Research Article

The Gendered Consequences of Risk-Taking at Work: Are Women Averse to Risk or to Poor Consequences?

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Abstract

Women are seen as more risk-avoidant in the workplace, and some have argued that this contributes to occupational gender gaps. Across two correlational and three experimental studies (total N = 2280), we examined the role of consequences of workplace risk-taking in determining the likelihood of taking future risks at work. We found no evidence for overall gender differences in initial risk-taking, and women and men anticipated similar consequences for risks with which they have no experience. However, this stands in contrast to the consequences of risk-taking they have experienced. Here, men reported on average more positive consequences, even for those risks that are more normative for women, translating into a higher likelihood of taking the same risks again. When faced with the same consequences, women and men were equally likely to take the same risks again. Our findings challenge the simple assumption that women are averse to workplace risks and suggest that if and when women do avoid risks, it is because their risk-taking leads to less rewarding consequences. Workplace gender equality initiatives should therefore tackle any inequities of consequences rather than encouraging women to "lean in" and take more risks. *Additional online materials for this article are available on PWQ's website at* https://journals.sagepub.com/doi/suppl/10.1177/03616843221084048.

Keywords

risk-taking, risk-aversion, gender, gender differences, workplace gender equality

Taking risks—that is, engaging in actions that potentially bring the individual closer to a desired goal or benefit, but that also hold the possibility of failure or costs—continues to be seen as a defining feature of masculinity and as incompatible with the feminine gender role (Bem, 1974). This has been viewed as both a workplace strength and a weakness for women. For example, it has led to claims that women make better leaders, particularly in times of crisis such as the COVID-19 pandemic (Anderson, 2020), or that a greater presence of more risk-averse female leaders would have prevented the global financial crisis (Dejevsky, 2015). However, lower female risk-taking has also been used to explain—at least in part—why women are less likely to attain leadership roles. Perhaps most notably, in her bestselling book *Lean In: Women, Work, and the Will to Lead,* Facebook COO Sheryl Sandberg (2013) suggested that women's fears of failure or making the wrong decision contribute to their lower representation in leadership.

Similar suggestions are found in the academic literature. For example, Ertac and Gurdal (2012) demonstrated that men, compared to women, took more risky gambles on behalf of a group. The authors suggest that "[s]ince many decisions in top positions in the workplace involve the responsibility of deciding for others under uncertainty, this relative unwillingness of women to make such decisions can be an important reason why men are more likely to be found in leader positions in the workplace and in social life" (p. 29).

Thus, although there is debate about the value of taking risks in leadership positions, and at work more generally, the assumptions that women are risk-avoidant and that this has important implications are often taken for granted, despite the fact most gender differences on psychological variables are small, with largely overlapping distributions (see Hyde, 2005). This assumption can have consequences for women in the workplace regardless of their actual levels of risk

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avoidance: Given that taking risks is seen as an important part of leadership, viewing men as risk-takers and women as risk-avoidant could contribute to the Think Manager—Think Male association (Schein, 1973) and hinder women's career progress due to discrimination and bias (see Eagly & Karau, 2002; Heilman, 1983). It can also lead to harmful perceptions that women are responsible for workplace gender inequality (Kim et al., 2018).

But is it really true that women take fewer risks at work and, if so, what are the underlying reasons? In this article, we examine gender differences in risk-taking, whether taking risks at work has the same consequences for women and men, and whether any gender differentiation in the consequences of risk-taking affect the likelihood of women's and men's future risk-taking. Our findings have potential implications for gender equality initiatives that encourage women to take more risks at work.

Do Women Take Fewer Risks at Work?

At first glance, the literature on risk-taking seems to support the idea that women are, on average, more risk-averse than men (e.g., Croson & Gneezy, 2009; Eckel & Grossman, 2008; Meyers-Levy & Loken, 2015). There are, however, a number of reasons to be cautious of such claims in general, and of their application to risk-taking at work more specifically.

First, narrative reviews point to confirmation bias and contradictory findings in research on gender differences in choices related to risky gambles and other lab-based measures of risk-aversion such as investment scenarios (Fine, 2017; Nelson, 2014). For example, Nelson (2014) points out that the economic literature on risk-taking suffers from publication bias and has overstated gender differences in risk-taking by inaccurately citing previous findings (e.g., meta-analyses), over-interpreting and emphasizing non-significant differences, neglecting null findings, and focusing on a narrow range of tasks to measure risk-taking.

Second, there is considerable variation in an individual's attitude towards risk, depending on the method used to elicit ostensibly the same construct (e.g., Holzmeister & Stefan, 2021; Pedroni et al., 2017) and on the domain in which the risk occurs (Hanoch et al., 2006; Weber et al., 2002). Indeed, women and men have similar distributions and average levels of risk-taking for some behaviors (e.g., drinking and smoking; Byrnes et al., 1999) and domains (e.g., social; Morgenroth et al., 2018; Weber et al., 2002). Additionally, many measures of risk-taking yield findings of gender differences that vary across cultures, calling further into question the idea that they get at a clearly defined, broadly applicable construct in which women score lower than men (Dorrough & Glöckner, 2021).

Thus, there are clear reasons to be careful about generalizing findings of gender differences in lab-based economic risk-aversion measures to the broad domain of workplace risk-taking. This is particularly the case given that few studies specifically examine workplace risk-taking. Those that do tend to focus on a narrow range of behaviors, such as investment decisions, or leaders taking risks on behalf of a team or an organization (Dwyer et al., 2002; Ertac & Gurdal, 2012; Faccio et al., 2016).

Finally, cultural associations between risk-taking and masculinity bias how researchers operationalize risk-taking behavior, such that it trends towards more male-typical forms of risk-taking (Nelson, 2014). Even measures of risk-taking that focus on multiple domains largely focus on stereotypically masculine risks (e.g., riding a motorbike without a helmet, going skydiving), whereas risky behaviors that are more normative for women (e.g., horseback riding, undergoing cosmetic surgery) are overlooked (Morgenroth et al., 2018). Indeed, even when the "objective" risk (e.g., risk of injury) is the same, stereotypically feminine behaviors are seen as less risky. This suggests that certain forms of risky workplace behaviors may not be recognized as such, precisely because they are more common in women.

Given these inconsistencies and open questions, it is important to explore whether women do indeed take fewer risks at work than men, and to do so using a wide range of risk-taking behaviors that individuals may engage in at work, including those that are seen as stereotypically feminine, which may have been overlooked in past research.

Why Might Women Take Fewer Risks at Work?

Given the issues outlined above, it is unclear whether women indeed take fewer risks at work. Additionally, to the extent that they do, simply cataloguing such differences is only a first step to understanding why and when such differences arise. We argue that one important reason lies in the consequences that individuals experience when taking risks. These consequences are likely to differ between women and men. More specifically, gender roles and stereotypes likely affect the costs and benefits that women and men experience when they take workplace risks. In line with this argument, Harris and colleagues (2006) demonstrated that men's greater likelihood of engaging in risk-taking, is, at least in part, explained by gender differences in perceptions of probability of outcomes and the severity of negative consequences.

Social role theory (Eagly, 1987; Eagly & Wood, 2012) posits that because women and men occupy different roles in society, they are perceived to have complementary attributes in line with these roles. As women are over-represented in caretaking roles, they are perceived as communal (e.g., nurturing, altruistic), but not agentic (e.g., assertive, independent), whereas men, who are overrepresented in leadership roles, are perceived as agentic but not communal. Importantly, these gender stereotypes are not only descriptive (i.e., describing what women and men are like) but also prescriptive and proscriptive (i.e., dictating what women and men should and should not be like). Thus, women and men who violate these gender rules face penalties, particularly when their behaviors challenge the gender hierarchy (Rudman et al., 2012).

Table 1. Descriptive Statistics for All Items Included in Pilot Study 2.

