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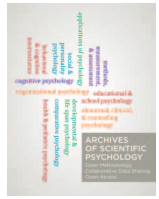

SPECIAL SECTION: ADVANCING GENDER EQUALITY IN THE WORKPLACE

Stereotype Threat and Women's Work Satisfaction: The Importance of Role Models

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ABSTRACT

Globally across OECD countries, increasingly more women than men are graduating from a higher education institution with at least a bachelor's degree (OECD, 2017), yet women continue to be highly underrepresented in top leadership positions around the world. What can explain the stark workplace and economic gender inequity despite the growing pool of educated women? One key contributor to gender inequity in the workplace is the psychological experience of women, and decades of research have found that concerns about confirming negative gender stereotypes in professional contexts can hinder women's motivation, performance, and engagement, all of which can ultimately contribute to the exacerbation of workplace gender inequity. This research explores whether and in what way(s) social support from different workplace sources (role models, formal and informal mentors/sponsors, supportive supervisors, and peer support) benefit and protect women's psychological resilience to disrupt the negative cycle of gender inequity.

SCIENTIFIC ABSTRACT

This research examines the psychological benefits of different sources of workplace social support in a global sample of professional women leaders (N = 1,221). We explored whether and in what way(s) social support from different workplace sources (role models, formal and informal mentors/sponsors, supportive supervisors, and peer support) predicts women's experience of stereotype threat—or concerns about confirming gender stereotypes—and subsequently their work satisfaction. We did this using cross-sectional data from a survey of international graduate business school alumnae who represented 72 countries, were mostly from Generation X (63.4% aged 35–54), reported directly to General Management or had more senior roles (64.1%), and described their work responsibilities as regional or global (66.4%). Workplace role models emerge as the only statistically reliable predictor of work satisfaction indirectly through reduced stereotype threat concerns. However, role models, informal (but not formal) mentors/sponsors, supportive supervisors, and peer support all directly predict women's work satisfaction. Implications of the benefits of workplace social support for efforts to reduce work-related gender inequities are discussed.

Keywords: gender identity, role models, stereotype threat, work satisfaction, workplace social support
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The authors have made available for use by others the data that underlie the analyses presented in this paper (see Cortland & Kinias, 2018), thus allowing replication and potential extensions of this work by qualified researchers. Next users are obligated to involve the data originators in their publication plans, if the originators so desire.

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Women currently hold just 5.2% of CEO roles and constitute only 11% of top earners on the S&P500 list (Catalyst, 2018); 78% of U.K. firms pay men more than women (Christie, 2018); and on a global level there is a 32% gender gap across indices of economic opportunity, education, well-being, and empowerment (World Economic Forum, 2017). And yet, globally across OECD countries, increasingly more women than men are graduating from a higher education institution with at least a bachelor's degree (OECD, 2017). What can explain the stark workplace and economic gender inequity despite the growing pool of educated women?

In addition to biases in the minds of organizational decision-makers and systems that were designed by and for men—making the workplace harder to navigate for women (Eagly & Carli, 2007)—one key contributor to gender inequity in the workplace is the psychological experiences of women. Being male is strongly associated with managerial success in the minds of men and women (Schein, 1973, 1975), and men continue to be seen as having more agency than women (Eagly & Karau, 2002; Haines, Deaux, & Lofaro, 2016). As a result, women can quite reasonably feel marginalized and concerned about confirming gender stereotypes in many professional contexts (Purdie-Vaughns, Steele, et al., 2008). These concerns are central to the psychological experience of *stereotype threat*, and decades of research have found that experiencing stereotype threat results in decrements in motivation, performance, and engagement in the stereotype-relevant domain, all of which can ultimately contribute to the exacerbation of workplace gender inequity (Roberson & Kulik, 2007). Toward the goal of advancing gender balance in the workplace by ensuring women's professional motivation and engagement, it is essential to understand the psychological experiences of women and factors that ameliorate stereotype threat to enhance women's work satisfaction (Hoyt & Murphy, 2016).

