Three studies investigated antecedents and consequences of stereotype threat for female employees. The results of Studies 1 and 2 suggest that social comparisons with men are associated with feelings of stereotype threat whereas social comparisons with women are not. Stereotype threat, in turn, was associated with conflict surrounding women’s identity as female employees and with decreased perceived likelihood of achieving career goals. Study 3 extended these findings by demonstrating that feelings of stereotype threat are also negatively related to workplace attitudes and turnover intentions. Furthermore, the effect of stereotype threat on these job attitudes and intentions was itself mediated by identity conflict and perceived likelihood of achieving career goals. Implications and limitations of these findings are discussed. Copyright © 2010 John Wiley & Sons, Ltd.

Although organizations are becoming increasingly diverse, stereotypes concerning women continue to hinder their ability to succeed in male-dominated fields (Roberson & Kulik, 2007). For example, women are less preferred as potential hires in traditionally masculine domains, are presented with fewer progression opportunities, and continue to earn less than their male counterparts in top executive roles (Catalyst Census, 2005; Lyness & Heilman, 2006; Steinpreis, Anders, & Ritzke, 1999). Women also experience more barriers and greater stress in their pursuits within these careers (Kottke & Agars, 2005; Lyness & Heilman, 2006; Lyness & Thompson, 2000). Although the persistent trend of under-representation of women in these fields appears to be due in part to these barriers that confront them, there may be additional factors that play a role as well. The purpose of the current research is to examine stereotype threat as a barrier to women’s success in male dominated fields.

Any individual can be faced with the psychological threat of confirming or being reduced to a negative stereotype (Steele, Spencer, & Aronson, 2002). This concern can result in performance deficits when people attempt to perform difficult tasks in domains in which they are negatively stereotyped. Detrimental effects of stereotype threat on performance have now been documented across a wide range of domains, such as African Americans’ academics (Steele & Aronson, 1995), older adults’ memory (Hess, Auman, Colcombe, & Rahhal, 2003), white males’ athletics (Stone, Lynch, Sjomeling, & Darley, 1999), and women’s driving (Yeung & von Hippel, 2008). Thus, stereotype threat is contextual more than it is individual, in that the threat arises whenever people become aware that they are negatively stereotyped in their current activities (Steele, 1997).

Perhaps the primary reason why stereotype threat disrupts performance is that it distracts the individual from the task at hand, thereby reducing working memory capacity (Croizet, Despres, Gauzins, Huguet, Leyens, & Meot, 2004; Schmader & Johns, 2003). Stereotype threat effects appear to be multiply mediated, however, as stereotype threat has also been shown to increase stress (Blascovich, Spencer, Quinn, & Steele, 2001) and anxiety (Bosson, Haymovitz, & Pinel, 2004; Inzlicht & Ben-Zeev, 2003). These findings suggest that stereotype threat effects are likely to be ubiquitous, as not only does stereotype threat disrupt performance in a variety of domains, but it does so for a variety of reasons. Furthermore, these findings suggest that stereotype threat effects are not likely to be limited to performance deficits, as stress and anxiety lead to an array of attitudinal and behavioral consequences, both in and out of the workplace (Glazer & Beehr, 2005; Mathieu & Zajac, 1990; Parasuraman & Alluto, 1984; Podsakoff, LePine, & LePine, 2007).

STEREOTYPE THREAT IN ORGANIZATIONS

Although it is unlikely for women at work to experience the kind of stereotype threat that is induced in the laboratory (e.g., in which an experimenter might state, “we’re trying to understand why women do not perform as well in math”), there are subtle experiences in the workplace that can lead women to worry about being evaluated on the basis of their gender. Of particular interest in the current research are the social comparisons in which women are likely to engage to evaluate their career outcomes. Just as people use social
comparison to gain a more accurate understanding of the self (Festinger, 1954), women use social comparisons in the workplace to gain self-knowledge and to evaluate themselves relative to others (Isobe & Ura, 2006). Given that men typically earn more, are promoted faster, and are given work that is of greater value to the organization than their female counterparts (Agars, 2004; Heilman, 2001), it might be problematic for women to compare themselves with their male colleagues. That is, by engaging in social comparisons with their male colleagues, it may become salient to women that they are paid less, that they are climbing the corporate ladder at a slower rate, and that they are being assigned less visible projects.

Not all women will compare themselves to their male colleagues when evaluating their workplace outcomes, however. Some women might avoid comparisons with men because they find such comparisons inherently threatening (cf. Crocker & Major, 1989) and some women might not compare themselves with men because they see men as a less relevant comparison group (Goethals & Darley, 1977). Nevertheless, senior executives and the rising stars, both of whom are often predominantly male, are likely to set the standards of success. Thus many women are likely to compare themselves to their male colleagues simply because the men in their firm provide the most salient comparison standards.

