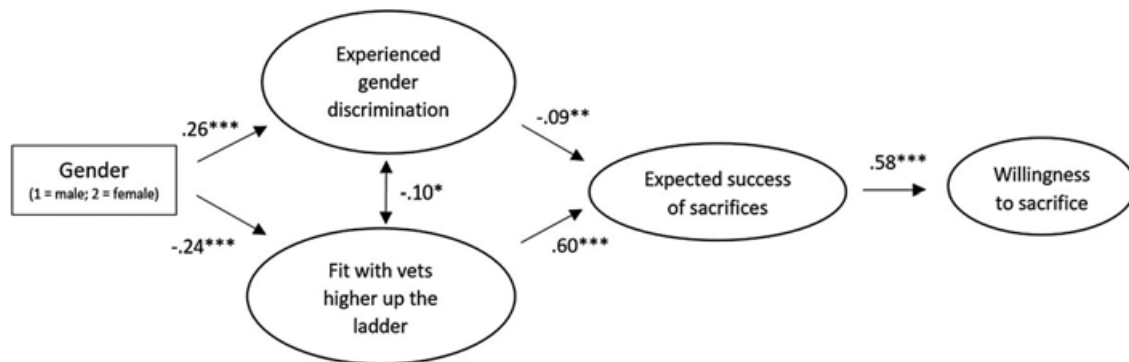
**TABLE 2** Descriptives of and correlations between Study 2 measures for men and women

	<i>M</i> ( <i>SD</i> ) <sub>women</sub>	<i>M</i> ( <i>SD</i> ) <sub>men</sub>	<i>t</i> ( <i>df</i> ) <sup>a</sup> <sub>gender difference</sub>	1	2	3	4
1. Experienced gender discrimination	2.06 (1.10)	1.60 (0.78)	-7.77 (888.17)***		-.10 <sup>†</sup>	-.18**	-.001
2. Fit with vets higher up the ladder	4.13 (1.13)	4.58 (1.25)	5.68 (639.06)***	-.08 <sup>†</sup>		.44***	.35***
3. Expected success of sacrifices	3.57 (1.43)	4.22 (1.55)	6.59 (643.97)***	-.11**	.40***		.45***
4. Willingness to sacrifice	3.87 (1.54)	4.71 (1.42)	8.91 (750.02)***	-.12**	.26***	.46***	

Note: Correlations under the diagonal are for women, above the diagonal for men

<sup>a</sup>Corrected for unequal variances.

<sup>†</sup> $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



**FIGURE 2** Study 2 SEM model results (standardized estimates). Factor loadings are omitted for simplicity, but all latent factors predicted their respective manifest indicators at  $p < .001$ ; \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$

#### Experienced gender discrimination

We measured experienced gender discrimination by asking participants how often they were “deprived of opportunities available to others because of their gender,” “treated according to stereotypes based on their gender,” and “viewed negatively because of their gender” ( $\alpha = .87$ ) on a scale from (1) Never to (5) Very often (see Begeny et al., 2020).

#### Fit with vets higher up the ladder

We measured perceptible fit with vets higher up the ladder with three items (adapted from Peters et al., 2012; see also Morgenroth et al., 2020): “When I look at successful vets, I have a lot in common with them,” “I think that people like me have made it to the top of the veterinary career,” and “I see myself as quite different from those who have made it in the veterinary career” (reversed) ( $\alpha = .68$ ).

#### Expected success of sacrifices

We measured participants’ expected success of sacrifices made for their career with two items: “The sacrifices I make to get ahead in my career are likely to be rewarded” and “There are clear benefits of the sacrifices I make for my career” ( $r = .76$ ,  $p < .001$ ).

#### Willingness to sacrifice

Similar to Study 1, we measured willingness to make sacrifices for one’s career with two items “I will give up other things in my life if it

helps me get ahead in my career” and “I am prepared to make sacrifices to get ahead in my career” ( $r = .72$ ,  $p < .001$ ).