Stereotype Threat for Women in Organizations

The theory of stereotype threat and its effect on engagement and performance originates in the educational context and was originally tested in laboratory settings, where researchers found that inducing stereotype threat by making salient the negative stereotypes associated with Black students and academic performance resulted in lowered academic performance among Black American college students (Steele & Aronson, 1995). These findings were soon extended to women and lowered math performance (Spencer, Steele, & Quinn, 1999; see Nguyen & Ryan, 2008 for meta-analytic review). A strong body of laboratory research has demonstrated how stress, active monitoring, and efforts to suppress intrusive stereotype-relevant thoughts constitute related yet distinct processes by which stereotype threat undermines academic performance (see Schmader, Johns, & Forbes, 2008, for a review). Outside of the laboratory, anxiety and self-doubt seem to explain gender differences in real-world math and business school performance in the United States and internationally (Kinias & Sim, 2016; Osborne, 2001).

Beyond educational settings, stereotype threat is increasingly being explored in work and professional contexts (Roberson & Kulik, 2007), where stereotypes have a significant and detrimental impact on work-related performance and motivational outcomes for people with marginalized identities (e.g., Bergeron, Block, & Echtenkamp, 2006; Chung, Ehrhart, Holcombe Ehrhart, Hattrup, & Solamon, 2010). For example, in the context of negotiation outcomes, framing effective negotiating as a stereotypically masculine skill can turn on the experience of stereotype threat, resulting in women making lower salary requests than men (Kray, Thompson, & Galinsky, 2001).

Stereotype threat not only undermines performance, but also erodes interest and engagement in the stereotyped domain. For example, under conditions of stereotype threat, college women reported less interest in math (Davies, Spencer, Quinn, & Gerhardstein, 2002), and reduced their leadership aspirations on a leadership task (Davies, Spencer, & Steele, 2005). Generalizing beyond college undergraduates to professional women's work engagement, reminding women graduate level business students interested in entrepreneurship about the negative stereotypes surrounding women's lack of success as entrepreneurs lowered their entrepreneurial intentions (Gupta & Bhawe, 2007). Furthermore, working adults who reported having to actively suppress a social identity at work—an indicator of stereotype threat—reported lower job satisfaction and greater turnover intentions (Madera, King, & Hebl, 2012).

Additional work has found that concerns about stereotypes predict workplace disengagement and reduced work satisfaction among working women. These outcomes include intentions to quit among women staff workers (Pinel & Paulin, 2005); mental exhaustion and psychological burnout among working women engineers who reported daily interactions with men that signaled incompetence and lack of acceptance (Hall, Schmader, & Croft, 2015); identity separation among working women in accounting and consulting firms (von Hippel, Walsh, & Zouroudis, 2011); identity conflict, decreased perceived likelihood of accomplishing career goals, higher intentions to quit, and lower job attitudes among working women in legal and consumer goods professions (von Hippel, Issa, Ma, & Stokes, 2011); and diminished well-being among working women in finance, as well as a lower likelihood of recommending their chosen career to other women seeking employment (von Hippel, Sekaquaptewa, & McFarlane, 2015). All of this research serves to underscore the point that in male-dominated contexts where women often contend with negative gender stereotypes, the resultant disengagement that women may experience directly results in women leaving the workplace, further perpetuating gender inequity (see Hoyt & Murphy, 2016 for a review of stereotype threat effects on women in leadership).

Given the established research on the negative effects of stereotype threat on women's engagement and satisfaction with work, researchers have begun considering and investigating potential interventions that can be employed to protect women from stereotype threat in organizational contexts (Kinias & Sim, 2016; Schmader & Hall, 2014). However, the research on attenuating the deleterious effects of stereotype threat and the work toward providing women resources with which to succeed have largely been investigated in parallel rather than integrated streams. Stereotype threat intervention work often focuses on ways to shift the individual psychological experience of women by manipulating cues in the potentially threatening environment (Walton & Spencer, 2009) and bolstering the resiliency of women's self-systems to inoculate against the identity threat (Cohen, Purdie-Vaughns, & Garcia, 2012; Kinias & Sim, 2016). On the other hand, organizational interventions designed to facilitate women's success often focus on relational resources, such as mentoring and peer support networks (Ibarra, Carter, & Silva, 2010). Indeed, consistent with the goals of commonly used organizational interventions, broadly speaking, social support has been shown to predict positive work-related outcomes (Danna & Griffin, 1999).

