

Full Length Research Paper

The Effect of Stereotype Threat on the Interview Performance of Women

Amanda Shantz

Assistant Professor, Department of Human Resources
York University

Gary P. Latham

Secretary of State Professor of Organizational Behavior
Rotman School of Management
University of Toronto

Address correspondence to:

Amanda Shantz
Atkinson Building
4700 Keele St, Toronto, M3J 1P3
E-mail: amandashantz100@hotmail.com

When women are in a situation whereby they are at risk of being judged by a negative stereotype, they underperform relative to men. This quandary is called stereotype threat. The present study examined whether stereotype threat affects the performance of men versus women in a simulated job interview. The stereotype that women are not suitable for managerial jobs was unobtrusively embedded in a job description presented to interviewees ($n = 50$) prior to the interview. The interviews were evaluated by four HR managers, two male and two female. The results showed that stereotype threat disadvantages females vis-à-vis those in the control group, and it disadvantaged them relative to men in the stereotype threat condition. This occurred regardless of whether the HR manager was male or female.

Keywords: stereotype threat, employment interview, performance

A wealth of studies have found that women as well as men perceive that the attributes ascribed to successful managers are more likely to be held by a man rather than a woman (e.g., Boyce & Herd, 2003; Cabrera, Sauer & Thomas-Hunt, 2009; Eagly & Karau, 2002; Fernandes, & Cabral-Cardoso, 2006; Gmuer, 2006; Powell, Butterfield, & Parent, 2002; Sczesny, 2003; Welbourne, 2005; Willemsen, 2002). This is because in Euro-Western society, managerial jobs are believed to “require an achievement-

oriented aggressiveness and an emotional toughness that is distinctly male in character and antithetical to both the stereotyped view of what women are like, and the stereotype-based norms specifying how they should behave” (Heilman, 2001, p. 659). Because of these perceptions, women’s competence in managerial positions is often viewed as inferior (Foschi, 1996), and their work is undervalued and considered of lower quality even when they perform at the same level as men (Heilman, 1995). Thus,

it is not surprising that the selection of women for managerial positions has been uneven and slow (International Labor Organization, 2005).

One reason for this slow and uneven growth may be that organizations perpetuate gender stereotypes through their hiring practices (Kmec, 2005). Organizations often frame particular departments or positions as masculine or feminine in their job descriptions and hiring criteria (Hall, 1993; Pierce, 1996). For instance, Skuratowicz and Hunter (2004) investigated how newly created jobs were described to incumbent employees at a US-based bank. Management used signs, photographs and videos that depicted men as prestigious personal bankers and women as customer relations personnel. The latter position commanded lower pay, and had little or no supervisory power, as compared to a personal banker.

Gender stereotypes may also be perpetuated in the employment interview. Indeed, the interpersonal nature of the employment interview makes it susceptible to interviewer biases (Latham & Sue Chan, 1999). Interviewer decisions are affected by expectations that are generated from stereotypes (Pingitore, Dugoni, Tindale & Spring, 1994). For male-sex-typed jobs (e.g., engineer, carpenter), male interviewees are hired more frequently than females because males are seen as more likely to be successful than female interviewees even when the latter have similar credentials (Davison & Burke, 2000; Dipboye, 1987).

These studies shed light on the human resource management procedures that maintain what Schein (1973, 1975) coined as the 'think-manager-think-male' belief. However, these studies do not take into account how stereotypes influence the behavior of the target of a stereotype. Rather, this body of research has been

limited to discovering the evaluations made by "powerful others." Indeed, over and above any bias on the part of interviewers, women carry an additional burden, which is the possibility that what they say or do will be interpreted in light of the stereotype about women's inferior managerial ability. This burden is called stereotype threat. Specifically, stereotype threat refers to the phenomenon whereby an individual or group performs more poorly on a task when they perceive that a negative stereotype may be characteristic of their group within the task's domain (Steele, 1997; Steele & Aronson, 1995).

Research in management is lacking as to whether stereotype threat provides a disadvantage to an individual's employment. In social psychology, stereotype threat has almost exclusively been studied as an issue in testing for cognitive ability/academic performance (Nguyen & Ryan, 2008). But it can also be present in routine situations that are part of most jobs and employment experiences (Roberson & Kulik, 2007). On-going exposure to stereotype threat may lead a person to disengage from the performance domain (Steele, 1997).

The purpose of the present study is to address this gap in the literature by assessing whether stereotype threat influences the interview performance of female job candidates. Few studies have examined the effect of stereotype threat in the work domain, and no study, to date, has examined it in relation to the interview performance of men versus women. Hence, the present study contributes to the extant literature by examining, for the first time, whether stereotype threat impairs women's performance in a selection interview. To do so, we first define stereotype threat, and review empirical research that has examined its effects on women in a work domain. Next we present the results of a pilot study that was conducted to ensure that the manipulation

of stereotype threat for a selection interview was effective. Finally, we present the results of the simulated interview study, and conclude with a discussion of those results, as well as limitations of this experiment and directions for future research.