## 3.2 | Results

As in Study 1, we tested our hypotheses using structural equation modeling with latent variables representing each construct (each significantly predicting their respective items/manifest indicators) and MLR estimations. To test Hypotheses 1 and 2, we modeled the relationship between gender and willingness to sacrifice with expected success of sacrifices as a mediator. Model fit was high with CFI and TLI = 1; RMSEA = .00; and SRMR = .01. *R* square indicated that the model explained 34.9% of the variance in willingness to make sacrifices for one’s career ( $p < .001$ ). As in Study 1, results showed a significant relation between gender and willingness to sacrifice for one’s career such that women in veterinary medicine indicated lower willingness to make sacrifices for their career than men ( $\beta(SE) = -0.16$  (0.03),  $p < .001$ ). Hypothesis 1 was thus confirmed. This gender difference was significantly mediated by expected success of sacrifices (indirect effect  $\beta(SE) = -0.31$  (.06),  $p < .001$ ), again confirming Hypothesis 2. Women expected lower success of sacrifices than men ( $\beta(SE) = -0.22$  (0.03),  $p < .001$ ) and this in turn related to willingness to make sacrifices ( $\beta(SE) = .53$  (.03),  $p < .001$ ).

Next, we added experienced gender discrimination and fit with vets higher up the ladder as mediators to test Hypotheses 3 and 4



(Figure 2). We again specified a correlational path between these mediators in the model as a more rigorous test of their independent roles (results fully replicate without this path). Power analyses (Soper, 2020) for this full model (specifying a medium anticipated effect size, power of .80, and a probability of .05) indicated a necessary sample of 991 participants, which was exceeded in our study ( $N = 1,080$ ). The model again showed good fit with  $TLI = .94$  and  $CFI = .96$  exceeding the .90 criterion (Bentler, 1990) and with  $RMSEA = .06$ , 90% CI [.05; .07], and  $SRMR = .05$  at acceptable levels (Browne & Cudeck, 1992; Hu & Bentler, 1998).  $R$  square indicated that the model explained 33.2% of the variance in willingness to make sacrifices for one's career ( $p < .001$ ).

Results are shown in Figure 2. Women experienced more gender discrimination in their work than men ( $\beta(SE) = .26 (.03)$ ,  $p < .001$ ), and they also experienced lesser fit with successful vets ( $\beta(SE) = -.24 (.04)$ ,  $p < .001$ ). Both experienced discrimination ( $\beta(SE) = -.09 (.03)$ ,  $p = .004$ ) and perceptible fit with successful vets ( $\beta(SE) = .60 (.03)$ ,  $p < .001$ ) related to expected success of sacrifices made for one's career, and this in turn related to the willingness to make such sacrifices ( $\beta(SE) = .58 (.03)$ ,  $p < .001$ ).

Looking into the hypothesized mediation paths, the gender difference in expected success of sacrifices was significantly mediated by experienced discrimination ( $\beta(SE) = -.02 (.01)$ ,  $p = .007$ ). Moreover, the indirect effect of gender on willingness to sacrifice for one's career was significantly mediated by experienced discrimination which related to lower expected success of sacrifices ( $\beta(SE) = -.01 (.01)$ ,  $p = .007$ ). Thus, Hypothesis 3 was confirmed. Hypothesis 4 was also confirmed, as the gender difference in expected success of sacrifices was significantly mediated by fit with successful vets ( $\beta(SE) = -.015 (.002)$ ,  $p < 0.001$ ) and the indirect effect of gender on willingness to sacrifice for one's career was significantly mediated by perceptible fit with successful vets which related to higher expected success of sacrifices ( $\beta(SE) = -.08 (.02)$ ,  $p < .001$ ).

In sum, all hypotheses were confirmed in Study 2.

### 3.3 | Discussion

In this second study we replicated the findings of Study 1 in a different field, veterinary medicine, which is also historically male-dominated, yet, now with a majority of women. Again, women indicated less willingness to make sacrifices for their career compared to men. As in Study 1, this difference could be explained by women's lesser experienced fit with vets higher up the ladder, which related to lower expectations that the sacrifices made for their career would result in some success (i.e., benefit their career). The results of Study 2 also confirmed our hypothesis that women's more frequent experiences of gender discrimination in the workplace related to lower expectations of success of sacrifices and hence less willingness to make such sacrifices. In Study 1, this relation was in the same direction yet not significant--this difference will be discussed further in the general discussion. Again, these findings support the notion that men and women both weigh their odds in deciding whether or not

to make sacrifices for their career, and that gendered experiences in the workplace (experienced discrimination and lower perceptible fit with those higher up the ladder) can explain gender differences in the estimated success or benefit of making sacrifices for one's career advancement, and hence, their willingness to make such sacrifices.