Social comparisons with those who perform well can be threatening to self-evaluations (Schwinghammer, Stapel & Blanton, 2006; Wills, 1981). Similarly, social comparisons with men might be stereotype threatening for working women, as typical differences in rank and career opportunities between genders might be perceived as intrinsically linked to the stereotypes of women at work. On the other hand, evidence suggests that comparison with successful women can reduce stereotype threat for other women (Marx, Stapel, & Muller, 2005). It seems that comparing oneself to another woman who excels in the stereotyped area can serve as evidence that the stereotype is irrelevant or can be overcome. Following this logic, comparisons with successful women should not induce stereotype threat. Thus, based on these findings, we predict that:

\[ H_1: \text{Women who engage in social comparisons with male colleagues will show increased feelings of stereotype threat compared to women who do not engage in these comparisons. In contrast, comparisons with other women should not induce feelings of stereotype threat.} \]

Research on stereotype threat has focused primarily on its debilitating effect on performance, with much less research examining other consequences (Shapiro & Neuberg, 2007). Notable exceptions can be found in research showing how stereotype threat can adversely impact female undergraduates’ leadership aspirations (Davies, Spencer, & Steele, 2005) and managers’ feedback seeking in the workplace (Roberson, Deitch, Brief, & Block, 2003). Studies such as these provide support for the idea that stereotype threat may have wide-ranging effects on the individual, beyond the scope of acute performance deficits (see also, Bergeron, Block, & Echtenkamp, 2006; Roberson & Kulk, 2007).

Stereotype threat can also lead to disidentification from task domains in which the person feels stereotyped (Steele, 1997). That is, in contrast to the sense of engagement that arises when employees feel psychologically safe and secure at work (Kahn, 1990), employees who feel threatened at work by negative stereotypes are likely to feel disengaged (cf. Steele, 1997). Disengagement, in turn, can lead employees to separate their personal and work roles and to psychologically withdraw from work (Kahn, 1990). This disengagement can be costly to the organization, as disengaged employees are less satisfied and committed to their jobs and have greater intentions to quit (Brown, 1996; Brown & Leigh, 1996).

### Identity Separation

In addition to disidentifying with a threatening domain, people who experience stereotype threat can also choose to deflect the threat by disidentifying with the stereotyped group itself (Schmader, 2002; Steele, 1997). Alternatively, one strategy that women in organizations can use to remain identified with the domain of work and with their stereotyped group membership is by making a clear distinction between their identity as a member of the stereotyped group (i.e., women) and their identity as a worker in the threatened domain (Pronin, Steele, & Ross, 2004). Pronin et al. (2004) demonstrated that individuals selectively disidentify with components of their group identity to protect against stereotype threat while simultaneously maintaining positive identification with their group. This process of identity bifurcation or separation in response to stereotype threat involves reducing identification with those aspects of group membership perceived to be associated with the negative stereotype, while retaining identification with aspects of the group perceived as unproblematic in the domain.

Women who experience stereotype threat in the workplace could adopt a strategy similar to that identified by Pronin et al. (2004). That is, by separating their identity as a female from their identity as an employee they can emphasize their role as a skilled employee in the organization even when such skills are counter-stereotypic for women. In this manner, women who experience stereotype threat may respond to this threat by differentiating between their female and worker roles. For example, when Jane is working she might consider herself persuasive, influential, analytical, and independent. Jane may see these characteristics as her “work self.” When Jane is not working, she might consider herself sensitive, warm, tender, accommodating, and gentle. Jane may see these characteristics as her “female self.” In this way, Jane maintains a clear distinction between her work self and female self, and she prevents her female qualities from serving as a source of weakness or stereotypicality at work (while simultaneously retaining them as a valued aspect of her self-concept). This possibility is examined in the current study by assessing whether stereotype threat is associated with identity separation. Thus, we hypothesize that:

\[ H_2: \text{Stereotype threat will be associated with a tendency for women to separate their female and work identities.} \]

Because social comparison with men is theorized to lead to stereotype threat, \( H_2 \) suggests that stereotype threat will play a mediating role between social comparisons and identity separation. Specifically, women who engage in social comparisons with men should be more likely to experience...
stereotype threat, which in turn, should be associated with the tendency for women to separate their female and work identities. The goal of Study 1 is to test these possibilities.

STUDY 1

Method

Participants and Procedure

Participants were 108 women working at an international consumer goods organization in Australia. These women held positions across all levels of the organization, ranging from junior, entry level (N = 19), supervisor/manager level (N = 32), middle management level (N = 23), to senior management level (N = 4), with 30 respondents not indicating their position. The average tenure for women in the organization was 7.09 years (SD = 6.28) and the average tenure for women in their current position was 3.33 years (SD = 3.20). Participants received an email with a web link inviting them to complete an on-line survey. At the end of the survey, participants provided demographic information relating to their current level in the organization, their tenure in the organization, and their current position.