Item	Likelihood		Riskiness		Stereo-Typicality		Gendered Riskiness	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Entire sample								
Admitting that one doesn't know how to carry out a task to one's boss/manager/supervisor * f	4.42	1.77	4.06	1.75	4.68	0.98	4.24	1.02
Admitting that one doesn't know how to carry out a task to co-workers	4.82	1.63	3.80	1.78	4.50	1.42	4.30	0.95
Asking one's boss/manager/supervisor for support with a difficult task * f	5.24	1.49	2.82	1.66	4.86	0.97	4.02	1.06
Asking for a pay-rise * m	3.88	1.97	3.90	1.76	2.98	1.46	4.54	0.91
Attending voluntary meetings	4.46	1.96	1.80	1.34	4.70	1.28	4.18	0.72
Being vocal about one's career goals with one's boss/manager/supervisor ** m	5.12	1.53	3.20	1.69	3.52	1.17	4.38	0.73
Changing work procedures against the will of one's boss/manager/supervisor	2.16	1.38	6.02	0.98	3.64	1.38	4.50	1.06
Complaining about one's boss/manager/supervisor to someone higher up	3.06	1.90	5.78	1.31	4.30	1.46	4.54	1.01
Complaining to one's boss/manager/supervisor about a co-worker ** f	3.88	1.80	4.20	1.55	4.76	1.15	4.38	1.03
Confronting a co-worker about the quality of their work	3.78	1.77	4.52	1.49	3.76	1.38	4.54	1.01
Confronting a rude co-worker ** m	4.64	1.75	4.48	1.58	3.36	1.66	4.08	1.40
Confronting one's boss/manager/supervisor	3.60	1.93	5.08	1.60	3.28	1.44	4.56	1.26
Doing a co-worker a favor with no immediate positive consequences for oneself	5.78	1.13	2.06	1.60	4.76	1.26	4.10	0.65
Giving emotional support to a co-worker	5.64	1.38	2.24	1.61	5.80	1.16	3.84	0.98
Going ahead with a project despite not all requirements being met	3.06	1.66	5.42	1.13	3.40	1.09	4.34	0.94
Knowingly not fixing minor flaws in one's work hoping that nobody will notice	2.84	1.66	4.76	1.64	3.38	1.38	4.18	0.96
Making a difficult decision one feels unsure about without asking for advice	3.50	1.62	4.98	1.32	3.42	1.13	4.20	0.88
Making an important decision without consulting one's boss/manager/supervisor	3.10	1.64	5.34	1.24	3.26	1.26	4.24	1.24
Making suggestions about work procedures to one's boss/manager/supervisor	5.62	1.21	3.04	1.55	3.70	1.17	4.32	0.79
Not adhering to company policies to accommodate a client's or co-worker's wishes	2.50	1.54	5.62	1.24	3.70	1.20	4.16	1.00
Not adhering to company policies to increase efficiency	2.86	1.67	5.36	1.45	3.36	1.23	4.32	0.96
Not following the instructions given by one's boss/manager/supervisor	2.66	1.42	5.70	1.04	3.28	1.18	4.16	1.04
Putting off a task with the risk of missing the deadline	3.16	1.58	5.60	1.13	3.76	1.21	4.34	0.94
Putting oneself forward for promotion * m	3.94	1.58	4.36	1.51	3.90	1.18	4.20	0.81
Putting work into a new, voluntary project where success is unclear	4.72	1.57	3.36	1.87	3.30	1.52	4.60	0.99
Quitting one's current job for a different one	4.62	2.09	4.96	1.56	3.46	1.39	4.56	1.13
Reducing one's work-hours ** f	3.72	2.12	4.10	1.88	4.94	1.48	4.16	1.08
Skipping a meeting one is required to attend	2.18	1.59	5.64	1.14	3.50	1.30	4.38	0.97
Speaking up about bullying or harassment one witnesses ** f	5.06	1.70	4.08	1.85	4.80	1.39	4.56	1.25
Speaking up when asked to do a task for which one is overqualified	3.68	1.94	3.76	1.86	3.66	1.55	4.50	1.13
Speaking up when asked to do a task for which one lacks the qualifications and skills	4.64	1.61	4.34	1.42	4.12	1.19	4.46	1.01
Staying at work longer to help one's boss/manager/supervisor	5.12	1.86	2.00	1.51	4.48	1.34	4.18	0.72
Staying at work longer to help a co-worker	5.64	1.35	2.12	1.47	4.84	1.22	4.14	0.64
Taking on a difficult task of that one is not sure one will be able to complete ** m	4.36	1.41	4.66	1.38	3.46	1.43	4.38	1.01
Using a co-worker's work without their knowledge to enhance one's own career	1.52	1.36	6.50	0.84	3.54	1.30	4.40	0.99
Female participants								
Admitting that one doesn't know how to carry out a task to one's boss/manager/supervisor * f	4.50	1.82	4.00	1.89	4.96	1.00	4.32	1.09
Admitting that one doesn't know how to carry out a task to co-workers	4.93	1.51	3.75	1.74	4.68	1.36	4.43	0.92
Asking one's boss/manager/supervisor for support with a difficult task * f	5.07	1.49	2.75	1.56	5.07	1.02	3.75	1.08
Asking for a pay-rise * m	3.18	1.93	4.32	1.79	2.50	1.43	4.71	0.94
Attending voluntary meetings	4.36	1.85	1.54	0.79	4.96	1.14	4.11	0.57
Being vocal about one's career goals with one's boss/manager/supervisor ** m	4.79	1.60	3.43	1.71	3.46	1.23	4.46	0.74
Changing work procedures against the will of one's boss/manager/supervisor	2.04	1.23	6.14	0.80	3.14	1.38	4.61	0.96
Complaining about one's boss/manager/supervisor to someone higher up	2.89	1.71	5.96	1.17	4.14	1.60	4.54	1.00
Complaining to one's boss/manager/supervisor about a co-worker ** f	3.89	1.62	4.29	1.49	4.68	1.19	4.39	1.03
Confronting a co-worker about the quality of their work	3.39	1.75	4.68	1.49	3.50	1.40	4.61	1.03
Confronting a rude co-worker ** m	4.04	1.82	4.43	1.62	3.32	1.72	4.07	1.30

(continued)

Table 1. (continued)

Item	Likelihood		Riskiness		Stereo-Typicality		Gendered Riskiness	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Confronting one's boss/manager/supervisor	3.39	1.83	5.61	1.23	3.04	1.48	4.68	1.22
Doing a co-worker a favor with no immediate positive consequences for oneself	5.86	0.97	2.00	1.39	5.18	1.22	4.11	0.50
Giving emotional support to a co-worker	5.86	1.21	2.00	1.44	6.29	0.90	3.68	0.82
Going ahead with a project despite not all requirements being met	2.82	1.49	5.39	1.20	3.07	0.94	4.36	0.99
Knowingly not fixing minor flaws in one's work hoping that nobody will notice	2.50	1.23	4.86	1.48	2.93	1.33	4.11	0.99
Making a difficult decision one feels unsure about without asking for advice	3.29	1.46	5.14	1.27	3.21	1.00	4.21	0.79
Making an important decision without consulting one's boss/manager/supervisor	3.11	1.62	5.29	1.41	2.93	1.12	4.32	1.09
Making suggestions about work procedures to one's boss/manager/supervisor	5.57	1.10	3.00	1.39	3.71	1.18	4.36	0.78
Not adhering to company policies to accommodate a client's or co-worker's wishes	2.36	1.25	5.57	1.32	3.25	1.21	4.00	1.02
Not adhering to company policies to increase efficiency	2.61	1.50	5.50	1.40	3.07	1.25	4.43	0.96
Not following the instructions given by one's boss/manager/supervisor	2.75	1.24	5.75	1.01	2.93	1.15	4.11	1.17
Putting off a task with the risk of missing the deadline	3.25	1.51	5.71	1.08	3.43	1.20	4.43	1.03
Putting oneself forward for promotion * m	3.61	1.37	4.25	1.53	3.64	1.25	4.18	0.77
Putting work into a new, voluntary project where success is unclear	4.39	1.32	3.75	1.92	2.71	1.30	4.61	1.03
Quitting one's current job for a different one	4.39	2.25	4.64	1.77	3.29	1.44	4.68	1.22
Reducing one's work-hours ** f	3.86	2.21	4.04	1.93	5.11	1.45	4.07	1.18
Skipping a meeting one is required to attend	1.89	1.13	5.57	1.23	3.11	0.99	4.57	0.96
Speaking up about bullying or harassment one witnesses ** f	4.71	1.56	4.39	1.73	4.82	1.22	4.71	1.12
Speaking up when asked to do a task for which one is overqualified	3.14	1.69	3.64	1.87	3.25	1.71	4.68	1.34
Speaking up when asked to do a task for which one lacks the qualifications and skills	4.57	1.50	4.21	1.29	4.00	1.19	4.46	1.00
Staying at work longer to help one's boss/manager/supervisor	5.18	2.02	1.79	1.23	4.71	1.36	4.21	0.63
Staying at work longer to help a co-worker	5.89	1.17	2.18	1.44	5.21	1.07	4.07	0.47
Taking on a difficult task of that one is not sure one will be able to complete ** m	4.18	1.39	4.71	1.30	3.18	1.47	4.46	0.88
Using a co-worker's work without their knowledge to enhance one's own career	1.21	0.79	6.61	0.63	3.18	0.98	4.43	0.88
Male participants								
Admitting that one doesn't know how to carry out a task to one's boss/manager/supervisor * f	4.32	1.76	4.14	1.61	4.32	0.84	4.14	0.94
Admitting that one doesn't know how to carry out a task to co-workers	4.68	1.78	3.86	1.89	4.27	1.49	4.14	0.99
Asking one's boss/manager/supervisor for support with a difficult task * f	5.45	1.50	2.91	1.82	4.59	0.85	4.36	0.95
Asking for a pay-rise * m	4.77	1.66	3.36	1.62	3.59	1.30	4.32	0.84
Attending voluntary meetings	4.59	2.13	2.14	1.78	4.36	1.40	4.27	0.88
Being vocal about one's career goals with one's boss/manager/supervisor ** m	5.55	1.37	2.91	1.66	3.59	1.10	4.27	0.70
Changing work procedures against the will of one's boss/manager/supervisor	2.32	1.56	5.86	1.17	4.27	1.12	4.36	1.18
Complaining about one's boss/manager/supervisor to someone higher up	3.27	2.14	5.55	1.47	4.50	1.26	4.55	1.06
Complaining to one's boss/manager/supervisor about a co-worker ** f	3.86	2.05	4.09	1.66	4.86	1.13	4.36	1.05
Confronting a co-worker about the quality of their work	4.27	1.70	4.32	1.49	4.09	1.31	4.45	1.01
Confronting a rude co-worker ** m	5.41	1.33	4.55	1.57	3.41	1.62	4.09	1.54
Confronting one's boss/manager/supervisor	3.86	2.05	4.41	1.79	3.59	1.37	4.41	1.33
Doing a co-worker a favor with no immediate positive consequences for oneself	5.68	1.32	2.14	1.86	4.23	1.11	4.09	0.81
Giving emotional support to a co-worker	5.36	1.56	2.55	1.79	5.18	1.18	4.05	1.13
Going ahead with a project despite not all requirements being met	3.36	1.84	5.45	1.06	3.82	1.14	4.32	0.89
Knowingly not fixing minor flaws in one's work hoping that nobody will notice	3.27	2.03	4.64	1.84	3.95	1.25	4.27	0.94
Making a difficult decision one feels unsure about without asking for advice	3.77	1.80	4.77	1.38	3.68	1.25	4.18	1.01
Making an important decision without consulting one's boss/manager/supervisor	3.09	1.72	5.41	1.01	3.68	1.32	4.14	1.42
Making suggestions about work procedures to one's boss/manager/supervisor	5.68	1.36	3.09	1.77	3.68	1.17	4.27	0.83
Not adhering to company policies to accommodate a client's or co-worker's wishes	2.68	1.86	5.68	1.17	4.27	0.94	4.36	0.95
Not adhering to company policies to increase efficiency	3.18	1.84	5.18	1.53	3.73	1.12	4.18	0.96
Not following the instructions given by one's boss/manager/supervisor	2.55	1.65	5.64	1.09	3.73	1.08	4.23	0.87
Putting off a task with the risk of missing the deadline	3.05	1.70	5.45	1.18	4.18	1.10	4.23	0.81
Putting oneself forward for promotion * m	4.36	1.76	4.50	1.50	4.23	1.02	4.23	0.87

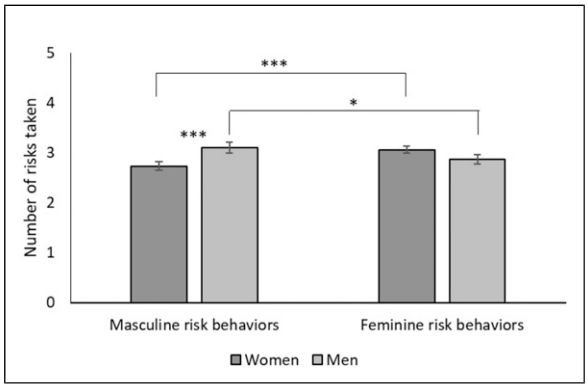
(continued)

Table 1. (continued)