Stereotype Threat

There are voluminous experiments in social psychology showing that stereotype threat has a pernicious effect on the performance of those who are targeted (Steele, 1997). This is because the targeted individual or group focuses on “the threat of being viewed through the lens of a negative stereotype or the fear of doing something that would inadvertently confirm that stereotype” (Steele, 1999, p.46). This fear interferes with task performance, which ironically confirms for others the very stereotype that the individual or group wants to avoid (Wheeler & Petty, 2001). The targets of a stereotype perform poorly relative to their non-stereotyped counterparts as soon as they perceive they are being judged stereotypically, treated stereotypically or presumed to be behaving stereotypically (Link & Phelen, 2001). This is especially likely to occur when the targeted group identifies strongly with the stereotyped categorization (e.g., women who strongly identify with their gender), and the task domain (e.g., women who strongly identify with a management career; Steele, 1997). This is because they perceive their self-identity has been threatened (Schmader, 2002).

Stereotype threat can be experimentally activated in a variety of ways. For instance, Schmader and Johns (2003) explicitly reminded women of the stereotype that men outperform them in mathematical domains. Shih, Pittinsky and Ambady (1999) elicited stereotype threat by asking women in the experimental condition to indicate their sex, and answer questions related to their

sex immediately prior to taking a mathematics test. No explicit mention of the stereotype was made. Davies, Spencer, Quinn and Gerhardtstein (2002) primed stereotype threat by showing the participants gender-stereotypical commercials on television, and then asking them to complete a mathematics test. The results of social psychology experiments reveal that stereotype threat can be elicited either obtrusively or unobtrusively.

Regardless of how stereotype threat is activated, research shows that it has a negative impact on the performance of a wide range of people, specifically, African Americans’ and Latinos’ academic performance (Aronson, 2002; Steele, 2003), females versus males on mathematical problems (Brown & Josephs, 1999; Cadinu, Maass, Rosabianca, & Kiesner, 2005; Spencer et al., 1999), lower socioeconomic groups’ performance on academic tasks (Croizet & Claire, 1998), white males’ performance vis-à-vis Asian males on mathematical problems (Aronson, Lustina, Good, Keough, Steele & Brown, 1999), and gay men in their interaction with children (Bosson, Haymovitz & Pinel, 2004). There is also evidence that suggests that stereotype threat may hinder women’s performance in the workplace. One work-related activity whereby women are susceptible to stereotype threat is negotiations (Kray, Thompson and Galinsky, 2001). Kray et al. (2001) elicited this threat in a negotiating exercise by indicating that a test was diagnostic of success in the classroom. MBA students enrolled in a negotiations course were randomly assigned to mixed-gender dyads. Half of the pairs were told that success in the exercise generally translates into success in overall classroom performance (threat condition) and the other half were told that success in the exercise did not correlate with success in the classroom. Simply labeling the negotiation as diagnostic of a person’s effectiveness improved men’s

ability to negotiate, but hindered women's performance at the bargaining table.

Davies et al. (2002) examined the effect of stereotype threat on women's vocational aspirations. Undergraduate women, who were shown gender-stereotypic television commercials, indicated less interest in pursuing educational/vocational options where mathematical skills are required to succeed (e.g., engineer, mathematician, computer science, statistician, accountant, etc.) and more interest in domains that rely on verbal skills for success (e.g., author of novels, linguistics, journalist, communications, political scientist, editor, etc.), than did women who were shown gender-neutral television commercials.

Davies, Spencer and Steele (2005) examined whether exposing undergraduate women to stereotype threat, that was not made salient by the researchers, influenced the decision of women to adopt a leadership role as opposed to a problem-solver role on a subsequent task. The participants were shown television commercials that either depicted women in a stereotypical light, or neutrally. Women who viewed the gender-stereotypical commercials were subsequently less likely to prefer a leadership role, compared to women who watched the gender-neutral commercials.

Although these experiments suggest a reason for why women do not occupy as many managerial roles as men, few studies to date have explicitly addressed work related tasks for managerial roles. A notable exception is a study conducted by Bergeron, Block, and Echtenkamp (2006). They investigated the effect of stereotype threat on men and women's performance on a managerial in-basket exercise. Specifically, graduate students were asked to complete a decision-making activity in the field of human resource management after they were provided with information on their successful predecessor. Their

successor was described using either stereotypically masculine or feminine descriptors. Bergeron et al. hypothesized that exposing female participants to masculine descriptors elicits stereotype threat, which in turn leads to lower levels of performance, both in terms of the quantity of memos to which the participants were able to respond, and the quality of their responses in the in-basket exercise.