Although there is growing evidence suggesting that various sources of workplace social support (role models, formal and informal mentors and sponsors, supportive supervisors, and peers) can serve to protect women from the negative outcomes associated with stereotype threat in distinct ways, to our knowledge the effects of such relational resources on stereotype threat experiences have not been directly investigated or compared. Thus, we

examine the efficacy of different sources of social support in male-dominated work contexts in which women are likely to face challenges related to their gender identity. In doing so, our aim is to assess the efficacy of multiple means of disrupting the negative cycle of gender inequity by bolstering women's psychological resilience through relational means.

The Benefits of Social Support

Role Models

The most well-documented source of social support found to reduce stereotype threat for women and girls is female role models. Dasgupta (2011) discusses how ingroup exemplars can act as "social vaccines" that serve to inoculate people's threatened self-concepts against stereotypes and lead to increased feelings of belonging. In a lab experiment, women participants scored higher on a math test after a stereotype threat induction when a highly math-competent female experimenter conducted the study session (Marx & Roman, 2002). Further, exposing female Science, Technology, Engineering, and Math (STEM) college students to female STEM experts—either by interacting with an advanced peer, or being enrolled in STEM classes taught by female professors—leads to improved performance and engagement (Stout, Dasgupta, Hunsinger, & McManus, 2011; Young, Rudman, Buettner, & McLean, 2013).

Female role models also positively impact women's career-related performance and engagement. In one laboratory study, subtle exposure to highly successful female role models (Hillary Clinton and Angela Merkel, vs. exposure to a male role model or no role models) predicted longer speech times and higher perceived speech quality on a stressful leadership task among women college students (Latu, Mast, Lammers, & Bombari, 2013). In another set of studies, women college students' career-related self-perceptions were more positively affected after reading about a female (compared to male) role model (Lockwood, 2006). Furthermore, exposure to women in successful counter-stereotypic roles (e.g., web developer, athlete, doctor) improved women's self-perceptions and career aspirations (Del Carpio & Guadalupe, 2018; Simon & Hoyt, 2013). Finally, a randomized natural experiment across rural villages in India found that female representation in village leadership positively influenced adolescent girls' career aspirations and educational attainment, providing evidence in support of the positive effect of role models (Beaman, Duflo, Pande, & Topalova, 2012).

Formal Mentors/Sponsors, Informal Mentors/Sponsors, and Supportive Supervisors

Other forms of workplace social support that have received substantial research attention for their benefits to women include support coming from formal and informal mentors, sponsors, and supervisors (Burke & McKeen, 1990; Eagly & Carli, 2007; Ibarra et al., 2010; Noe, 1988). There is evidence that these work relationships can lead to positive workplace outcomes for everyone, regardless of gender or context—though the evidence is mixed as to which sources of support are most beneficial. For example, one study found that mentoring predicts a significant increase in wages for both men and women mentees (about $3,200 income boost), with no evidence of gender differences in the mentoring-related pay boost (Dreher & Ash, 1990). Other research has investigated potential distinctions between formal and informal mentoring/sponsoring relationships, and found that for both men and women mentees, informal mentoring (but not formal mentoring) led to improved promotion rates and salary increases relative to no mentoring (Ragins & Cotton, 1999). Supervisor support also seems to be a particularly important resource of health and well-being at work, over and above other sources of social support (Hämmig, 2017). Perceived supervisor support has been positively associated with job satisfaction, reduced turnover intention, and reduced emotional exhaustion (Galletta, Portoghese, Penna, Battistelli, & Saiani, 2011; Willemse, de Jonge, Smit, Depla, & Pot, 2012). In sum, these forms of workplace social support enhance employee experiences both practically and psychologically.