## 4 | GENERAL DISCUSSION

Building on arguments that women's lower overall tendency toward career advancement may be due to less willingness to make sacrifices for their career compared to men, in this article, we report two studies examining factors explaining *why* women (and men) may be unwilling (or willing) to make sacrifices for their career. Two high-powered studies in traditionally male-dominated fields with different current representations of women (a majority of men in surgery and a majority of women among veterinarians) yielded highly similar results. Women indeed reported less willingness to make sacrifices for their career than men. This gender difference could be explained by differential experiences in the workplace, with women reporting more frequent experiences of gender discrimination and less perceptible fit with those higher up the ladder than men. In Study 1, less perceptible fit with those higher up the ladder in turn related to lower expectations of being successful in their field, and in Study 2, both less perceptible fit and experiences of discrimination related to lower expectations that making sacrifices would advance one's career.

These findings contribute to research on workplace inequalities and gender differences in several ways. First, our findings that women experience more frequent workplace discrimination and lesser fit with those higher up the ladder are in line with a large body of research evidencing the discriminatory processes women may encounter at work (Barreto et al., 2009; Ellemers, 2014; Heilman, 2012; Van Laar et al., 2019) and the lack of fit between pervasive stereotypes of successful leaders and those of women (Eagly & Karau, 2002; Eagly et al., 1992; Heilman, 2001; Lyness & Heilman, 2006). We add to this research by evidencing that these workplace inequalities not only provide external barriers for women to advance their careers (e.g., reduced chances of being selected or promoted by others), but that they also relate to women's own willingness to make sacrifices for their career through reduced expectations of success. This demonstrates how willingness to make sacrifices for one's career, an internal explanation of women's overall lower tendency toward career advancement (e.g., Belkin, 2003; Perry, 2018), may also be driven by external situational factors, which may reinforce stereotypes and lack of fit.

Thus, rather than contrasting internal factors (such as motivation, interest, or ambition) to external factors (such as structural discrimination) as opposing explanations with different solutions, future research could further advance our understanding of workplace inequalities by continuing to study the dynamic interplay between these factors. It is likely that these two factors feed into one another, with women's experiences of discrimination and lack of fit

leading them to be less willing to sacrifice for their career, and lower willingness may in turn reinforce gender stereotypes, discrimination, and fit with leaders.

Our study also provides empirical evidence for critiques to the “choice rhetoric” (Stephens & Levine, 2011; Vinkenburg et al., 2015), which outline how emphasizing that women independently “choose” not to pursue career advancement overlooks the structural processes that lead men and women to make different decisions and ignores the inequalities and constraints women face in the workplace (and more broadly; Ellemers & Barreto, 2015; Heilman, 2012; van Laar et al., 2019).

Third, our findings contribute to literature on gender differences more broadly by evidencing how gendered outcomes, such as differences in willingness to sacrifice for one's career, need not to stem from gendered decision-making processes. Rather, our results show that deciding whether or not to make certain sacrifices for one's career can be seen as a general decision-making process (Peterson, 2009). Both men and women decide the extent to which they will sacrifice for their career based on the (perceived) odds of being successful. Importantly, these odds are constrained by a gendered context, such that women's experiences in the workplace—more frequent discrimination and a lesser fit with those higher up the ladder—signal that making sacrifices may not necessarily lead to career advancement and hence may not be worthwhile. Thus, we move from gendered decision-making processes, which would imply gender moderates decision-making processes such that men and women show different reactions to workplace experiences, to gendered experiences in the workplace which differentially inform the same decision-making process for men and women.

In our research, all hypotheses were confirmed except for one: In Study 1, women's higher perceptions of gender discrimination (compared to men's) did not explain gender differences in expected success or willingness to sacrifice as it did in Study 2. One explanation for this difference is the adjusted measures in Study 2. Here, we looked into one's own experiences of being discriminated against in the workplace, as opposed to more general perceptions of gender discrimination in the field in Study 1 (see the personal/group discrimination discrepancy, Taylor et al., 1990); and expected success of sacrifices made for one's career, compared to expected success in one's field more generally in Study 1. While we would expect that a generally discriminatory climate would affect women's expectations of success even when they have not (yet) experienced discrimination personally, future research could look further into the potentially different (or additive) roles of systematic discrimination in a field versus an individual personally experiencing discrimination in willingness to sacrifice.