Item	Likelihood		Riskiness		Stereo-Typicality		Gendered Riskiness	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Putting work into a new, voluntary project where success is unclear	5.14	1.78	2.86	1.73	4.05	1.46	4.59	0.96
Quitting one's current job for a different one	4.91	1.88	5.36	1.18	3.68	1.32	4.41	1.01
Reducing one's work-hours ** f	3.55	2.04	4.18	1.84	4.73	1.52	4.27	0.94
Skipping a meeting one is required to attend	2.55	1.99	5.73	1.03	4.00	1.48	4.14	0.94
Speaking up about bullying or harassment one witnesses ** f	5.50	1.79	3.68	1.96	4.77	1.60	4.36	1.40
Speaking up when asked to do a task for which one is overqualified	4.36	2.06	3.91	1.88	4.18	1.14	4.27	0.77
Speaking up when asked to do a task for which one lacks the qualifications and skills	4.73	1.78	4.50	1.60	4.27	1.20	4.45	1.06
Staying at work longer to help one's boss/manager/supervisor	5.05	1.68	2.27	1.80	4.18	1.30	4.14	0.83
Staying at work longer to help a co-worker	5.32	1.52	2.05	1.53	4.36	1.26	4.23	0.81
Taking on a difficult task of that one is not sure one will be able to complete ** m	4.59	1.44	4.59	1.50	3.82	1.33	4.27	1.16
Using a co-worker's work without their knowledge to enhance one's own career	1.91	1.80	6.36	1.05	4.00	1.51	4.36	1.14

Note. Items marked * included in Study 1 only, items marked with ** were included in Studies 1 and 2. m indicates masculine risk-taking behaviors, and f indicates feminine risk-taking behaviors.

Figure 1. Number of Risks Taken by Women and Men (Study 1).



Note. Error bars refer to 95% confidence intervals. *$p < .05$. **$p < .001$.

Applied to risk-taking, these findings suggest two possible predictions regarding the consequences women face when taking risks at work. As risk-taking is a core part of masculinity (Bem, 1974) and can be viewed as a component of agency, women, compared to men, may be penalized more, and rewarded less, for taking risks in general. On the other hand, Morgenroth and colleagues (2018) have shown that risk-taking encompasses a broad category of behaviors, some of which are seen as more normative for women. Thus, it may be the case that women are penalized for taking risks that are seen as masculine but not for risks that are seen as feminine, whereas the opposite may be the case for men.

In line with the second prediction, both women and men face economic and social penalties for engaging in career-relevant counter-stereotypical workplace behavior, a phenomenon that has been termed "backlash" (Rudman, 1998). Some of these behaviors can also be seen as risky. For example, women are responded to less favorably than men when they self-promote (Rudman, 1998; Rudman & Glick, 2001), when they engage in economic negotiations (Mazei et al., 2015), and when a risky decision turns out badly (Brescoll et al., 2010). Conversely, men face backlash for behaviors that are more normative for women, such as requesting family leave (Rudman & Mescher, 2013).

In line with social role theory (Eagly, 1987; Eagly & Wood, 2012), we argue that if women witness such negative consequences for other women and thus expect similar treatment (especially if they experience them firsthand), they will be less likely to take similar risks (again) in the future (see Rudman & Fairchild, 2004). In other words, if women anticipate or experience fewer benefits from taking risks, they may be less likely to take risks.

The Current Project

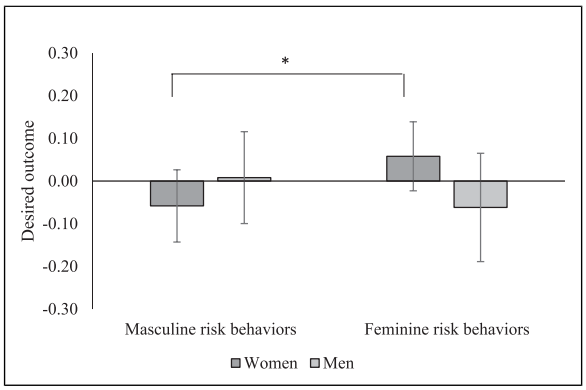
Taken together, it is unclear whether women do indeed take fewer risks at work and, if so, why. We address these issues in a series of five studies that aim to investigate: (a) whether women, on average, take fewer risks at work than men; (b) whether women anticipate and experience different consequences when taking risks, compared to men; (c) the effect of these consequences on future risk-taking; and (d) whether these issues differ between feminine and masculine forms of workplace risk-taking. Please note that these binary comparisons of women versus men are not meant to imply that these are the only gender groups or the only gender groups worth studying. Our work is a reaction to widespread claims

Table 2. Correlations Between Variables (Study 1).

Variable	1	2	3	4	5	6
1. Likelihood to take risks (feminine risks)	-	.49	.31	.53	.22	.32
2. Likelihood to take risks (masculine risks)	.48	-	.28	.31	.48	.54
3. General consequences (feminine risks)	.46	.24	-	.42	.52	.33
4. Desired outcome (feminine risks)	.49	.25	.38	-	.26	.39
5. General consequences (masculine risks)	.28	.57	.40	.26	-	.59
6. Desired outcome (masculine risks)	.34	.57	.30	.41	.45	-

Note. Correlations for risks taken are displayed above the diagonal; correlations for risks not taken are displayed below diagonal. All correlations displayed here are significant at the $p < .001$ level.

Figure 2. Extent to Which Taking Risks Had the Desired Outcome for Women and Men (Study 1).



Note. Error bars refer to 95% confidence intervals. *$p < .05$.

that women are more risk-averse than men, hence our focus on these groups specifically.

Given findings that risk-taking is a domain-specific construct (Weber et al., 2002) and that women's risk-taking is often overlooked or seen as less risky—even when objective riskiness is matched (Morgenroth et al., 2018)—we take a broad view of risk-taking in the workplace that encompasses a wide range of workplace behaviors with a range of potential outcomes (e.g., financial, social; see Weber et al., 2002). This approach enables us to investigate a multi-faceted construct in a way that reflects its complexities and without neglecting overlooked facets (i.e., "feminine" risks) while still being able to examine the "big picture" and identify patterns that hold across these varied facets.

We thus address important previous shortcomings in the literature by: (a) explicitly focusing on a wide range of workplace risk-taking behaviors, that include those that are viewed as stereotypically feminine and those that are viewed as masculine; (b) examining the costs and benefits people experience when taking gendered workplace risks; and (c) establishing the effects these costs and benefits have for women's and men's future risk-taking at work.

We first present two pilot studies which we used to generate a list of feminine and masculine workplace risks, followed by Study 1, an exploratory study that investigated the competing predictions that women either (a) benefit less than men from risk-taking across behaviors because risk-taking is seen as a core part of masculinity or (b) that they benefit less from taking risks seen as masculine in particular, whereas the opposite is the case for feminine risks. An additional study, similar to Studies 1 and 2, but focusing on hypothetical risk-taking, (Study 0) can be found in the online supplemental material.

Following Study 1, we develop and test our hypotheses across the remaining four pre-registered studies. Study 2 is a replication of Study 1 and also focuses on a range of different risk-taking behaviors. In Study 3a, we use a hypothetical risk-taking task in an experimental design to establish the hypothesized causal link between consequences of risk-taking and the likelihood of taking risks in the future, and to rule out the potential explanation that gender differences in the consequences of risk-taking may be a reflection of women and men interpreting the same consequences differently. By focusing on one feminine and one masculine risk-taking behavior, we ensure high levels of experimental control without overlooking feminine risks. Study 3b uses the same risk-taking decision as Study 3a but uses a behavioral measure with (allegedly) real consequences for participants. Finally, in Study 4 we aim to create a situation that mirrors the workplace and ask participants to choose between a risky and a non-risky bonus payment scheme. Thus, whereas Studies 3a and 3b establish causality using risks that were also included in Studies 1–3 and based on our pilot studies, Study 4 replicates these findings in a design that more closely matches risk-taking in a real workplace environment. By combining a bottom-up approach and correlational data across a wide range of risk-taking behaviors with experimental methods, our different studies balance external as well as internal validity of the findings.

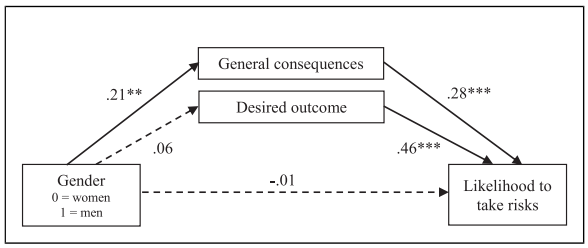
All studies except for Study 1 were pre-registered. Full materials and data for all studies can be found at https://osf.io/fymkn/?view_only=ca95c9e1f84e40f09ccb65b12217b1ec and https://osf.io/8qsyd/?view_only=a87f27356a484a739e509b49ff2b9117. We report all measures, manipulations, and exclusions. Some measures not relevant to the hypotheses tested in this article are reported in the online supplemental material only. All data were

Table 3. Results of Mediation Analyses Predicting Likelihood to Take the Same Risks Again (Study 1).

	Masculine Risks					Feminine Risks				
Predictors	*B*	*SE*	*p*	R^2	*F*	*B*	*SE*	*p*	R^2	*F*
Predicting general consequences			.004	.02	8.25			.007	.02	7.38
Gender	.21 [.07, .36]	.07	.004			.20 [.06, .35]	.07	.007		
Predicting desired outcome			.371	<.01	0.80			.054	<.01	3.72
Gender	.06 [−.08, .20]	.07	.371			−.13 [−.26, .002]	.07	.054		
Predicting likelihood to take risks again			<.001	.33	75.07			<.001	.29	63.86
Gender	−.01 [−.14, .13]	07	.910			−.07 [−.20, .07]	.07	.314		
General consequences	.28 [.17, .38]	.05	<.001			.12 [.03, .21]	.05	.008		
Desired outcome	.46 [.35, .57]	.06	<.001			.55 [.45, .65]	.05	<.001		

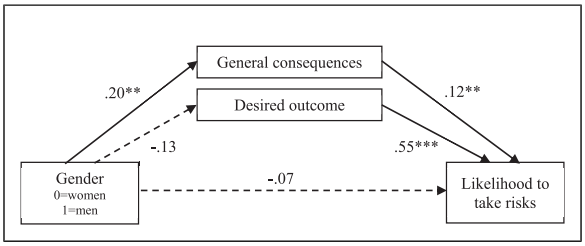
Note. Values in brackets refer to 95% confidence intervals.

Figure 3. Mediation Model Predicting Likelihood of Taking Masculine Risks Again (Study 1).