In addition to the overall positive impact of support coming from mentors, sponsors, and supervisors, there is some evidence that these sources of support can be particularly valuable to women in male-dominated contexts where negative stereotypes are more likely to be relevant and damaging (Eagly & Carli, 2007; Ibarra et al., 2010). For example, women mentees receive a great deal of psychosocial benefits from mentoring (Burke & McKeen, 1990; Noe, 1988), and mentoring was found to be empowering and had a positive impact on women's self-confidence on a U.K. police force (Jones, 2017). No known prior work, however, has directly investigated the potential benefit of mentors, sponsors, and supervisors on women's experiences of stereotype threat.

Peer Support

The final source of workplace social support included in the current study is peer support. Work on social networks describes them as "sticky webs" that encourage individuals to persist in challenging environments from which they might otherwise drop out (Mossholder, Settoon, & Henagan, 2005; Moynihan & Pandey, 2007). In an empirical investigation of the power of peer networks, a psychological intervention that effectively strengthened peer academic social networks predicted retention among college students in a STEM course series (Turetsky, Cook, Curley, Cohen, & Purdie Greenaway, 2018). Focusing on women in leadership roles, women are found to have weaker networks than men, and this predicts negative outcomes for women (Ibarra, 1993). However, taking part in intensive peer networking opportunities (i.e., a women's conference) relative to a waitlist control condition dramatically increased working women's likelihood of promotion and pay increase, as well as optimism and feelings of social connection (Achor, 2018).

Purpose of the Current Study

Because there is reason to believe that each of these distinct sources of workplace social support could offer protection to women from the harmful psychological effects of stereotypes in male-dominated contexts—albeit via different pathways, as the above literature review suggests—the present study aims to investigate how effectively each source of support predicts women's reduced feelings of stereotype threat and resultant work satisfaction. We focus on work satisfaction as the outcome because it is a psychological construct related to engagement that is both proximal to the experience of gender-based stereotype threat as well as predictive of downstream behaviors (e.g., turnover intentions and actual turnover: Tett & Meyer, 1993) that matter for advancing gender equity at work.

To our knowledge, this is the first empirical investigation testing the effects of multiple sources of workplace social support on a sample of professional women's career-related psychological well-being through reduced stereotype threat. Furthermore, because there are known culture differences in the effects of gender inequality on well-being (Kinias & Kim, 2012), as well as in how social support is experienced (Kim, Sherman, & Taylor, 2008), the present study uses a global sample of professional women to assess generalizability.

Furthermore, the women in this study represent a population of women with significant leadership experience and influence, which speaks to the potential impact of the findings. Understanding how social support improves outcomes for women of influence has the potential to reverse the gender imbalance that remains so stark in top leadership positions around the world.

Method

Participants and Procedure

Following Institutional Review Board review and approval, all alumnae/i from a competitive international graduate business school with campuses in Europe, Asia, and the Middle East were invited to participate in an online survey that was administered by a survey management company. Participants received invitations to participate that were sent by the business school's current dean and included unique identifier response links. The school's national alumni associations announced and encouraged survey participation through social media channels, and the second author sent a reminder e-mail through the survey management company with the unique link to all nonresponders and partial responders one week before the survey closed. All participants gave informed consent at the beginning of the survey. The findings reported in this paper focus on the subset of survey respondents who self-identified as women and survey items that addressed our hypothesis tests. The full survey included other items such as business and societal impact indicators, and respondents included both men and women for a full sample of 5,715. A total of 1,286 women completed the survey for a response rate of 13.8% of all invited women alumnae. After listwise deletion for missing data and selection of only the female respondents for the current study, the final sample size used in analyses was 1,221.

Alumnae respondents represented 72 countries (no more than 15.6% of the sample from any one given country), with the majority of participants (57.7%) located in Europe, 18.7% in Asia-Pacific, 13.5% in North America, and 10.1% located in all other regions combined.[1] The majority (66.4%) of participants described their professional responsibilities as regional or global in scope.