Measures

Social Comparisons Four questions were designed to assess women’s social comparisons with men and with other women. Two questions assessed women’s comparisons with men (α = .89); “When you think about your career progression in the organization, how much do you compare yourself to men in the organization?” and, “When you think about your developmental opportunities in the organization, how much do you compare yourself to men in the organization?” Participants responded using a five-point scale ranging from 1 (not at all) to 5 (a lot). Two questions were used to assess women’s comparison with other women, which were identical in form but replaced “men” with “other women” (α = .93).

Stereotype Threat Stereotype threat (α = .90) was assessed by adapting items from Steele and Aronson’s (1995) original measure of stereotype threat. Because their scale was developed to measure stereotype threat among African American students, not all items were appropriate. Thus, we adapted three items to tap stereotypes relevant to women in the work place (e.g., “Some of my colleagues feel that I have less ability because I’m a woman.”). Participants responded using a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Identity Separation Two items were designed to assess women’s identity separation (α = .85). These items were: “I am conflicted between the feminine and work ways of doing things”; and, “I feel I am continuously switching between my usual feminine-self and my work-self.” These items were adapted from Benet-Martinez and Haritatos’ (2005) Bicultural Identity Integration Scale-Version 1 (BIIS-1). Participants responded using a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Results

Social Comparisons and Stereotype Threat

Table 1 presents the means, standard deviations, and inter-correlations of the measures. As can be seen, a significant correlation emerged between the two social comparison measures, suggesting that women who engage in social comparisons with men also tend to engage in comparisons with other women. For this reason, the two types of social comparison were entered as simultaneous predictors in the mediational model. In the first step in the model stereotype threat was regressed on comparisons with men and women. In the second step, identity separation was regressed on comparisons with men and women. In the final step in the model, identity separation was regressed on stereotype threat, comparisons with men, and comparisons with women.

As can be seen in Figure 1, comparisons with men had a significant direct effect on stereotype threat whereas comparisons with women did not. Additionally, comparisons with men had a significant effect on identity separation whereas comparisons with women did not. Lastly, feelings of stereotype threat impacted identity separation, and when stereotype threat was included as a mediator in the model, the direct effect of comparisons with men on identity separation was no longer significant. To test whether this mediational effect was significant, a bootstrapping procedure was used following the recommendations and syntax of Preacher and Hayes (2008). To obtain confidence limits, we computed indirect effects from unstandardized regression weights with 10,000 bootstrap resamples. This analysis revealed that the relationship between social comparisons with men and identity separation was significantly mediated by stereotype threat (indirect effect = 0.098, SE = 0.056, 95% confidence interval: 0.012, 0.237).

To provide a further test of the proposed mediational model, competing models were examined by rearranging the variables. In the first alternative model, social comparison was the mediator and stereotype threat the predictor. According to this alternative model, feelings of stereotype threat lead women to compare themselves with men, which then leads to identity separation. Analyses reveal that such an interpretation is unlikely, as social comparison was not a significant mediator (indirect effect = 0.039, SE = 0.031, 95% confidence interval: −0.003, 0.129). In the second alternative model, identity separation was the mediator and stereotype threat the dependent variable. Support for such a model would

Table 1. Study 1 means, standard deviation, and inter-correlations of variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparisons with men</td>
<td>2.40</td>
<td>1.25</td>
<td>.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparisons with women</td>
<td>2.30</td>
<td>1.15</td>
<td>.55</td>
<td>.93</td>
<td></td>
</tr>
<tr>
<td>Identity separation</td>
<td>2.56</td>
<td>1.62</td>
<td>.29</td>
<td>.22</td>
<td>.85</td>
</tr>
<tr>
<td>Stereotype threat</td>
<td>3.01</td>
<td>1.75</td>
<td>.36</td>
<td>.21</td>
<td>.29</td>
</tr>
</tbody>
</table>

*Note: N = 108. Scale reliabilities are listed on the diagonal.
*p < .05; **p < .01.
suggest that engaging in social comparisons with men causes women to separate their identities, which in turn leads to experiences of stereotype threat. Here identity separation was a significant mediator (indirect effect $= 0.069$, $SE = 0.046$, 95% confidence interval: 0.004, 0.195), but the direct effect between social comparisons and stereotype threat remained significant after the mediator was included in the model ($\beta = .31$, $p < .01$). Furthermore, there is no theoretical basis for such an alternative model. These analyses suggest that neither alternative model provides as compelling of a causal story as is provided by the theorized model. Finally, the demographic variables were unrelated to feelings of stereotype threat (all $p$’s > .45).