Note. Dashed lines signify non-significant effects. ** $p < .01$. *** $p < .001$.

Figure 4. Mediation Model Predicting Likelihood of Taking Feminine Risks Again (Study 1).



Note. Dashed lines signify non-significant effects. ** $p < .01$. *** $p < .001$.

collected on the Prolific website and no additional data was collected after looking at the results.

Pilot Studies

There is currently no established measure of workplace risk-taking, and measures previously used in the literature are narrowly focused on specific masculine risk-taking behaviors. We therefore conducted two pilot studies to create a diverse list of feminine and masculine risk-taking behaviors that are seen as equally risky. We used a bottom-up approach to ensure that we tapped into behaviors that are both common and regarded as risky by those who engage in them.

Pilot Study 1. We prompted 47 employed participants recruited through Prolific (63.82% women, 36.17% men; $M_{age} = 40.43$, $SD_{age} = 8.21$; 80.85% British) to think about workplace behaviors with uncertain consequences that they had engaged in. We avoided using the term "risky" because risk-taking is highly associated with masculinity and we did not want to bias our participants regarding the types of behaviors that came to mind. Participants then reported one instance of taking a risk in which the outcomes were positive and one for which the outcomes were negative in randomized order.

We deleted responses that did not answer the question and grouped the remaining behaviors into more general categories. For example, we categorized the responses "I took a chance on making a decision on behalf of our client and it turned out to be the correct choice" and "I had to sandblast some tanks and fittings for a car radiator and I was not sure if I had to sandblast them all over or not. So I decided to sandblast them all over and my workmate was happy with the result" as "Making a decision one is unsure of without asking for advice." After this, we further narrowed down the list of behaviors by deleting those that did not seem applicable to a wide range of jobs (e.g., "working in a physically dangerous environment"), resulting in a total of 35 behaviors listed in Table 1.

Pilot Study 2. The aim of the second pilot study was to narrow down the list of risk-taking behaviors to five behaviors seen as stereotypically feminine and five behaviors seen as stereotypically masculine that were seen as equally risky and in which participants would be equally likely to engage overall.

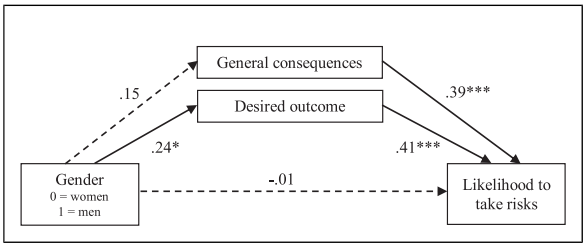
Fifty employed participants recruited through Prolific (56.00% women, 44.00% men; $M_{age} = 35.54$, $SD_{age} = 7.92$; 52.00% British, 22.00% United States [U.S.] American) were presented with the risk-taking behaviors derived from Pilot Study 1 in random order. For each behavior they indicated (a) how likely they would be to engage in this behavior (on a scale from 1 "very unlikely" to 7 "very likely"), (b) how risky they

Table 4. Results of Mediation Analyses Predicting Likelihood to Take the Risks Participants Had Not Yet Taken (Study 1).

	Masculine Risks					Feminine Risks				
Predictors	*B*	*SE*	*p*	R^2	*F*	*B*	*SE*	*p*	R^2	*F*
Predicting general consequences			.108	<.01	2.59			.157	<.01	2.01
Gender	.15 [−.03, .34]	.09	.108			.12 [−.05, .29]	.09	.157		
Predicting desired outcome			.009	.02	6.86			.399	<.01	0.71
Gender	.24 [.06, .42]	.09	.009			.07 [−.10. .24]	.09	.399		
Predicting likelihood to take risks again			<.001	.45	110.79			<.001	.33	71.14
Gender	.01 [−.13, .15]	.07	.855			−.14 [−.28, .001]	.07	.051		
General consequences	.39 [.31, .47]	.04	<.001			.33 [.24, .41]	.04	<.001		
Desired outcome	.41 [.32, .49]	.04	<.001			.37 [.28, .45]	.04	<.001		

Note. Values in brackets refer to 95% confidence intervals.

Figure 5. Mediation Model Predicting Likelihood of Taking Masculine Risks for Risks Not Taken (Study 1).



Note. Dashed lines signify non-significant effects. * $p < .05$. ** $p < .01$. *** $p < .001$.

perceived the behavior to be (on a scale from 1 "not risky at all" to 7 "extremely risky"), (c) if the behavior was more typical for a man or a woman (on a scale from 1 "much more typical for a man" to 7 "much more typical for a woman"), and (d) whether the behavior was more risky for men or for women (on a scale from 1 "much more risky for men" to 7 "much more risky for women"). Descriptive statistics are displayed in Table 1.

To identify stereotypically feminine and masculine behaviors, we ran a series of one-sample t-tests on the typicality measure with the midpoint of the scale (4) as the test value. We classified behaviors significantly below the midpoint as masculine and those significantly above the midpoint as feminine. We then selected five stereotypically feminine and five stereotypically masculine behaviors that were rated as approximately equal in riskiness and likelihood of engagement (see Table 1). Participants rated the average likelihood that they would engage in the selected feminine behaviors as 4.46 (SD = 1.20) and the average likelihood that they would engage in the selected masculine behaviors as 4.54 (SD = 1.14). The perceived riskiness of the feminine behaviors was 3.85 (SD = 1.23) and the riskiness of the perceived masculine behaviors was 3.92 (SD = 1.14). We expected feminine behaviors to be rated as more risky for men and masculine behaviors to be rated as more risky for women. However, two one-sample t-tests with the midpoint of the scale (4) as the test value showed that both masculine behaviors (M = 4.40, SD = 0.74) and feminine behaviors (M = 4.27, SD = 0.75) were rated as more risky for women than for men, $t(49) = 3.81$, $p < .001$, d = .54 and $t(49) = 2.55$, p = .014, d = .36, respectively.

All of the behaviors were rated as at least somewhat risky, but the types of potential positive and negative consequences varied considerably between behaviors. For example, asking for a pay rise has the potential for clear positive financial consequences but could also result in negative reactions such as being viewed as arrogant or entitled; asking for support with a difficult task could result in receiving the help one needs but also in negative reactions such as being viewed as lacking independence, which could in turn affect career progression; asking for a reduction in work hours could increase well-being but also result in a reduction in pay. Thus, the chosen behaviors cover a wide range of different costs and benefits relevant to the workplace, increasing generalizability and external validity.

The resulting behaviors also make clear that the feminine and masculine behaviors differ in the type of risk they represent. More specifically, and in line with findings that women seem more prevention-focused in the risks they take (Schubert et al., 2000), the feminine risks seem more focused on avoiding failure (e.g., asking for help with a task; admitting not knowing how to carry out a task) whereas the masculine risks seem more focused on potential gains (e.g., putting oneself forward for promotion, asking for a pay rise).

Additionally, and in line with social role theory (Eagly, 1987; Eagly & Wood, 2012), the masculine risks seem more agentic than the feminine risks (e.g., confronting a co-worker vs. complaining about a co-worker). As a result of these differences, the masculine risk behaviors seem, on average, more career enhancing than those that were rated as feminine. This is interesting in itself and suggests that although there are risks that are seen as more normative for women, taking those risks are unlikely to result in career enhancement.

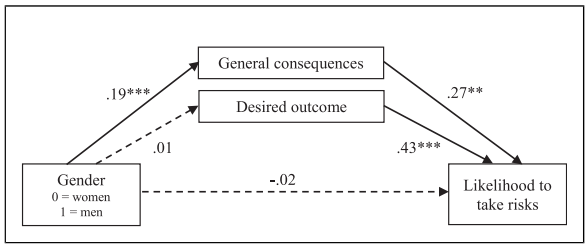
It is also important to note that both the feminine and masculine behaviors represent a wide range of behaviors that

Table 5. Correlations Between Variables (Study 2).

Variable	2	3	4	5	6
1. Likelihood to take risks again (feminine risks)	.38	.41	.45	.18	.28
2. Likelihood to take risks again (masculine risks)	-	.20	.22	.52	.58
3. General consequences (feminine risks)		-	.46	.42	.27
4. Desired outcome (feminine risks)			-	.24	.33
5. General consequences (masculine risks)				-	.58
6. Desired outcome (masculine risks)					-

Note. All correlations displayed here are significant at the $p < .001$ level.

Figure 6. Mediation Model Predicting Likelihood of Taking Masculine Risks Again (Study 2).



Note. Dashed lines signify non-significant effects. ** $p < .01$. *** $p < .001$.

are not necessarily related. For example, there is no reason to think that someone who asked for a reduction in work hours would be any more or less likely to also speak up about bullying or harassment they witnessed, and indeed, risk-taking is comprised of a range of unrelated domains (see Hanoch et al., 2006; Weber et al., 2002). As such, we do not view these behaviors as items of a scale that reliably measures a well-defined and narrow underlying coherent construct (feminine and masculine risk-taking) but instead as different examples of a multi-faceted and broad construct that is not well understood. In other words, our approach is comparable to stimulus sampling. The inclusion of these various examples provides a level of generalizability that scales focusing on a narrow range of risk-taking behaviors cannot provide.

Study 1

In this exploratory study, we asked participants about their actual risk-taking behavior, the experienced consequences of risk-taking, and the likelihood that they would take the same risk again in the future. Participants who indicated they had not taken a specific risk reported the consequences they anticipated for taking that risk. This gave us the opportunity to explore gender differences in anticipated and experienced consequences of feminine and masculine risk-taking and their effect on future risk-taking. This comparison helps us start to understand whether any resulting differences in future risk-taking are based on concrete personal gendered experiences, versus other factors, such as the awareness of gender norms and their potential consequences, or potential gender differences in general levels of risk perception.

Method

Participants

We used Prolific to recruit participants. As we were unsure what effect size to expect, we collected data from 500 women and men and specified that they had to be employed and at least 30 years old as a proxy for sufficient work experience. As we were interested in their experiences with risk-taking, excluding participants under the age of 30 increased the chances that participants had taken several risks in their lives and could report on the consequences. We also specified that participants had to be fluent in English given the survey was in English. We excluded the data of participants who indicated that they were not employed or who did not indicate their gender. The final sample thus consisted of 492 participants, with an average age of 42.49 ($SD = 9.13$), 313 (63.62%) of whom were women and 179 (36.38%) of whom were men. Participants came primarily from the United Kingdom (UK, 71.75%) or the U.S. (19.31%). The average number of years since entering employment was 23.42 ($SD = 10.09$) and the majority of participants (65.86%) were employed full-time.