Age was collected categorically using ordinal age clusters rather than exact ages. Women were overrepresented in younger age groups, with 22.3% of women aged 25–34 (Millennial = 1), 63.4% of women aged 35–54 (Generation X = 2), 13.3% of women aged 55–69 (Baby Boomer = 3), and 0.9% of women aged 70 and older (older generations = 4). Because the proportion of women who study at this business school has increased relatively recently (over the past 10–20 years), the distribution of age in the population of women alumnae is skewed. Further, as is often the case in alumni surveys, our sample of participants may be a bit younger than the overall population of alumnae invited to participate (M age = 45.8, SD = 19.05).

Participants indicated their current or most recently held job position on an item with ordinal categories. Of the alumnae sampled, 24.5% held C-Suite or CEO/President positions in their organizations (CEO, president, or similar = 7; other C-Suite or similar = 6); 40.1% held general management or reporting to general management positions (other general management responsibilities = 5; report to general management = 4); 22.9% held team leader, project manager, or midlevel manager positions (midlevel manager = 3; team leader/project manager = 2); and 12.5% held individual contributor positions (individual contributor = 1).

To account for the non-normal (skewed) distribution of the sample in age and job status and to assess the robustness of findings, we conducted hypothesis-testing analyses both with and without participant age and job position as covariates in the models. Additionally, some work suggests that a lifetime of exposure to gender discrimination might cultivate responses more in line with resilience and empowerment (rather than threat) disproportionately more so among the older women in our sample compared with the younger women (Seery, 2011; Shih, 2004). Thus, controlling for age also allowed us to control for possible age-related individual differences in stereotype threat responses. Furthermore, including job status as a covariate allowed us to control for differences in work satisfaction as a result of status (e.g., being low status is generally more stressful, Sherman et al., 2012; and associated with reduced work satisfaction, Thompson & Prottas, 2006).

Materials and Measures

Workplace social support. Participants indicated ("yes" or "no") which of the following sources of workplace social support they experienced during their career: "seeing people like you succeed in senior management positions" (*role models*); "formally assigned mentors/sponsors" (*formal mentors/sponsors*); "mentors/sponsors not formally assigned" (*informal mentors/sponsors*); "supportive supervisors" (*supervisors*); and "strong peer support" (*peers*). "Yes" responses were coded as "1," "no" as "0." Because the primary goal of this research is comparing the efficacy of these distinct forms of social support, we analyzed them as separate predictors rather than computing a composite measure of social support.

Stereotype threat. Participants indicated the extent to which they agreed with the following item measuring gender-relevant stereotype threat adapted from Shapiro (2011): "Currently, I am concerned about confirming stereotypes about my gender." Responses were measured on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Work satisfaction. Three items assessed participants' work satisfaction (Ely, Stone, & Ammerman, 2014) on a scale ranging from 1 = *not at all satisfied* to 5 = *extremely satisfied*: "At this stage in your life, how satisfied are you with the following:" (1) "Work that is meaningful and satisfying;" (2) "Opportunities for career growth and development;" and (3) "Professional accomplishments." Responses to these three items were averaged to create a work satisfaction score, with higher numbers corresponding with greater self-reported work satisfaction (α = .85).

Analysis

To test the indirect effect of each of the different sources of workplace social support on work satisfaction through stereotype threat, we employed the PROCESS macro by Andrew Hayes (Model 4 in Hayes, 2012). To run this analysis, we specified the following: workplace social support as the independent variable; stereotype threat as the mediating variable; and work satisfaction as the dependent variable. This command was run separately for each of the five workplace social support indicators included as the independent variable: role models, formal mentors/sponsors, informal mentors/sponsors, supervisors, and peers. Furthermore, the models were tested both with and without the inclusion of age, job status, and the other social support measures as covariates. Each PROCESS command was run with bootstrapping specified at 10,000 samples.

[1] Note that although current graduates at this business school are more balanced globally than this alumnae sample represents, the school's first campus was in Europe, and the balance is relatively recent. This is why Europe is overrepresented in the sample. Thus, to rule out the possibility that relationships observed are specific to the European context, we assessed whether being in Europe or not influenced results, and we found that it did not.