Another potential explanation could be the difference in average levels of discrimination: In Study 1 in surgery, women reported higher levels discrimination than in Study 2 in veterinary medicine (respective averages of 4.29 on a 7-point scale versus 2.06 on a 5-point scale,  $t(2,463) = 21.53, p < .001$ ). This difference could be due to the difference in measures, as it would not be odd that women perceive more gender discrimination in their field in general than they have

personally experienced (Crosby, 1984; Lindsay et al., 2015). Still, this difference could also (partly) signal an actual difference in levels of discrimination between our samples in surgery (where women are still the numerical minority) and veterinary medicine (where women are now the numerical majority). If so, then, this could suggest that only a sufficient lack of discrimination can fuel women's expected success and willingness to sacrifice. It would be interesting to explore such potential threshold effects in further research.

Future research on the role of gender discrimination in willingness to sacrifices for one's career could also distinguish between different forms of discrimination. We would expect that particular experiences of discrimination, such as structural discrimination or discrimination from senior individuals with power over decision making, would be more likely to impair women's expectations of success of sacrifices for career advancement. Moreover, it could be interesting to look at more or less subtle forms of discrimination, since discrimination has become increasingly ambiguous and subtle, yet, it needs not to be recognized as such to negatively affect its targets (Barreto & Ellemers, 2005; Sterk et al., 2018; Van Laar et al., 2019). For instance, future work could distinguish between expressions of hostile and benevolent sexism, with hostile sexism being more overt and negative (e.g., portraying women as being controlling of men) and benevolent sexism being more subtle and seemingly positive (e.g., portraying women as warm yet incompetent; Glick & Fiske, 2001). Research has shown that especially benevolent sexism affects women in the workplace, causing intrusive thoughts and impeding performance, because its seemingly positive nature makes it more difficult to detect as prejudice and attribute it externally (Dardenne et al., 2007).

## 4.1 | Implications

The (false) opposition between internal and external causes of women's lower career advancement is also relevant for the implications that follow. If internal factors are seen as the main drivers of women's underrepresentation in positions higher up the ladder, then, it follows change can best be instigated by programs directed at increasing women's interest, ambition, or confidence (e.g., Casad et al., 2018; Knipher et al., 2017). While such initiatives are often put into place with the best intentions and can instigate some change, they may inadvertently be harmful in that they may imply women are responsible for their lower career enhancement, thereby reinforcing stereotypes and putting the burden of responsibility for change on women (i.e., the very same individuals who are often discriminated against). In extremis, if one focuses on internal barriers, one may even question the necessity of any gender-focused programs, arguing that we need not force women into higher ranks if this is not what they want. In contrast, if external factors are the primary cause, then, change can best be instigated by removing the structural barriers that reduce women's career advancement. As our findings highlight the interplay between internal and external factors, we suggest that the

removal of structural barriers for women in the workplace is important even for gender differences that may, at first sight, seem internal, such as willingness to make sacrifices.

Our findings indicate that to facilitate gender equality in career advancement, organizations should implement structural changes to signal to women that the sacrifices they make for their career will pay off. Our studies suggest that it is especially important to demonstrate that women can, and do, move up (signaling fit with those higher up the ladder). Research shows this could be done by improving the visibility and numerical representation of women in leadership positions (Rosenthal et al., 2013), signaling the attainability of leadership (Morgenroth et al., 2015). Of course, increasing women's representation higher up the ladder to improve women's career advancement may seem like a matter of "the chicken or the egg." One way to directly improve women's representation at senior levels is to implement affirmative action targets or quotas, requiring a certain minimum representation of each gender in leadership positions. While such practices are controversial, a recent research review shows that their benefits do outweigh their costs, and hence, they can be an effective means to address gender inequalities (Morgenroth & Ryan, 2018).