Procedure and Materials

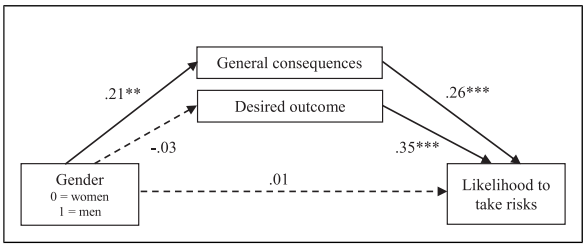
We advertised the study as a survey about workplace behaviors. We asked participants whether they had ever engaged in the 10 workplace behaviors selected through the pilot studies (binary response: yes vs. no). For behaviors in which participants had engaged, we asked them follow-up questions about the extent to which the behavior had the intended consequences, as well as positive and negative emotional, financial, social, and professional consequences, and the likelihood that they would engage in this behavior again in the future. We asked about a broad range of consequences to ensure that we captured a comprehensive picture of the consequences that the varied behaviors in our study might have. For behaviors in which participants had not engaged, we asked them about the positive and negative emotional, financial, social, and professional consequences they

Table 6. Results of Mediation Analyses Predicting Likelihood to Take the Same Risks Again (Study 2).

	Masculine Risks					Feminine Risks				
Predictors	*B*	*SE*	*p*	R^2	*F*	*B*	*SE*	*p*	R^2	*F*
Predicting general consequences			<.001	.01	11.92			.001	.01	10.45
Gender	.19 [.08, .30]	.05	<.001			.21 [.08, .34]	.07	.001		
Predicting desired outcome			.923	<.01	0.01			.690	<.01	0.16
Gender	.01 [−.10, .12]	.06	.923			−.03 [−.15, .10]	.06	.690		
Predicting likelihood to take risks again			<.001	.39	181.80			<.001	.26	85.17
Gender	−.02 [−.10, .07]	.04	.729			.01 [−.11, .12]	.06	.930		
General consequences	.27 [.20, .34]	.03	<.001			.26 [.18, .33]	.04	<.001		
Desired outcome	.43 [.37, .50]	.03	<.001			.35 [.27, .42]	.04	<.001		

Note. Values in brackets refer to 95% confidence intervals.

Figure 7. Mediation Model Predicting Likelihood of Taking Feminine Risks Again (Study 2).



Note. Dashed lines signify non-significant effects. ** $p < .01$. *** $p < .001$.

anticipated if they engaged in the behavior. We asked all of these items on 7-point scales. Because the resulting scales were comprised of different risk-taking behaviors for different participants, depending on which they had and had not engaged in, reliability cannot be calculated.

Results

Gender Differences in Past Risk-Taking

We created two risk-taking measures by adding together the number of feminine and masculine risk-taking behaviors in which participants had engaged. As there were five stereotypically feminine and five stereotypically masculine behaviors, each scale had possible values from 0 to 5. We then performed a 2 (Participant Gender: Female vs. Male) × 2 (Stereotypicality: Feminine vs. Masculine) mixed ANOVA with repeated measures on the second factor.

We did not find statistically detectable main effects for stereotypicality, $F(1, 490) = 0.36$; $p = .551$, $\eta_p^2 < .01$ [.00, .01][1], or gender, $F(1, 490) = 0.74$; $p = .391$, $\eta_p^2 < .01$ [.00, .02], but the two factors interacted with one another, $F(1, 490) = 16.57$, $p < .001$, $\eta_p^2 = .03$ [.01, .07] (see Figure 1). Simple effect analyses revealed that women had engaged in significantly more stereotypically feminine ($M = 3.05$, $SD = 1.24$) than masculine ($M = 2.73$, $SD = 1.49$) risk-taking behaviors, $F(1, 490) = 14.97$, $p < .001$, $\eta_p^2 = .03$ [.01, .06], whereas the opposite was the case for men, who had engaged in fewer stereotypically feminine ($M = 2.87$, $SD = 1.27$) than masculine ($M = 3.11$, $SD = 1.47$) risk-taking behaviors, $F(1, 490) = 4.74$, $p = .030$, $\eta_p^2 = .01$ [.00, .03]. Moreover, the gender difference for the feminine behaviors was not significant, $F(1, 490) = 2.58$, $p = .109$, $\eta_p^2 < .01$ [.00, .03], but men indicated that they had engaged in significantly more masculine behaviors compared to women, $F(1, 490) = 7.26$, $p = .007$, $\eta_p^2 = .02$ [.00, .04]. Chi-squared tests comparing the percentage of women and men who had taken the different risks individually can be found in the online supplemental material.

Risks Taken

As we were interested in the negativity or positivity of consequences generally, rather than the specific consequences (e.g., financial vs. emotional), and because the type of consequences likely differs between risk-taking behaviors, we created a general consequences variable by adding the positive emotional, financial, social, and professional consequences, and subtracting the negative ones. We kept the extent to which a specific behavior resulted in the desired outcome as a separate variable since, particularly for the feminine behaviors, gender differences were often reversed for this variable and it might thus represent quite a different construct. For example, if requesting a reduction in work hours has the desired effect (i.e., work hours are reduced), this will likely have negative financial consequences. We standardized both variables before running the analyses.

We then averaged the general consequences variables, the desired outcome variables, as well as the likelihood that participants would engage in risky workplace behaviors across the stereotypically feminine and masculine behaviors respectively. Note that this measure consists of different items for different participants, depending on which risks they indicated they had taken. As we standardized all variables before creating the scales, results are not a reflection of the positivity or negativity of individual items—instead, we are comparing

Table 7. Descriptive Statistics (Study 3a).

Variables	Positive Consequences										Negative Consequences									
	Feminine Risk				Masculine Risk				Feminine Risk				Masculine Risk							
	Women			Men			Women			Men			Women			Men				
	n	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
Consequences	49	0.51	0.95	47	0.66	0.95	59	0.60	0.59	40	0.65	0.81	48	−0.65	0.72	48	−0.53	0.73	39	−0.78	0.87	57	−0.54	0.76
Likelihood to take risk again	49	5.63	1.45	47	5.62	1.36	59	5.24	1.15	40	5.25	1.21	48	4.73	1.57	48	4.67	1.60	39	3.44	1.77	57	4.26	1.63

Note. The consequences variable is standardized; likelihood to take risk again is displayed in unstandardized form (scale 1–7).

whether men and women experience more positive or negative consequences adjusted for the overall positivity/negativity and variance of the behavior (see Table 2 for correlations between variables). Item-by-item analyses for anticipated and experienced consequences of risk-taking can be found in the online supplemental material.

We then conducted two 2 (Stereotypicality: Feminine vs. Masculine) × 2 (Participant Gender: Female vs. Male) mixed ANOVAs with stereotypicality as the within-participants factor. For general consequences, we found a main effect for stereotypicality, $F(1, 452) = 4.52$; $p = .034$, $\eta_p^2 = .01$ [.00, .04], such that consequences for feminine risks ($M = 0.03$, $SD = 0.78$) were rated as more positive than those for masculine behaviors ($M = -0.06$ $SD = 0.78$). Moreover, we found a main effect of gender $F(1, 452) = 9.89$; $p = .002$, $\eta_p^2 = .02$ [.00, .05], such that men ($M_{EM} = .12$, $SE = .05$) reported more positive consequences than women ($M_{EM} = -.09$, $SE = .04$). However, the two factors did not interact, $F(1, 452) = 0.09$, $p = .763$, $\eta_p^2 < .01$ [.00, .01].

For the desired outcome, neither the main effect of stereotypicality, $F(1, 452) = 0.36$; $p = .548$, $\eta_p^2 < .01$ [.00, .01], nor the main effect of gender, $F(1, 452) = 0.21$; $p = .647$, $\eta_p^2 < .01$ [.00, .01], were significant, but the two factors interacted, $F(1, 452) = 5.80$; $p = .016$, $\eta_p^2 = .01$ [.00, .04]. Simple effects analyses showed that women had achieved their desired outcome to a higher extent for feminine ($M = 0.06$, $SD = 0.68$) than masculine ($M = -0.06$, $SD = 0.75$) risk-taking behaviors, $F(1, 452) = 6.27$, $p = .013$, $\eta_p^2 = .01$ [.00, .04] (see Figure 2).

Next, we used the PROCESS macro (Version 3, Model 4, 10,000 bootstrap samples; Hayes, 2018) with participant gender as the predictor (0 = women, 1 = men), general consequences and desired outcome as parallel mediators, and likelihood of taking risks as the outcome, to test whether there was an indirect effect of gender on future risk-taking through experienced consequences. Full statistical information is provided in Table 3. For masculine risk-taking behaviors we found an indirect effect through general consequences, $B = .06$ [.01, .12] but not through desired outcome $B = .03$ [−.03, .09]. As illustrated in Figure 3, men experienced more positive consequences for taking masculine risks, and in turn were more likely to take the risk again. Interestingly, the same pattern emerged for feminine risks (see Figure 4). Men reported more positive consequences for taking risks, and in turn indicated a higher likelihood of taking the same risk again in the future, resulting in a significant indirect effect, $B = .02$ [.003, .06]. The indirect effect through achieving the desired outcome was again not significant, $B = -.07$ [−.15, .002].

Risks Not Taken

We calculated the scores using the same strategy as above and conducted two 2 (Stereotypicality: Feminine vs. Masculine) × 2 (Participant Gender: Female vs. Male) mixed ANOVAs with stereotypicality as the within-participants factor to

Table 8. ANOVA Results for Perceived Consequences (Study 3a).

Independent Variables	*df*	*F*	*p*	η_p^2
Gender	1, 379	3.02	.083	<.01 [.00, .03]
Consequences	1, 379	226.77	<.001	.37 [.30, .44]
Stereotypicality	1, 379	0.04	.836	<.01 [.00, .00]
Gender × Consequences	1, 379	0.26	.613	<.01 [.00, .02]
Gender × Stereotypicality	1, 379	<0.01	.969	<.01 [.00, .00]
Consequences × Stereotypicality	1, 379	0.45	.501	<.01 [.00, .02]
Gender × Consequences × Stereotypicality	1, 379	0.48	.488	<.01 [.00, .02]

Note. Values in brackets refer to 95% confidence intervals.

Table 9. ANOVA Results for Likelihood to Take the Same Risk Again (Study 3a).