Results

Table 1 contains the descriptive statistics and correlations for all of the study variables. Table 2 contains the path coefficients and confidence intervals of the mediation models predicting work satisfaction from the different sources of workplace social support through stereotype threat (with and without age, job status, and the other sources of workplace social support included as covariates).

Assessing the *a* pathways—indicating how each of the sources of workplace social support (role models, formal mentors/sponsors, informal mentors/sponsors, supervisors, and peers) predicts the psychological experience of stereotype threat—only role models significantly predicted stereotype threat, $B = -.253$, $p < .001$ ($B = -.246$, $p = .002$ with covariates). None of the other sources of social support predicted stereotype threat, all ps $> .16$.

The *b* pathway—in which stereotype threat predicts work satisfaction—was statistically significant, $B = -.091$, $p < .001$ ($B = -.078$, $p < .001$ with covariates).

With respect to the total effect of social support on work satisfaction (*c* pathways), role models, informal mentors/sponsors, supervisors, and peers—but not formal mentors/sponsors—all emerged as statistically significant (all ps $< .01$ in models without covariates, and only role models lost statistical significance with the inclusion of covariates).

Two of the four relationships between the age and job status control variables and the mediator (stereotype threat) and outcome (work satisfaction) were statistically significant. Age significantly predicted stereotype threat, with women from older generations experiencing less gender-based stereotype threat, $B = -.108$, $p < .001$. Job status, however, did not predict stereotype threat, $B = -.003$, $p = .871$. Furthermore, job status significantly predicted satisfaction, such that women with higher status reported higher work satisfaction, $B = .108$, $p < .001$. Age, however, did not predict work satisfaction, $B = .038$, $p = .320$.

Examining the statistical significance of the mediating role of stereotype threat in the models, among the five sources of workplace social support, the only model revealing a statistically significant indirect effect is that of role models on work satisfaction through reduced stereotype threat. Controlling for age and job status as well as the four other support variables, the magnitude of the indirect effect through stereotype threat was 0.019. The 95% bootstrap confidence interval for this indirect effect (10,000 bootstrap samples) did not include 0 (0.007 to 0.039), indicating that this effect was statistically significantly different from 0. None of the four other workplace social support variables resulted in a significant indirect effect on work satisfaction through stereotype threat (95% bootstrap confidence intervals all included 0).

Discussion

Among the sources of workplace social support predicted to positively impact women's satisfaction at work, having role models with whom they could identify emerged as the only social support source that was indirectly associated with women's reported work satisfaction through reduced feelings of stereotype threat. Building on literatures that have established the benefits of role models in mitigating the experience of stereotype threat in other ways and in other contexts (e.g., Beaman et al., 2012; Marx & Roman, 2002; Stout et al., 2011), our finding emphasizes the importance of role models in attenuating the experience of stereotype threat for professional women in competitive global business contexts.

It is noteworthy with respect to this finding that the present study's research context is competitive global business leadership. Recall that the majority of our women participants had regional or global responsibilities near, at, or above the General Management level. In parallel to our context, the prior work on the benefits of role models has been contextualized in places where women and girls are underrepresented and/or devalued, including young women in North American STEM fields and leadership (e.g., Simon & Hoyt, 2013; Young et al., 2013), South Asian girls in school (Beaman et al., 2012), and Latin American low-income women coders (Del Carpio & Guadalupe, 2018). In some ways our participants are very different from prior research samples—more educated, experienced, and worldly—but their psychological experiences operating in global business contexts where women are underrepresented appear to be very similar. In considering where identifiable role models of success will be particularly critical for enhancing women's work experiences and facilitating gender balance, we stress the significance of contexts in which women are underrepresented and negatively stereotyped.

We also appreciate that men are underrepresented and negatively stereotyped in some work contexts (e.g., nursing, childcare: see O'Brien, Kinias, & Major, 2008), and can experience stereotype threat (Stone, Lynch, Sjomeling, & Darley, 1999) even though they are generally privileged in most professional contexts. To fully achieve gender equity, work contexts where men are currently underrepresented will also require greater inclusion of men, and providing male role models in such contexts may be an important step to this end. We encourage future research along these lines.