Discussion

The results of Study 1 suggest that women who engage in social comparisons with men experience more stereotype threat than women who do not engage in these comparisons. Furthermore, stereotype threat was found to mediate the relationship between women’s comparisons with men and identity separation, such that women who engaged in comparisons with men were more likely to experience stereotype threat, and feelings of stereotype threat were associated with separation between their female and worker identities. Social comparisons with other women, in contrast, had no independent relationships with stereotype threat or identity separation. The goal of Study 2 was to extend these findings by assessing whether stereotype threat might impact another form of disidentification.

STUDY 2

Employees aspire to achieve different levels in their career. Those with high career aspirations are more likely to persist in their attempts to attain senior level positions than those with lower career aspirations (Tharenou, 2001). Career aspirations may be sensitive to stereotype threat, in that women may feel that they have reduced prospects in threatened domains (Steele, 1997), and thus they may aspire to less lofty positions when they feel stereotyped. Consistent with such a possibility, Davies et al. (2005) found that female college students showed diminished leadership aspirations after viewing commercials portraying women in a stereotypic fashion. Thus, one possibility is that women who experience stereotype threat will have less lofty career aspirations compared to women who do not experience stereotype threat.

It is not clear, however, whether the results found with university students will parallel those found among women who are already entrenched in their career. Rather than (or in addition to) diminished career goals, stereotype threat might be associated with lowered confidence about achieving their career goals. This possibility is also consistent with laboratory-based research on stereotype threat showing that it diminishes self-confidence (Stangor, Carr, & Kiang, 1998) and increases self-doubt (Steele & Aronson, 1995). Due to the viability of both of these predictions, the current study tested the following hypotheses:

$H_{3A}$: Women who experience stereotype threat will have lowered career aspirations.

$H_{3B}$: Women who experience stereotype threat will have decreased confidence in their likelihood of reaching their career aspirations.

In examining the effect of stereotype threat on career aspirations, this study also sought to replicate the earlier findings regarding social comparisons and stereotype threat. To extend these findings to a new domain, the current study recruited a sample of female attorneys. As in many other domains, in the legal arena women are less likely than men to make the crucial step between junior level positions and senior level positions (American Bar Association, 2006). For
example, despite the fact that 54% of Australian law graduates are female, only 13% of senior positions in Australian law firms are occupied by women (Gardener, 2006). Stereotype threat and its effects on career aspirations might play a role in this difference between men and women in their career trajectory.

Method

Participants and Procedure

Participants were 147 women working in the Australian offices of an international law firm. These women held various positions within the firm; Graduate Solicitor (N = 20), Solicitor (N = 60), Senior Lawyer (N = 7), Senior Associate (N = 41), Special Counsel (N = 3), Partner (N = 11), and other (N = 2). The mean age of participants was 30.86 years and the average tenure at the firm was 4.13 years. Participants were invited to participate through an email that contained a web link to the on-line survey. At the end of the questionnaire, participants provided demographic information relating to their age group, current position in the organization, and their tenure.

Measures

Social Comparisons

The four items from Study 1 were used to assess women’s social comparisons with men (α = .84) and other women (α = .85).

Stereotype Threat

The three items from Study 1 were used to measure the extent to which women experience stereotype threat (α = .81) with responses provided on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Career Aspirations

Because we were interested in aspirations as well as perceived likelihood of achieving those aspirations, participants were first asked, “What level in the organization do you aspire to?” They were then asked to indicate their agreement with the item “Achieving this goal is likely.” Responses to the first question were coded based on hierarchical levels in the organization,1 and responses to the second were provided on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Results

Table 2 presents the means and standard deviations of the measures. As in Study 1, there was a significant correlation between the two social comparison measures, indicating that women who engage in social comparisons with men also tend to engage in social comparisons with other women. Thus, as in Study 1, social comparison with men and women were entered as simultaneous predictors in the mediational analyses. Because stereotype threat did not correlate with aspirated rank, further analyses to test for mediation were only conducted on confidence in achieving career aspirations. In the first step in the model, stereotype threat was regressed on comparisons with men and women. In the second step, likelihood of achieving career aspirations was regressed on comparisons with men and women. In the final step, likelihood of achieving career aspirations was regressed on stereotype threat, comparisons with men, and comparisons with women.