Independent Variables	*df*	*F*	*p*	η_p^2
Gender	1, 379	1.58	.209	<.01 [.00, .03]
Consequences	1, 379	58.72	<.001	.13 [.08, .20]
Stereotypicality	1, 379	16.48	<.001	.04 [.01, .09]
Gender × Consequences	1, 379	1.61	.206	<.01 [.00, .03]
Gender × Stereotypicality	1, 379	2.30	.130	<.01 [.00, .03]
Consequences × Stereotypicality	1, 379	2.38	.124	<.01 [.00, .03]
Gender × Consequences × Stereotypicality	1, 379	2.02	.156	<.01 [.00, .03]

Note. Values in brackets refer to 95% confidence intervals.

investigate whether women and men differed in the consequences they anticipated when taking feminine and masculine risks. None of the effects were significant for the general consequences measure (gender: $F(1, 370) = 2.53$, $p = .113$, η_p^2<.01 [.00, 03]; stereotypicality: $F(1, 370) = 1.10$, $p = .295$, $\eta_p^2 < .01$ [.00, .02]; inter action: $F(1, 370) = 0.30$, $p = .587$, $\eta_p^2 < .01$ [.00, .02]). For the desired outcome variable, we found a main effect of gender, $F(1, 370) = 4.17$; $p = .042$, $\eta_p^2 = .01$ [.00, .04], indicating that women anticipated a lower likelihood to achieve the desired outcome ($M_{EM} = -.07$, $SE = .05$) compared to men ($M_{EM} = .09$, $SE = .06$). Neither the main effect of stereotypicality, $F(1, 370) = 1.21$, $p = .273$, $\eta_p^2 < .01$ [.00, .02], nor the interaction, $F(1, 370) = 1.67$, $p = .198$, $\eta_p^2 < .01$ [.00, .03], were significant.

Next, we used the PROCESS macro (Version 3, Model 4, 10,000 bootstrap samples; Hayes, 2018) with participant gender as the predictor (0 = women, 1 = men), general consequences and desired outcome as parallel mediators, and likelihood of taking risks as the outcome, to test whether there was an indirect effect of gender on future risk-taking through anticipated consequences (see Table 4 for statistics). For masculine behaviors, we found an indirect effect through desired outcome, $B = .10$ [.02, .18], but not through general consequences, $B = .06$ [−.01, .13]. As illustrated in Figure 5, men anticipated a higher likelihood of achieving their desired outcome when taking masculine risks, and in turn were more likely to take the risk in the future. For feminine behaviors, none of the effects were significant (direct effect: $B = -.14$ [−.28, .001]; indirect effect through general consequences: $B = .04$ [−.01, .10]; indirect effect through desired outcome: $B = .03$ [−.03, .09].

Discussion

In this exploratory study we found, in line with previous research (Morgenroth et al., 2018), that women had on average taken more feminine than masculine risks, whereas men had taken more masculine than feminine risks. In addition, men had on average taken more masculine risks than had women, but there was no gender difference for the feminine risk-taking behaviors.

Patterns differed between experienced consequences of risk-taking and anticipated consequences of risk-taking. Women and men did not differ in the overall positivity of consequences they anticipated for risks they had never taken, regardless of gender typicality, suggesting that women did not anticipate backlash for taking risks in general or for taking masculine risks. These patterns stand in contrast to the consequences women and men experienced when taking risks. Here, men reported on average more positive consequences for taking risks, regardless of type of behavior, in line with the argument that risk-taking in general is seen as a trait that men, but not women, should exhibit. This finding is interesting considering how much the feminine and masculine risk-taking behaviors differed, not just in terms of gender typicality, but also in how much they appear to be tied to career advancement or apparent agency.

Additionally, we found indirect effects of gender on the likelihood of taking the same risk again through the general

Table 10. Logistic Regression Results Predicting Likelihood to Take the Same Risk Again (Study 3b).

Predictor	*B*	*SE*	*p*	*OR*
Consequences	−2.83 [−4.71, −0.94]	0.96	.003	0.06
Gender	−0.41 [−2.52, 1.71]	1.08	.707	0.66
Risk chosen	0.38 [−2.14, 2.91]	1.29	.766	1.47
Consequences × Gender	−0.32 [−3.05, 2.40]	1.39	.816	0.72
Consequences × Risk chosen	0.61 [−2.42, 3.64]	1.54	.693	1.84
Gender × Risk chosen	−1.01 [−4.24, 2.22]	1.65	.539	0.36
Consequences × Gender × Risk chosen	1.22 [−2.79, 5.24]	2.05	.550	3.39

Note. $N = 105$; $X^2 = 35.85$, $p < .001$. Values in brackets refer to 95% confidence intervals. *OR* = Odds Ratio. Coding of variables: 0 = negative consequences, 1 = positive consequences; 0 = women, 1 = man; 0 = feminine risk chosen originally, 1 = masculine risk chosen originally; 0 = same risk chosen, 1 = different risk chosen.

Table 11. Logistic Regression Results Predicting Likelihood to Take the Same Risk Again (Study 4).

Predictors	*B*	*SE*	*p*	*OR*
Consequences	2.03 [1.17, 2.90]	0.44	<.001	7.61
Gender	0.26 [−0.31, 0.82]	0.29	.374	1.30
Consequences X gender	0.39 [−0.99, 1.78]	0.71	.576	1.48

Note. $N = 398$; $X^2 = 60.39$, $p < .001$. Values in brackets refer to 95% confidence intervals. *OR* = odds ratio. Coding of variables: 0 = negative consequences, 1 = positive consequences; 0 = women, 1 = man; 0 = non-risky payment scheme, 1 = risky payment scheme.

consequences. In other words, for both masculine and feminine behaviors, men reported on average more positive consequences and were in turn more willing to engage in the behavior again.

Women did anticipate a lower likelihood of reaching the desired outcome across risk-taking behaviors in which they had not engaged and this was associated with a lower likelihood of taking these risks for masculine behaviors. These differences in anticipated outcomes may contribute to the general pattern that women take fewer masculine risks than men and the findings from the experienced outcomes suggest that women's and men's expectations regarding reaching the desired outcome may indeed be correct—at least for masculine behaviors.

Given that these findings were exploratory and Study 1 did not test specific hypotheses, we aimed to replicate these findings in Study 2. Here, as well as in the remaining studies, we tested the following hypotheses:

H1: Men, compared to women, will report more positive consequences of risk-taking at work.

H2: More positive consequences of risk-taking will translate into a higher likelihood of taking the same risk again in the future.

Note that because we are presenting the hypotheses for all remaining studies here, the wording is not identical with our pre-registered hypotheses for the individual studies. Moreover, some pre-registered hypotheses and analyses are not presented in this article, but can instead be found in the online supplemental material, along with the materials and analyses used to test them.

Study 2

In this study, we aimed to replicate findings regarding the gender-differentiated consequences of risk-taking from Study 1. We pre-registered our sample size, materials, data collection strategy, predictions, and analyses (see https://osf.io/pvjmh/?view_only=0a4a734a46bc479cb58b676251320a08) and explicitly mention when we deviate from this plan.

Method

Participants

We used the same recruitment strategy as in Study 1 and aimed to recruit 912 women and men, based on power calculations (see pre-registration) and financial constraints. After we excluded participants who were not employed or under the age of 30, our final sample consisted of 898 participants with an average age of 42.19 ($SD = 9.13$), 520 (57.91%) of whom were women and 41.98% were men (one participant did not indicate their gender). Participants came primarily from the UK (73.50%) or the U.S. (19.60%). The average number of years since entering employment was 23.09 ($SD = 9.68$) and the majority of participants (70.04%) were employed full-time.

Procedure and Materials

The procedure was similar to that of Study 1. We reduced the number of behaviors to three feminine and three masculine behaviors to decrease survey time, but aimed to retain items that differed in the potential costs and benefits associated with them (e.g., advancement at work, work-life balance, or conflict with colleagues). The included behaviors were "Have you ever spoken up about bullying or harassment that you witnessed at work?," "Have you ever requested a reduction in your work hours?," "Have you ever complained to your boss/manager/supervisor about a co-worker?," "Have you ever been vocal about your career goals to your boss/manager/supervisor?,"

"Have you ever taken on a difficult task that you were not sure you would be able to complete?," and "Have you ever confronted a rude co-worker?"

For behaviors in which participants had engaged, we then asked further questions about the consequences of the behavior and their likelihood of engaging in it again, similar to Study 1, with the exception that we specified the desired outcome. For example, we asked "To what extent did requesting a reduction in work hours result in the consequences you had hoped for, that is, result in a reduction of work hours for you?"

Results

We used the same analytic strategy as in Study 1. First, we tested whether men benefit more from taking risks (H1). Similar to Study 1, we found that men reported more positive consequences (M_{EM} = .13, SE = .04) than women (M_{EM} = −.07, SE = .03), $F(1, 724) = 14.03$; $p < .001$, $\eta_p^2 = .02$ [.00, .04]. Moreover, consequences for feminine risks (M = 0.06, SD = 0.89) were rated as more positive than those for masculine behaviors (M = −0.03 SD = 0.80), $F(1, 724) = 6.46$; $p = .011$, $\eta_p^2 = .01$ [.00, .03]. Stereotypicality and gender did not interact, $F(1, 724) = 0.02$, $p = .883$, $\eta_p^2 < .01$ [00, .00]. For the desired outcome variable, none of the effects were significant (gender: $F(1, 724) < 0.01$, $p = .989$, $\eta_p^2 < .01$ [.00, 00]; stereotypicality: $F(1, 370) = 0.02$, $p = .882$, $\eta_p^2 < .01$ [.00, 00]; interaction: $F(1, 370) = 0.49$, $p = .483$, $\eta_p^2 < .01$ [.00, 01]).

Next, we tested whether these gender differences in the consequences of risk-taking affected the likelihood of taking the same risk again in the future (H2; see Table 5 for correlations). For masculine risks, we found a significant indirect effect through general consequences, B = .05 [.02, .09], but not through the desired outcome variable, B = .00 [−.04, .05] (see Figure 6 and Table 6). The same was true for feminine risks, where we also found an indirect effect through general consequences, B = .05 [.02, .10], but not through the desired outcome B = −.01 [−.05, .04] (see Figure 7 and Table 6). We thus found consistent support for H2.

The pre-registered item-by-item analyses can be found in the online supplemental material and reveal the same picture.

Discussion

In this pre-registered study, we replicated our findings from Study 1 indicating a greater pay off for risk-taking for men than for women (H1). Moreover, in line with results from Study 1, these differences translated into a higher likelihood of men's reported willingness to take the same risk again in the future (H2). Importantly, this was true for both stereotypically masculine and feminine behaviors.