Fit with those higher up the ladder can also be improved with less masculine definitions and descriptions of leadership positions. For instance, gender-neutral job advertisements increase girls' and women's interest in stereotypically male occupations, women's perceptions of fit with leadership positions, and their perceived effectiveness as leaders (Eagly et al., 1995; Gaucher et al., 2011; Horvath & Sczesny, 2016; Verweken et al., 2013). Similarly, emphasizing the importance of leadership traits typically associated with women without dismissing those associated with men (a process called "prototype inversion") can bring a more diverse or balanced prototype of leadership positions (Danbold & Bendersky, 2019). A broader, more diverse definition of, and representation in, leadership may also benefit other individuals who do not fit into traditional stereotypes of successful leaders, such as men who do not fit into traditionally masculine stereotypes (Peters et al., 2015); LGBTQ+ individuals; people from racial, ethnic, or cultural minority groups; or employees with disabilities. We would expect that the general processes found in our data also apply to members of all groups underrepresented higher up the organizational ladder, such that reducing discrimination and improving their perceptions of fit with leaders can increase expected benefits of and willingness to make sacrifices for their career.

While in our studies the relationship between gender discrimination and expected success of and willingness to sacrifice was mixed (which we will discuss further under "Limitations and future directions") and weaker than the relationship with fit with those higher up the ladder, we would argue it remains important to reduce gender discrimination to enhance women's willingness to make sacrifices for their career. This is because increasing women's numerical representation at the top (to enhance fit with leaders) may not have the hoped-for effects in organizations with discriminatory climates (Ellemers et al., 2012). Research has shown that women who experience discrimination at work may show "queen bee behaviors" in

response, such as distancing themselves from other women and emphasizing their masculine qualities (perpetuating stereotypes of masculine leadership), and denying gender discrimination and opposing practices that aim for change therein (thus legitimizing and maintaining the status quo; Derks et al., 2011; Derks et al., 2011). Given these findings, both discrimination and lack of fit with leaders need to be reduced in combination to instigate change.

## 4.2 | Limitations and future directions

This research also has its limitations and raises a number of new questions that could be pursued in follow up work. First, we tested our predictions in two fields in which women were traditionally underrepresented (yet with clear differences in current gender representations) as we expected that gender differences in experienced discrimination and lack of fit with those higher up the ladder, and the hypothesized processes following these, would be especially prevalent in such fields. Thus, our findings cannot necessarily be generalized to all occupations. Moving forward, it would be interesting to investigate our model in fields where women have always been the numerical majority and fields in which stereotypically feminine rather than masculine qualities are valued (e.g., nursing). We would expect that in such contexts, the outlined general decision-making processes still hold, with people weighing their odds of success to decide whether or not to sacrifice for their career—and these odds being informed by workplace experiences. Yet, in such contexts, we would not expect women to experience more frequent discrimination or lower fit with those higher up the ladder compared to men, and therefore, we would expect smaller gender differences in expected success and willingness to sacrifice. This is supported by the fact that those sacrifices seen as necessary to climb up the organizational ladder are indeed made by many women in female-dominated professions. For instance, working evenings, nights, or weekends is common in nursing and midwifery and traveling abroad for work is common for flight attendants. Thus, women seem less willing to make these sacrifices in certain contexts, corroborating the importance of contextual factors in willingness to make sacrifices for one's work. Moreover, we would expect our processes to hold in contexts with reversed power dynamics, such that when men experience more discrimination or lower fit with those higher up the ladder compared to women, men would expect lower success of sacrifices and hence be less willing to sacrifice. Yet, few such fields may currently exist, as research has shown that men face little discrimination and may even encounter structural advantages to move upward in female-dominated professions (Williams, 1992).

Second, while our research focuses on experiences in the workplace and expected success as explanations of willingness to make sacrifices for one's career, other factors are likely to play a role. For instance, in addition to the perceived *benefits* of sacrifices for one's career, perceived *costs* of such sacrifices (e.g., backlash for deviating from gender norms; Rudman & Glick, 2001; Rudman et al., 2012)