As can be seen in Figure 2, social comparisons with men but not women had a direct effect on stereotype threat. Analyses further revealed that social comparisons with men but not women were negatively associated with likelihood of achieving career aspirations. Finally, analyses revealed that the direct effect of social comparisons on likelihood of achieving career aspirations was no longer significant when stereotype threat was included in the model. As in Study 1, a bootstrapping procedure was used to test for mediation. This analysis revealed that the relationship between social comparisons with men and likelihood of achieving career aspirations was mediated by stereotype threat (indirect effect = –0.075, SE = 0.043, 95% confidence interval: −0.181, −0.006).

To further establish the validity of the model presented in Figure 2, alternative models were explored in a variety of ways. First, although women’s aspired position correlated with social comparisons with men (Spearman’s ρ = .21, p < .05) and with the likelihood of achieving their career aspirations (Spearman’s ρ = −.25, p = .01), the mediated relationship depicted in Figure 2 was unchanged when controlling for aspired position. Thus, although women who aspire to higher levels are less confident in their ability to achieve their career aspirations, this finding does not drive the relationship depicted in the mediational model. Second, when the model was rearranged so that social comparison was the mediator, and stereotype threat the predictor, social comparison was not a significant mediator (indirect effect = –0.034, SE = 0.029, 95% confidence interval: −0.100, 0.016). Thus, feelings of stereotype threat do not seem to cause women to perceive themselves as less likely to achieve their career goals via social comparisons with men. Third, the model was then rearranged so that likelihood of achieving career aspirations was the mediator and stereotype threat the dependent variable. Support for such a model would suggest that women who engage in social comparisons with men lower their career aspirations, which in turn leads to feelings of stereotype threat. While the results reveal that likelihood of achieving aspirations was a significant mediator (indirect effect = 0.037, SE = 0.025, 95% confidence interval: 0.002, 0.110), the direct effect between comparisons with men and stereotype threat remained significant after the mediator was included in the model (β = 0.30, p < 0.001). These analyses suggest that neither

1After discussion with the organization, it was determined that the aspired levels of senior lawyer, senior associate, and partner represented an increasing hierarchical listing of positions, with partner being the highest level to which participants could aspire. This coding strategy resulted in the exclusion of 26 participants for the analyses involving desired rank. These exclusions were due to participants who were already at the top rank (n = 11) as well as participants who chose the options “other” and “special counsel,” because these latter options could not be appropriately grouped into the determined hierarchy.
alternative model provides as compelling of a causal story as is provided by the theorized model. Finally, as in Study 1, the demographic variables were unrelated to stereotype threat (all $p’s > 0.15$).

**Discussion**

Consistent with Study 1, the results of Study 2 demonstrate that women who engage in social comparisons with men experience more stereotype threat than women who do not engage in these comparisons. Furthermore, although stereotype threat was unrelated to aspirations, stereotype threat mediated the relationship between women’s comparisons with men and their perceived likelihood of achieving their career goals. Women who engaged in comparisons with men were more likely to experience stereotype threat, and stereotype threat was associated with less confidence that they would reach their career goals. Social comparisons with other women, in contrast, had no independent relationships with stereotype threat or with confidence that they would reach their career goals. Such diminished expectations of reaching career aspirations can have considerable consequences for women in organizations, as lowered expectations have been found to undermine performance by reducing perseverance in the face of difficulties (Carver & Scheier, 2002).

In sum, Studies 1 and 2 suggest that social comparisons with men are associated with greater feelings of stereotype threat, and that stereotype threat in turn is associated with identity separation (Study 1) and reduced confidence in attaining career aspirations (Study 2). These outcome variables seem important in their own right, and have been conceptually linked to other issues of organizational importance, but their relevance in an organizational setting would be enhanced if evidence were available regarding their direct organizational consequences. The goal of Study 3 was to collect such evidence.

**STUDY 3**

When women feel that they must separate their identities such that their work self must be separate from their feminine self, they are experiencing a lack of feelings of belonging in the workplace. And when women have little confidence that they will achieve their career aspirations, they are experiencing poor prospects in their organization. Steele (1997) has argued that poor prospects and lack of belonging lead people to distance themselves psychologically from domain-relevant activities and performance. Steele (1997) refers to this process as one of disidentification – or disengagement – from the task domain. Disengagement from work and the organization is associated with a variety of negative job attitudes, such as...
lowered job satisfaction and greater intentions to quit (Brown, 1996; Saks, 2006). Thus, poor prospects (reduced confidence in reaching career aspirations) and lack of belonging (identity separation) should manifest themselves in more negative job attitudes and an increased intention to quit. Because identity separation and reduced confidence in reaching career aspirations are themselves expected to be a product of stereotype threat, these hypotheses are again mediational, and can be stated as follows:

$H_{4A}$: Stereotype threat will be associated with a tendency for women to separate their female and work identities, which in turn will be associated with negative job attitudes and an increased intention to quit.