However, given our methodology, we do not know the true consequences participants experienced, and there could therefore be differences in how women and men interpret or remember these consequences. In other words, perhaps women and men indeed experience the same consequences when taking risks, but women interpret or remember these consequences as more negative compared to men, in line with research suggesting that women might be particularly attentive to the risk of failure in the workplace (Fiske & Overton, 2019) or arguments that women have evolved a heightened sensitivity to negative outcomes (Campbell et al., 2021).

Moreover, as noted above, the examples of feminine and masculine risk-taking that we developed in the pilot studies were not equivalent in the consequences they are likely to entail. So far, we used standardization to account for this issue, but it is also worth comparing women and men's risk-taking behavior, perceived consequences, and the effect of these consequences on future risk-taking using more comparable risks. In the remaining studies, Studies 3a and 3b, we therefore focus on feminine and masculine risk-taking behaviors which have more equivalent consequences.

Lastly, as we relied solely on cross-sectional surveys, we cannot make claims about causality. For example, it could be that confirmation bias leads those who are more likely to take risks again to remember the consequences more positively than those less inclined to take risks again. We addressed these issues in Studies 3 and 4.

Study 3

Across two experimental studies (one with hypothetical risk-taking and one with real risk-taking), we sought to establish the causal link between consequences of risk-taking and future risk-taking (H2). We also examined whether reactions to the same consequences differed between women and men, which would suggest that, counter to H1, the findings reported above may simply be the result of women showing more negative reactions to equal consequences. We chose to focus on one risk that was reported as being relatively common (and thus applicable to a wide range of people and jobs) and for which all options presented some form of risk: Taking on a difficult task one is unfamiliar with (masculine risk) or admitting that one does not know how to carry out the task (feminine risk). Thus, these studies investigate whether participants prefer taking the same or a different risk after facing positive or negative consequences for taking a risk, rather than whether participants do or do not take risks.

Study 3a

The pre-registration for this study can be found here: https://osf.io/n7zdv/?view_only=0a4a734a46bc479cb58b676251320a08

Method

Participants. We recruited 387 women and men through Prolific, which gave us 80% power to detect gender differences similar to the ones we found in Study 2 (η_p^2 = .02), should they exist (see preregistration). We excluded 51 participants who were unemployed or did not indicate their gender (11–15 per condition) and collected additional data to

meet our target sample size. Our final sample consisted of 195 (50.39%) women and 192 (49.61%) men who came primarily from the UK (22.48%), Poland (16.54%), Portugal (11.11%), and other European countries (34.88%). The average age was 30.08 (SD = 9.01). The majority of participants were employed full-time (66.67%).

Design and Materials. We asked participants to imagine themselves in a workplace scenario and randomly presented them with one of four scenarios in which they imagined taking a stereotypically feminine risk or a stereotypically masculine risk and, in turn, experiencing either predominantly positive or predominantly negative consequences. Our study thus had a 2 (Participant Gender: Female vs. Male) × 2 (Stereotypicality: Feminine vs. Masculine) × 2 (Consequences: Positive vs. Negative) between-participants design.

In the scenario, participants imagined themselves in a situation where their manager invited them to join a new project and asked them to carry out a task with which they were unfamiliar. Those assigned to the feminine risk condition then read that they admitted to their manager that they did not know how to carry out the task. In the masculine risk condition, they read that they took on the task even though they were unsure whether they could complete it.

Next, participants read about the consequences of this decision. In the positive consequences condition, participants were told that their manager was happy with their decision, that the next task they were allocated was very prestigious and good for their career, and that they might receive a bonus payment in the future. In the negative consequences condition, participants learned that their manager's reaction was more mixed, that the next task they were allocated was less prestigious and that they were unlikely to receive a bonus payment. Across conditions, we kept social consequences in the form of reactions from colleagues consistent. They were mixed regardless of the risk taken. The full text of the scenarios can be found at https://osf.io/fymkn/?view_only=61d24f2cb2d44eaf8abff48c4ccbf924.

Following the scenario, we asked about the perceived consequences of risk-taking and the likelihood of taking the same risk again using the same items as in Studies 1 and 2, adapted for the imagined scenario.

Results

There were no missing values for any participant for any item. We calculated the consequences score the same way as in Study 1 and 2 and standardized both dependent variables prior to analyses before running two 2 (Participant Gender: Female vs. Male) × 2 (Stereotypicality: Masculine vs. Feminine) × 2 (Consequences: Positive vs. Negative) ANOVAs (see Table 7 for descriptive statistics).

For perceived consequences of risk-taking, we found a main effect of consequences, indicating that our manipulation was successful. Participants in the positive consequences condition indeed rated the consequences as more positive (M = 0.60, SD = 0.82) than those in the negative consequences condition (M = −0.61, SD = 0.77). Women and men did not differ in their ratings of the consequences and the two factors did not interact (see Table 8).

For the likelihood of future risk-taking we found a main effect of consequences in line with H2, such that participants in the positive consequences condition reported a higher likelihood of taking the same risk again (M = 0.35, SD = 0.81) compared to those in the negative consequences condition (M = −0.35, SD = 1.05; see Table 9 for statistical information). The only other significant effect was a main effect of stereotypicality. Participants indicated a higher likelihood of taking the feminine risk again (M = 0.18, SD = 0.97) compared to the masculine risk (M = −0.17, SD = 1.00).

Discussion

This study confirmed our previous results: positive consequences of taking risks increase the subjective likelihood to take the same risk again in the future. The study also addressed two limitations of the previous studies. First, we found no evidence that women and men interpret consequences of risk-taking differently. Moreover, our experimental design enables us to say with more certainty that the positivity and negativity of consequences of taking risks does indeed affect the likelihood of taking the same risks again in the future (H2), at least for hypothetical risks. This did not depend on whether the risks were feminine or masculine.

Study 3b

In this study, we used a similar design to Study 3a and tested whether the same patterns would emerge for actual (rather than hypothetical) risk-taking. Moreover, while we kept the risk-taking behavior itself consistent, we varied various aspects of the workplace situation in which the risks were taken to more realistically reflect the complexities and ambiguities of the contexts in which people make decisions about risks they do or do not want to take. The pre-registration for this study can be found at https://osf.io/ztgau.

Method

Participants. We used the Prolific website to recruit 106 U.S. Americans who were currently employed, giving us 80% power to detect a small to medium interaction between gender and consequences (OR = 3.45), should it exist (see preregistration). After excluding one participant in the negative consequences condition who did not indicate their gender, our sample consisted of 53 women and 52 men who were predominantly White (83.81%) and employed full-time (82.86%). The average age was 36.06 (SD = 8.25).

Design and Materials. Participants took on the role of an employee who works in an office in a "choose your own adventure" style story (see https://osf.io/fymkn/?view_only=61d24f2cb2d44eaf8abff48c4ccbf924 for full materials). They

were told that they could earn and lose points (career points, social points, financial points, reflecting the type of consequences included in the previous studies) depending on their choices and that the 10 participants who earned the highest number of points once data collection was complete would earn a bonus payment of $2.00, in addition to the payment for participation ($3.23).

After providing demographic information and making their first choice, for which all participants received the same number of points, they were presented with the same scenario we used in Study 3a, in which their manager asked them to take on a task they were not sure they could complete. They then had to make a choice between two risky options: They could either take the feminine risk (admit they do not know how to carry out the task) or take the masculine risk (take on the task). After making their choice, they were randomly assigned to receive either predominantly positive or predominantly negative consequences. We used the same consequences as in Study 3a and translated them into points that participants believed increased or decreased their chances to earn a bonus payment. After making another filler choice for which all participants received the same number of points, participants then encountered a similar choice to the one before, where they had to either take on a task they did not necessarily feel qualified for or admit that they did not know how to carry out the task. In this case, a colleague who was working on the same project was on extended sick leave and his tasks had to be divided up between the other team members. The text stressed that this was a project for an important client and that the quality of the outcome was highly important. After making their decision, all participants were debriefed and received a bonus payment of $2.00 regardless of the choices they had made.

Results

There were no missing data for any participants. Women and men did not differ in which risk they chose to take initially, $X^2(1) < 0.01$, $p = .931$, $OR = 0.97$. Next, we tested whether consequences of risk-taking affected the likelihood to take the same risk again (H2). Of the 53 participants in the positive consequences condition, 35 took the same risk again, whereas only 8 of the 52 participants in the negative consequences condition took the same risk again. We used the PROCESS macro (v. 3.2, Model 3) to run a logistic regression with type of consequences as the predictor, whether or not they chose the same or a different risk when encountering the same risky decision as the outcome and participant gender and type of risk they had originally taken as the moderators. In line with H2, we found that those who had experienced more negative consequences were less likely to take the same risk again (see Table 10). None of the other variables or their interactions predicted the likelihood to take a different risk than before.

Discussion

In this study, we replicated the findings from Study 3a for a measure of risk-taking with actual financial stakes and where the risk-taking context varied across the two decisions. We demonstrated once more that not gender but the consequences of previous risk-taking leads to differences in which risks individuals choose to take. Women were no more or less responsive to negative feedback than men were, lending strength to our claim that the gender differences in consequences observed in Studies 1 and 2 are not merely the result of gender differences in the interpretation of or reaction to different consequences.

However, although this study used behavioral, rather than hypothetical, risk-taking in the sense that participants believed that their choices had real financial consequences for them, the risks they took were still part of an imagined scenario. In the final study, we therefore aimed to replicate the findings in a task that did not contain any imagined elements and thus may be a more realistic reflection of real workplace risk-taking. In addition, participants in the final study also had the option to avoid taking risks altogether (rather than choosing between two different risks), enabling us to examine women's alleged risk avoidance more directly.

Study 4

In this study, we tested H2 in an online task in which participants had the choice between a risky and a non-risky bonus payment scheme. Those choosing the risky option then received positive or negative consequences. Those who chose the non-risky option were not subjected to a manipulation and excluded from analyses.

This study enabled us to test whether the findings from Study 3 also hold when choosing between a risky and a non-risky (rather than two risky) options and when risk-taking is measured using a behavioral measure in a context that better simulates the workplace. Here, participants were paid for carrying out a specific task (coding of free responses) and were led to believe that a supervisor was monitoring the quality of their work, similar to different workplace situations (e.g., if they worked as paid research assistants in a research lab). Focusing on a risk that was not included in our previous studies further adds to the generalizability of our findings.

The pre-registration for this study can be found at https://osf.io/r8zck.

Method

Participants

We used Prolific to recruit 722 U.S. Americans, 717 of whom completed the survey. We excluded 12 participants who did not indicate their gender and one participant who identified as non-binary. In addition, we excluded 24 participants who reported technical issues with the survey and 2 who reported suspicion. Of these 677 participants, 398 chose the risky option and were therefore included in our analyses, exceeding our target sample size of 347 (see preregistration for power analysis). The final sample consisted of 199 women and 199

men, who were predominantly White (74.62%) and employed (72.36%) with an average age of 34.56 (SD = 11.73).