What conclusions should be drawn regarding the other sources of workplace social support we investigated in the present study? First, this work is consistent with hypotheses that providing other forms of social support for global women leaders improves their workplace well-being, yet it does not establish evidence for any causal claims, as the findings reported herein are correlational (see Limitations for a longer discussion). Recall that prior research and theory on the positive impact of mentors, sponsors, supervisors, and peer networks

Table 1
Means, SDs, and Pearson Correlations Among All Study Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7
1. Role models	0.64	0.479	—						
2. Formal mentors/sponsors	0.42	0.494	.051	—					
3. Informal mentors/sponsors	0.72	0.450	.105***	.256***	—				
4. Supportive supervisors	0.86	0.342	.137***	.154***	.278***	—			
5. Strong peer support	0.67	0.470	.211***	.156***	.208***	.229***	—		
6. Stereotype threat	2.78	1.270	−.091**	−.004	.000	−.034	.012	—	
7. Work satisfaction	3.36	0.931	.103***	.042	.117***	.116***	.134***	−.134***	—

** $p < .01$. *** $p < .001$.

Table 2
Path Coefficients and Confidence Intervals of Mediation Models Predicting Work Satisfaction From Five Sources of Workplace Social Support

Predictors	Role models		Formal mentors/sponsors		Informal mentors/sponsors		Supportive supervisors		Strong peer support	
	No covs	Covs added	No covs	Covs added	No covs	Covs added	No covs	Covs added	No covs	Covs added
Mediator: Stereotype threat; DV = Work satisfaction										
a	−.253*** (.075)	−.246** (.084)	−.021 (.073)	−.100 (.047)	−.002 (.080)	.012 (.086)	−.109 (.105)	−.156 (.112)	.024 (.077)	.040 (.082)
Covariates:										
Age		−.108***		−.108***		−.108***		−.108***		−.108***
Status		−.003		−.003		−.003		−.003		−.003
b	−.091*** (.021)	−.078*** (.020)	−.100*** (.021)	−.078*** (.020)	−.100*** (.021)	−.078*** (.020)	−.100*** (.021)	−.078*** (.020)	−.098*** (.020)	−.078*** (.020)
Covariates:										
Age		.038		.038		.038		.038		.038
Status		.108***		.108***		.108***		.108***		.108***
c	.201*** (.055)	.080 (.055)	.078 (.054)	.052 (.055)	.243*** (.058)	.177*** (.061)	.316*** (.077)	.222** (.079)	.266*** (.056)	.203*** (.058)
c′	.178** (.055)	.061 (.055)	.076 (.053)	.044 (.054)	.243*** (.058)	.178** (.061)	.305*** (.076)	.210** (.079)	.269*** (.055)	.206*** (.058)
95% CI of the indirect effect	[.009, .044]	[.007, .039]	[−.013, .017]	[−.003, .023]	[−.016, .016]	[−.015, .013]	[−.009, .034]	[−.004, .034]	[−.019, .012]	[−.018, .009]

Note. Covariates include: participant age, job status, and all other social support indicators not included as the independent variable in the model. *a* denotes the path of the social support indicator on the mediator, stereotype threat. *b* denotes the path of the mediator on the dependent variable, work satisfaction. *c* denotes the total effect of social support on work satisfaction. *c′* denotes the direct effect of social support on work satisfaction. Coefficients are unstandardized coefficients, standard errors are in parentheses.
** $p < .01$. *** $p < .001$.