$H_{4B}$: Stereotype threat will be associated with decreased confidence in women’s perceived likelihood of reaching their career aspirations, which in turn will be associated with negative job attitudes and an increased intention to quit.

In sum, Study 3 investigated whether stereotype threat is associated with negative job attitudes and increased turnover intentions, and also whether these relationships are mediated by identity separation and low confidence in reaching career aspirations.

**Method**

**Participants and Procedure**

Participants were 253 women working in the legal profession in Australia. An email from a female lawyers’ association supplied members with a web link to an online questionnaire. Participants worked in a variety of areas: Solicitor ($N = 104$), Articled Clerk ($N = 18$), Partner ($N = 28$), Associate/Senior Associate ($N = 68$), and other positions not specified ($N = 31$). The average age of participants was 33.10 years.

**Measures**

**Work Attitudes and Intentions**

Three measures were used as indicators of women’s workplace attitudes and intentions. Unless otherwise indicated, all items in the survey were answered using a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

(i) *Job satisfaction*: Job satisfaction ($\alpha = .87$) was assessed with a five-item version of Brayfield and Rothe’s (1951) job satisfaction scale designed to measure overall job satisfaction (e.g., “Most days I am enthusiastic about my work”).

(ii) *Global job satisfaction*: An alternative measure of job satisfaction ($\alpha = .87$) was assessed with 10-items from the Global Satisfaction Scale (Warr, Cook, & Wall, 1979). Although termed “global” job satisfaction, this scale examines attitudes towards numerous specific aspects of the job and then sums these together to create a global measure of job satisfaction. Participants were asked how satisfied they were with ten facets of their job using a seven-point scale, with anchors 1 (extremely dissatisfied) to 7 (extremely satisfied). Sample items include “your hours of work” and “the amount of variety in your job.”

(iii) *Intention to turnover*: Intention to turnover ($\alpha = .94$) was assessed with Boroff and Lewin’s (1997) 2-item intent to quit scale (e.g., “I am seriously considering quitting this job for an alternative employer”).

**Stereotype Threat**

Due to the centrality of stereotype threat in the current research, an attempt was made to expand its measurement in this study. In service of that goal, two additional items were included (e.g., “Sometimes I worry that my behavior will cause my male colleagues to think that stereotypes about women are true”). Reliability of the expanded scale was similar to the three-item scale in Studies 1 and 2 ($\alpha = .81$), and the results of the current analyses were identical when only the original three-items from Studies 1 and 2 were used in the analyses.

**Identity Separation**

The same two items from Study 1 were used to assess women’s identity separation ($\alpha = .87$).

**Career Aspirations**

As in Study 2, participants were asked, “What is your aspired position?” followed by a text box where their response could be entered. Participants were then asked to indicate their agreement with the item, “Achieving this position is likely.” Responses to this question served as the primary measure of confidence in achieving career aspirations. To provide an additional test of whether career aspirations themselves are related to stereotype threat, career aspirations were also assessed with four-items from O’Brien’s (1996) career aspiration scale (e.g., “I hope to move up through any organization or business I work in”).

**Results**

**Bivariate Relationships Among Measures**

Table 3 presents the means, standard deviations, and inter-correlations of the measures. Consistent with previous research, women’s work attitudes were significantly related in the anticipated directions. Specifically, the two job satisfaction measures were positively correlated, and each of these measures was negatively correlated with intention to quit. Consistent with Study 1, stereotype threat was associated with a tendency for women to separate their female and work identities. Consistent with Study 2, no relationship emerged between stereotype threat and career aspirations, but women who experienced stereotype threat expressed decreased confidence in their likelihood of

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reaching their career aspirations. Additionally, greater feelings of stereotype threat were associated with decreased job satisfaction and an increased intention to quit.

Mediation Analyses

Because stereotype threat did not influence career aspirations, further analyses to test for mediation did not include this variable. H4A and H4B predict that stereotype threat will be associated with increased identity separation and decreased confidence in reaching career aspirations, which in turn will mediate the effect of stereotype threat on negative job attitudes and intentions to quit. To test these predictions a regression-based causal model was estimated as in Studies 1 and 2. In the first step in the model, identity separation and perceived likelihood of achieving career goals were regressed on stereotype threat. In the second step, the job attitude and intention measures were regressed on stereotype threat. In the final step, the job attitude and intention measures were regressed on stereotype threat, identity separation, and perceived likelihood of reaching career goals.