may be important. We also expect that perceived costs and benefits of such sacrifices *for one's private life* (e.g., less time with your family as a cost, increased income as a benefit) play an important role in explaining gender differences in willingness to sacrifice, since social norms about care-tasks are also highly gendered (Haines & Stroessner, 2019). If there is a gender imbalance in domestic responsibilities, this too will likely affect women's ability, and therefore, willingness, to make sacrifices that benefit their careers. Thus, it is important to recognize that to fully establish equitable opportunities and motivation to make sacrifices in the workplace, it will also require a more equitable balance of responsibilities that men and women have outside of the workplace (Croft et al., 2015; Meeussen et al., 2019). Relatedly, research could further investigate the extent to which our model differs depending on other individual characteristics. For instance, people with or without children (or other caretaking roles) may differ in the extent to which workplace experiences (as opposed to factors in the private life) influence their willingness to sacrifice for their career. Similarly, differences in power motivation may play a role (and these may also be gendered; Schuh et al., 2014). For instance, people high in power motivation may show greater willingness to sacrifice for their career even after negative workplace experiences. Also, positive workplace experiences could potentially increase power motivation over time.

Third, a limitation of the current research is its correlational design, which does not allow us to draw causal conclusions based on these data. Of course, the significant gender differences in discrimination, fit with leaders, expected success in one's career or of sacrifices, and in willingness to sacrifice in both studies are important findings that cannot be explained away by reversed causation.

Yet, the other relationships in our model could go the other way or be bidirectional: Women's experiences of workplace discrimination and a lack of fit with those higher up the ladder may decrease their willingness to make sacrifices, and when women are less willing to sacrifice, this may over time also exacerbate gender stereotypes, lack of fit, and discrimination. To look into this issue further, we tested an alternative model in which gender predicts willingness to sacrifice for one's career, which in turn predicts discrimination and fit with those higher up the ladder. While paths in these models were significant in the expected directions (except for a nonsignificant relation between willingness to sacrifice and discrimination in Study 2), these models showed poorer fit than the models outlined in our manuscript (for Study 1: CFI = .93, TLI = .88, RMSEA = .08 and SRMR = .07; for Study 2: CFI = .94, TLI = .91, RMSEA = .08 and SRMR = .06). Of course, our data remain correlational, and hence, even comparing models with different causal hypotheses does not provide causal information. Further research should look into the causality of the relationships in our models, for instance using experimental designs to manipulate (a) low versus high anticipation of experiences of discrimination, or (b) lesser or greater perceptions of fit with those higher up the ladder, and investigate how these may affect the expected success of sacrifices and willingness to make them.

Fourth, our studies use perceptual single-source data. The advantage of this design is that it allows us to test the personal decision process of a person when deciding on making sacrifices for one's career. When people make such decisions, their subjective experiences of discrimination, fit, and potential success of sacrifices arguably matter most. Yet, future research can use and combine other sources to gain more insight in the studied processes. For instance, workplace discrimination could be measured by combining perceptions of different employees or by using data on women's promotion chances compared to men; and behavioral data of specific sacrifices (e.g., hours worked during evenings or weekends, taking on extra responsibilities that fall out of one's work description, days abroad for work) could be used to look into sacrifices made rather than willingness to sacrifice.

Last, an interesting avenue is to examine more specifically the different types of sacrifices people may make for their career or family. While our studies measured general willingness to make sacrifices for one's career, it may be that gender differences in willingness to make sacrifices vary by the type of sacrifice (e.g., working overtime vs. moving to another country for work). If so, this would allow for a test of our predictions within a range of different sacrifices, and whether such variance can be explained by contextual factors leading to more or less gendered perceived benefits (or costs) of certain sacrifices rather than others.

### 4.3 | Conclusion

This paper probed the question of why women may be less likely to make sacrifices for their careers compared to men, particularly in traditionally male-dominated fields. We found that women's more frequent experiences of discrimination at work and especially a lack of fit with those higher up the ladder ultimately signal to women that making sacrifices for their career may not be successful and thus reduce their willingness to make such sacrifices. Together, these findings advance our understanding of women's lower career advancement and workplace gender inequalities, and suggest that a false distinction between internal "choice" versus external structural discrimination is unhelpful.

### CONFLICTS OF INTEREST

None.

### DATA AVAILABILITY STATEMENT

Data available from M.K.R. upon request.

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**How to cite this article:** Meeussen L, Begeny CT, Peters K, Ryan MK. In traditionally male-dominated fields, women are less willing to make sacrifices for their career because discrimination and lower fit with people up the ladder make sacrifices less worthwhile. *J Appl Soc Psychol*. 2022;52: 588–601. <https://doi.org/10.1111/jasp.12750>