suggest both overall benefits of these forms of social support on work satisfaction as well as their underlying potential to reduce stereotype threat as a process. The present research did not find support for the indirect benefits of having formal or informal mentors and sponsors, supportive supervisors, or strong peer support on women's work satisfaction through a reduction in stereotype threat. However, having informal mentors/sponsors, supportive supervisors, and strong social support all directly predicted increased satisfaction among female global business leaders. This suggests that although stereotype threat does not appear to be a process through which these other social support benefits materialize, there are benefits of these other forms of workplace social support for women in the global business context nonetheless. Our findings also resonate with prior work demonstrating the importance of these workplace social support factors for both male and female students and employees (Dreher & Ash, 1990; Turetsky et al., 2018). One conclusion may be that these factors can be beneficial overall, and to the extent that they are particularly beneficial for women, their impact is unrelated to women's identity at work, and more related to the practical and general psychological benefits of social support (see Cohen, Underwood, & Gottlieb, 2000). To the extent that the goal of the current paper is to understand how to ameliorate the detrimental effects of women's experienced identity threat in masculine work cultures, however, the present findings speak to the singular empowering force behind role models.

The fact that in contrast to informal mentors/sponsors, formal mentors/sponsors did not impact professional well-being underscores what has been shown in organizational contexts: merely assigning formal mentors does not seem to be as valuable for women as enabling them to naturally develop informal relationships with supporters and advocates (Ragins & Cotton, 1999). Our findings suggest that the quality of mentoring relationships is particularly important, and that organizations need to be thoughtful about the types of relationships that are most helpful in advancing the careers of high-potential women.

Although we did not have developed hypotheses related to our findings on covariates, we note that looking at covariates across models, older generation women experience less stereotype threat, but job status does not buffer against the experience of stereotype threat. Although job status predicts work satisfaction in a way that would be predicted from theory on psychological benefits of empowerment (Thompson & Prottas, 2006), this process does not appear to involve stereotype threat for female global business leaders. We encourage future research on the roles of age, tenure, and status in the experience of stereotype threat and coping.

Limitations

The most notable limitation of the present study is that the findings reported are based on correlational/cross-sectional data rather than experimental or longitudinal data, so interpretations should not be causal in nature. Lacking causal evidence, there are potential alternative explanations for our findings. First, it is possible that women who are exposed to role models are more likely to be employed in fields where women are better represented, or where gender stereotypes are less pervasive. Second, women who do not experience stereotype threat may be more likely to identify role models. Third, women who do experience stereotype threat might be more hesitant to establish relationships with other women (e.g., women leaders distancing themselves from more junior women in male-dominated organizations; Derks, Van Laar, & Ellemers, 2016), leading to reduced availability of women role models in particularly hostile contexts.

This limitation could be addressed in future work. For example, in a field experiment in which women are randomly assigned to receive

support from a female role model or not, their experiences with stereotype threat and well-being could be tracked over time. This would allow isolation of the causal effect of having role models on women global leaders' work experiences.

Another limitation of the present study is the use of single-item measures of social support and stereotype threat. Although multiple-item measures are preferred over single-item measures for purposes of reliability, it is often more feasible and practical to use single-item measures in surveys to reduce the length of time it takes to complete the survey and to increase response rates. Furthermore, single-item scales can be as valid as multiple-item scales (Robins, Hendin, & Trzesniewski, 2001). To improve the validity of the single-item measure of stereotype threat used, we picked the most face-valid item from an existing measure (Shapiro, 2011) that has been used in published research instead of creating a new item written as a single-item indicator (see recommendation by Fisher, Matthews, & Gibbons, 2016). For the single-item measures of each of the sources of social support, we aimed to create items that were as face valid and unambiguous as possible. However, future follow-up work might seek to establish further reliability and validity by incorporating multiple-item measures wherever possible.

Conclusion

In sum, the present research underscores the importance of role models for potentially ameliorating global women business leaders' experience of stereotype threat, which in turn predicts improved work satisfaction. Our findings also point to the importance of other sources of workplace social support (informal mentors/sponsors, supportive supervisors, and peer support) for women's work satisfaction overall, albeit unrelated to the experience of stereotype threat. Toward the goal of advancing gender equity in the workplace, these results suggest that organizations and professional communities might consider investing in efforts to create identifiable models of success for women, especially in contexts where the underrepresentation of women might engender identity-relevant stereotype threat. Furthermore, the present findings suggest that organizations and professional communities would do well to encourage and foster workplace social support more generally, as these social support systems seem only to benefit women across the board.

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