As can be seen in Figure 3, stereotype threat had a direct effect on identity separation and likelihood of reaching career goals. Stereotype threat was also negatively associated with job satisfaction, global job satisfaction, and positively associated with intention to turnover. Finally, the direct effect of stereotype threat on these outcome measures was reduced when identity separation and perceived likelihood were included in the model, although the direct effects remained significant. As in Studies 1 and 2, a bootstrapping procedure was used to test for mediation. This analysis revealed that the relationship between stereotype threat and job attitudes and intentions was significantly mediated by identity separation (indirect effect \(-0.080, SE = 0.027, 95\% \text{ confidence interval: } -0.143, -0.034\) for global job satisfaction; indirect effect \(-0.089, SE = 0.041, 95\% \text{ confidence interval: } -0.174, -0.011\) for job satisfaction; indirect effect \(0.13, SE = 0.068, 95\% \text{ confidence interval: } 0.002, 0.271\) for intention to quit). Bootstrapping analyses also revealed that perceived likelihood of reaching career goals mediated the relationship between stereotype threat and job attitudes and intentions (indirect effect \(-0.067, SE = 0.022, 95\% \text{ confidence interval: } -0.115, -0.030\) for global job satisfaction; indirect effect \(-0.070, SE = 0.029, 95\% \text{ confidence interval: } -0.136, -0.022\) for job satisfaction; indirect effect \(0.09, SE = 0.039, 95\% \text{ confidence interval: } 0.017, 0.170\) for intention to quit).

Competing models were explored in a variety of ways. First, the model was rearranged so that stereotype threat was

![Figure 3](image-url)
the mediator and identity separation and likelihood of achieving career goals were the predictor variables. According to this model, identity separation and reduced likelihood of achieving career goals lead to feelings of stereotype threat, which in turn leads to more negative job attitudes. Results revealed that the direct effect between the predictor variables and the job attitude measures remained strong after the mediator (stereotype threat) was included in the model. Although stereotype threat was a significant mediator in this model, the mediation effects in this alternative model were smaller than those depicted in Figure 3. Second, when the model was rearranged so that stereotype threat was the predictor variable, job attitudes were the mediator, and identity separation and likelihood of achieving career goals were the dependent variables, half of the direct pathways (and hence the indirect effects) were no longer significant. These results suggest that more negative job attitudes are not mediating the effect of stereotype threat on women’s tendency to separate their identities or reduce their perceived likelihood of reaching career goals. In sum, although these alternative models remain statistically possible, it appears that neither alternative model provides as compelling of a causal story as is provided by the theorized model. Finally, as in Studies 1 and 2, the demographic variables were unrelated to stereotype threat (all p’s > .30).

Discussion

Study 3 demonstrates that stereotype threat has a mediated effect on job attitudes and intention to quit via poor prospects and lack of belonging. It is also apparent from the partial mediation that these are not the only mediators of stereotype threat effects on job attitudes and intentions. What might account for the remaining effect? Although the current research cannot answer that question, stereotype threat also leads to stress and anxiety (Blascovich et al., 2001; Bosson et al., 2004; Inzlicht & Ben-Zeev, 2003), which could provide an additional route to reduced job satisfaction and intention to turnover (Glazer & Beehr, 2005; Parasuraman & Alluto, 1984; Podsakoff et al., 2007). This possibility might not only explain some of the variance in the current results, but it also indicates that stereotype threat might lead to other negative workplace attitudes and behaviors. Because stress and anxiety have a deleterious effect on a large array of employee attitudes and behaviors, any factor that increases employee stress and anxiety is likely to decrease job satisfaction and commitment and increase work withdrawal and turnover (Glazer & Beehr, 2005; Podsakoff et al., 2007; Mathieu & Zajac, 1990). Thus, by virtue of its relationships with disengagement, stress, and anxiety, stereotype threat is likely to lead to a wide variety of negative workplace attitudes and behaviors.

GENERAL DISCUSSION

The impact of stereotypes on behaviors has been the subject of intense study, and a large number of experiments have shown that stereotype threat typically impairs the performance of the person being stereotyped (Steele et al., 2002). Given the pervasive stereotypes about female abilities (e.g., Powell, Butterfield, & Parent, 2002), female employees are likely to experience subtle, but frequent stereotype threat. With most previous research on stereotype threat devoted to examining acute performance deficits, relatively less work has explored other potential consequences of stereotype threat (Shapiro & Neuberg, 2007). The present studies extend prior research in two primary ways. First, the current research examined the relationship between women’s feelings of stereotype threat at work and various psychological outcomes. Second, the current research also investigated a possible contributor to experiences of stereotype threat for women at work.

The picture that emerges from this research is not a rosy one. In Studies 1 and 3 female employees who experienced stereotype threat showed separation between their female and work identities. This identity separation is potentially important, as there may be negative mental health consequences for women who feel that their female identity cannot be expressed while enacting their work identity (Settles, Sellers, & Damas, 2002; Settles, 2004). Studies 2 and 3 extended these findings by demonstrating that female employees who experienced stereotype threat were less confident that they would reach their career aspirations. This finding complements the results of Davies et al. (2005) in which female university students disengaged from the leadership domain following stereotype threat. Interestingly, both of the current studies demonstrated that rather than reducing their aspirations, female attorneys reduced their confidence that they would attain these aspirations.