Design and Materials

Participants were recruited to code open-response data from an unrelated study. To maximize realism, increase similarity to workplace situations, and manipulate both financial and social consequences, they were led to believe that a research assistant would supervise them throughout the task. After a brief loading screen with the words "please wait until one of our research assistants is available," participants saw a video of their supposed supervisor who introduced himself and explained the coding task. He then explained to participants that they had the choice between two bonus payment schemes: they could either choose to be paid $0.01 for every word they coded (non-risky option) or be paid $0.05 for every word they coded but they would only receive this payment if their coding was above average in terms of speed and accuracy (risky option). Participants then engaged in the coding task for 10 minutes.

Those who had chosen the risky options were randomly assigned to the positive or negative consequences condition. After allegedly waiting for their supervisor to check their coding, they saw another video of their supervisor who either seemed annoyed (negative consequences condition) or happy (positive consequences condition) and informed them either that they had not performed well enough to earn the bonus payment (negative consequences condition) or that they had performed well enough to earn a bonus payment of $2.05 (positive consequences condition). The supervisor then told participants that they would engage in another, similar task and would again have the choice between the two different payment schemes. Once participants made their second choice and provided demographic information, they were informed that there was no second coding task and debriefed in full. All participants received a bonus payment of $2.05 in addition to the regular payment for the study ($4.31).

Results

There were no missing data for any participant. Women and men were equally likely to choose the risky payment scheme, $X^2(1) = 0.05$, $p = .818$, $OR = 0.96$. Almost all (94.12%) of the participants in the positive consequences condition, but only 63.98% of participants in the negative consequences condition chose the risky payment scheme for the second coding task.

To test whether the consequences of risk-taking affected future risk-taking (H2) and whether this effect differed by gender, we used the PROCESS macro (Version 3.2, Model 1) to run a logistic regression with consequences as the predictor, participant gender as the moderator, and participants' second payment scheme choice as the outcome. The overall model was significant, $X^2 = 60.39$, $p < .001$. In line with predictions, those who had experienced positive consequences were more likely to choose the risky payment scheme again (see Table 11). The effect of consequences was not moderated by gender and gender did not affect the likelihood to choose the risky payment scheme again.

Discussion

In this study, we mirrored a workplace environment where taking risks was supposedly linked to real outcomes (disapproval or approval from their supervisor and their payment for the study). This approach showed again that experiencing positive or negative consequences affects the likelihood to take risks. Importantly, even when a non-risky option (rather than two different risks) were available, women were neither less likely to take risks initially nor more affected by negative consequences.

General Discussion

Our findings represent the first exploration of gender differences in engagement in, and consequences of, a diverse range of employee-generated workplace risks. Across five studies, we found no evidence that women take fewer risks when risk-taking is defined broadly and includes both feminine and masculine risk-taking behaviors. Similarly, women and men did not differ, either in the overall consequences they anticipated for risks they had not taken, nor in their interpretation of positive and negative consequences of taking risks. We also found no evidence that negative consequences affect women's and men's future risk-taking differently.

However, we found that men reported benefitting more from taking risks, which translated into a higher likelihood of taking the same risks again. This was not only true for more stereotypically masculine behaviors, such as asking for a pay rise or putting oneself forward for promotion, but also for behaviors that are seen as more normative for women than for men, such as requesting a reduction in work hours or asking for help.

This pattern is somewhat surprising given the findings that men receive backlash when engaging in feminine behaviors, particularly when these behaviors challenge the gender hierarchy (Moss-Racusin et al., 2010; Rudman & Mescher, 2013), but is in line with the suggestion that risk-taking in general is in line with the masculine gender role (Bem, 1974). It is also possible that the observed pattern reflects other effects of gender stereotypes. For example, since men are seen as more independent than women (Morgenroth et al., 2020), it is possible that even when showing dependence (e.g., by asking for help with a task), this is less likely to be perceived as indicating inadequate levels of competence or independence. Research on working parents shows similar patterns, indicating that becoming a parent has negative workplace consequences for women but not for men (Correll et al., 2007;

Cuddy et al., 2004). Or, speaking up about bullying or harassment, especially when such harassment is sexist or sexual in nature, may be perceived as heroic and selfless when coming from a man but as exaggerated or self-serving when coming from a woman (Drury & Kaiser, 2014). Our data cannot answer the question of what drives the unequal consequences of risk-taking, but they do indicate that taking risks is another workplace behavior for which women experience less favorable outcomes.

Social role theory (Eagly, 1987; Eagly & Wood, 2012) posits that one of the ways in which gender roles are perpetuated is through social regulation: stereotypes of what women and men are like, and are supposed to be like, shape reactions by others such that stereotype-congruent behavior is rewarded and stereotype-incongruent behavior is punished. These reactions in turn shape future behavior. Our findings indicate that similar processes apply to risk-taking in the workplace in the sense that social regulation (i.e., positive and negative consequences) increases or decreases risk-taking in women and men. However, contrary to what would be predicted based on social role theory, whether or not the risks in question were in line with the female gender role or the male gender role did not matter. We have described some potential explanations for these patterns above. Future research should investigate these possibilities and the extent to which they fit with dominant theoretical models such as social role theory.

Limitations and Future Research

Our studies have a number of limitations. First, in Studies 1 and 2, we combined all consequences into a single general consequences score. We did so to generalize across multiple behaviors for which the consequences are likely very different. For example, whereas asking for a pay rise or reducing one's work hours may have direct financial consequences, the same may not be the case for complaining about or confronting a coworker. However, this approach necessarily also obfuscates potentially interesting gendered nuances. Future research should investigate these nuances and take into consideration the extent to which women and men may value these consequences differently. For example, as gender norms still prescribe the breadwinner role for men, men may be more concerned about financial consequences than are women.

Second, we only used a limited range of behaviors in our study. Our bottom-up approach of item generation ensured that our risk-taking items were based on the behaviors engaged in by women and men in many occupations. However, the sample of our pilot study was small and not balanced in terms of gender. It is therefore not clear whether the resulting behaviors are truly representative of all the risks women and men take in the workplace. Moreover, although we selected the behaviors carefully, there are many important forms of workplace risk-taking we did not look at. For example, given that we recruited a broad and diverse sample (rather than just people working in one specific industry or position), we limited the behaviors to those that were applicable to many different occupations. Of necessity, this excluded many risky behaviors that are more common in manual labor, such as taking health and safety risks. Future research should examine whether our findings also hold for these kinds of workplace risks. In line with our findings, a detailed case study of men working on two offshore oil platforms found that, among other cultural changes, an unlinking of masculine risk-taking from organizational rewards was associated with a substantive decrease in accident rates (Ely & Meyerson, 2010).

Additionally, in the studies focusing on behavioral measures with allegedly real consequences (Studies 3b and 4), the risks participants took were primarily financial and without long-term consequences. Future research should examine these issues in real organizations, for example using longitudinal designs.

Lastly, across all of our studies, our samples were predominantly White and presumably predominantly heterosexual. Given that we know that intersecting identities such as race, ethnicity, and sexual orientation have profound impacts on gendered experiences, including stereotypes, norms, and discrimination (Crenshaw, 1989; Ghavami & Peplau, 2013), our findings may not apply to all women and men. Indeed, research suggests that Black men are seen as reckless risk-takers, whereas White men are seen as responsible risk-takers (Wages et al., 2021), a pattern that likely alters the consequences these groups experience—and in turn their likelihood to take risks again in the future. Future research should examine workplace risk-taking from an intersectional perspective to shed further light on these nuances.

Practice Implications

Our findings have a number of interesting implications. First, they add emphasis to the need for caution in making arguments that women's risk-aversion makes them worse—or better—suited for particular occupations or leadership positions. We found little evidence for gender differences in workplace risk-taking across our five studies, and the patterns we found illustrate the role of gendered experiences in their emergence: Both women and men show similar levels of risk aversion and are equally sensitive to positive and negative consequences. However, as men experience more positive consequences, their levels of risk-taking are likely to increase, while women's levels of risk-taking are likely to decrease due to the consequences they experience. This underscores the need for caution in attributing gender gaps in occupational outcomes to "natural" differences between men and women in risk-taking preferences (see Fine, 2017), a message that needs to be conveyed to researchers, organizations, and the general public alike.

Second, our data suggest that many women have engaged in stereotypically masculine behaviors such as being vocal about their career goals, but that this did not result in benefits for them to the same extent that it did for men (see also Artz et al., 2018. On this basis, strategies to tackle gender inequality

that focus on increasing women's risk-taking behaviors and messages to "Lean in" (Sandberg, 2013) are unlikely to be very successful as long as there are unequal costs and benefits for men and women. Strategies should instead focus on the systematic differences in treatment that women and men face in the workplace—ensuring that women receive equivalent and appropriate rewards for taking risks to advance their careers as men do.

Heilman and Caleo (2018) use the lack of fit framework (Heilman, 1983) as a basis to suggest several such strategies that seem applicable to the risk-taking context. For example, they argue that organizations should reduce ambiguity in decision-making (e.g., regarding pay rises and promotions), clarify performance criteria and how different criteria are weighed, and structure teamwork in a way that makes the contribution of individual team members clear. These strategies could be used to standardize the financial and career consequences to risk-taking behaviors.

It is less clear, however, how to address inequities in the social consequences that women and men face when taking risks. For example, diversity training aimed to change stereotypes and attitudes are not only not particularly effective in changing attitudes long-term (Bezrukova et al., 2016), but can have unintended consequences such as normalizing stereotyping by highlighting its pervasiveness (Duguid & Thomas-Hunt, 2015). To make a real difference to gender norms in the workplace, and women's experiences at work, organizations will instead need to focus on structural changes, such as increasing the number of women in leadership positions and changing androcentric workplace cultures.

Conclusion

As overt gender discrimination is becoming less frequent, women's continued underrepresentation in certain domains and roles is sometimes attributed to their own preferences and resulting choices, including their inherent risk-aversion. We have found no evidence that women are inherently risk-averse. Instead, women on average benefit less from taking risks than men do, discouraging them from future risk-taking. Regardless of whether risk-taking is seen as useful or dangerous, our findings lend strength to arguments that the focus of organizations should shift from women and their choices regarding whether to take risks or not. Instead, we should focus on organizations and the ways in which their reward systems may perpetuate gender inequality.

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Authors' Note

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Supplemental Material

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Note

1. Values in brackets refer to 95% confidence intervals.

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