Study 3 also went beyond Studies 1 and 2 by relating feelings of stereotype threat to work attitudes. Women’s feelings of stereotype threat were associated with reduced job satisfaction and elevated intentions to turnover. This study also extended the findings from Studies 1 and 2 by demonstrating that the relationships between stereotype threat and workplace attitudes were partially mediated by identity separation and reduced confidence in reaching career aspirations.

Studies 1 and 2 explored social comparison as a possible antecedent of stereotype threat for working women. While all individuals engage in social comparison to gain a more accurate understanding of the self, not all comparisons are equally unnerving. Women who engaged in comparisons with men to evaluate their career experienced more stereotype threat than women who did not use men as a point of comparison. Such a finding is not surprising given that men typically earn more, are promoted faster, and are assigned more visible work compared to women (Agars, 2004; Heilman, 2001). Importantly, stereotype threat mediated the relationships between women’s comparisons with men and the outcomes noted above.

Implications and Future Directions

These results have a number of implications. First, they are informative with regard to an ongoing debate about the applicability of stereotype threat outside the laboratory. It has recently been argued that the performance deficits associated with stereotype threat might be less relevant in applied testing situations (Cullen, Hardison, & Sackett, 2004; Cullen, Waters, & Sackett, 2006). For example, in a special issue of Human
Indeed, the current results suggest that there may well be dominated fields, but also the promise for the integration of women at all levels of the organization also has the potential to highlight the difficulties inherent in being female in male-stereotypically female roles (e.g., human resources), however, this strategy may be ineffective (cf. Brewer et al., 1999). The presence of significant numbers of women at higher levels in the organization (Brewer, von Hippel, & Gooden, 1999), and in indirect ways, such as through the loss of talents and investment spent on women who choose to leave the organization.

The current findings also have important consequences for the employees themselves. Employees who are dissatisfied are less able to work to their potential (Harrison, Newman, & Roth, 2006; Judge, Thoreson, Bono, & Patton, 2001), thus diminishing their opportunities for career progression compared to satisfied employees. If stereotype threat is related to less favorable work attitudes, stereotypes about women’s abilities in the workplace may be amplified and self-perpetuated. In this way, stereotype threat may create a vicious cycle that maintains and exacerbates the observed under-representation of women in male-dominated fields.

Not only are the outcome variables documented in the current research of importance to organizations, but the antecedents of stereotype threat are worth noting as well. The finding that women who compare themselves to men experience stereotype threat suggests that there are good reasons to consider the distribution of women at different levels of the organization (Brewer, von Hippel, & Gooden, 1999). When there are more women at higher levels in the organization, incoming women may be able to obtain the necessary information for accurate self-evaluation without having to compare themselves to men, thereby minimizing experiences of stereotype threat. If senior women are placed primarily in stereotypically female roles (e.g., human resources), however, this strategy may be ineffective (cf. Brewer et al., 1999). The presence of significant numbers of women at all levels of the organization also has the potential to make the environment itself less threatening for female employees (Murphy, Steele, & Gross, 2007). These findings highlight the difficulties inherent in being female in male-dominated fields, but also the promise for the integration of such fields once a critical mass of women has been reached. Indeed, the current results suggest that there may well be a tipping point in many such fields, and rapid integration could occur after many years of slow progress.

**Limitations**

Although the results of the current studies are promising, the use of correlational and cross-sectional designs do not allow for the establishment of causality. Studies 1 and 2 demonstrated an association between women’s social comparisons with men, their feelings of stereotype threat, and identity separation and career aspirations. Given the correlational nature of the data, it may be the case that women who experience stereotype threat choose to engage in comparisons with men as a means to interpret their own feelings of stereotype threat. Although alternative causal models were statistically less plausible, the precise direction of these effects cannot be determined without experimentation or longitudinal study. In Study 3, stereotype threat was related to more negative work attitudes, but again, it is conceivable that women who have more negative attitudes are more likely to experience stereotype threat.

**CONCLUSION**

The current research demonstrates that social comparisons with men are associated with increased feelings of stereotype threat among working women. Furthermore, stereotype threat is associated with identity separation and diminished beliefs in achieving career aspirations, and via these variables, with negative work attitudes and job intentions. Collectively, these findings suggest that stereotype threat may lead to disidentifi- cation or disengagement in the workplace, indicating that stereotype threat is a concern for organizations and the women who work in them.

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**REFERENCES**