The results showed that women in the masculine sex-typed condition underperformed in terms of both quality and quantity relative to women in the feminine sex-typed condition. Compared to men in the masculine sex-typed condition, women in the same condition underperformed in terms of performance quantity. In terms of quality, men and women did not perform differently in the masculine sex-typed condition relative to men and women in the feminine condition. Surprisingly, both men and women in the masculine sex-typed condition underperformed compared to men and women in the feminine sex-typed condition in terms of performance quality.

Bergeron et al. suggested that a possible reason for these results is the nature of their sample. That is, the men in their sample scored atypically androgynous on Bem's Sex Role Inventory (1974) compared to men in the general population. Furthermore, the in-basket exercise was for a position in human resources, an increasingly feminine-sex-typed position (Roos, & Manley, 1996).

Although the study conducted by Bergeron et al. (2006) indicates that stereotype threat can negatively impact women in the workplace, additional research is needed to uncover the effect of stereotype threat in other non-gender specific, work-related domains. Hence, the present study builds on the work of Bergeron et al. (2006) by examining the effect of stereotype threat in

the employment interview. Unlike Bergeron et al.'s study, the job position in this study was not gender-specific, but rather a general managerial trainee program. Furthermore, instead of a masculine versus feminine sex-role typed position, the present study assessed the effects of a masculine versus a neutral condition. Finally, in the present study, a panel of four human resource (HR) managers assessed interviewee performance. The hypothesis was that the interviewee performance of women is undermined, that is, they perform significantly lower than women in the control group, when they encounter cues of a subtle negative stereotype in a job description.

As noted earlier, stereotype threat can be elicited explicitly or implicitly. Saliency of the threat was not made explicit in the present study because most, if not all, employers are sophisticated in avoiding explicitly sexist related behavior in hiring practices. Before presenting the results of the main study, we present a pilot study that was conducted to ensure that the manipulation of stereotype threat in an interview context was effective. Specifically, the experimental and control conditions were compared on the following three dimensions: (1) attractiveness of the job, (2) preference for the job, and (3) job description inspires confidence that the applicant will perform well in an interview for the position.

Pilot Study

A job description was developed for a management trainee position. The threat and no-stereotype threat (control) conditions differed in the description of the position for which the interviewees were asked to apply. Six neutral and seven masculine descriptors were selected from Bem's (1974) Sex Role Inventory. The seven masculine descriptors mapped onto a list of masculine descriptors generated by Heilman et al. (1989) in their study of

gender and success in a managerial position. These masculine descriptors were: self-confidence, ambition, independence, leadership, take a stand on issues, forceful, and willing to take risks. The 6 neutral descriptors were: conscientious, demonstrate a desire for continuous learning, motivated, flexible, responsible, and open to new experiences.

Each job description contained three paragraphs. The first and third paragraphs were identical for both conditions. The middle paragraph contained either the masculine or neutral descriptors:

How would you like to spend your time choosing the perfect job? This is what Milestones and Associate's 9-month Management Trainee Program can offer you. While networking with top executives, you will experience how a number of different business units operate and get to know how we work as one of the leading companies in our field. You will rotate through at least three key business units of your choice, work on special projects designed to give you valuable work experience, as well as attend career and self-development classes and seminars about our industry.

The Management Trainee Program recruits top individuals who demonstrate self-confidence, ambition and a high level of independence. We are looking for trainees that possess strong leadership skills. Success in this position requires you to be willing to take a stand on issues you believe in, make forceful and persuasive presentations to senior executives, and you must be willing to take the risks necessary to climb our corporate ladder.

OR

The Management Trainee Program recruits top individuals who are conscientious and demonstrate a desire for continued learning. Success in this position requires you to be highly motivated, flexible, responsible, and open to new experiences.

What happens after the Management Trainee Program? That's up to you! Past trainees have gone on to high-level positions across numerous businesses and functions within our company.

Method

Sample and Procedure

The pilot study was conducted with 71 undergraduate business school students. Their mean age was 21.86 (SD = 31); 53.5% were female. The participants were randomly assigned to the threat (n=35) versus control (n=36) job descriptions.

Results

To determine whether difference in length of the two job descriptions might be a confounding factor, the two job descriptions were rated in terms of attractiveness on a 4-item 5-point Likert-type scale (i.e., "I would like to have a job like this." "This job description would encourage me to apply for the job."). The Cronbach alpha coefficient for this 4-item scale was .84. A two-tailed independent t-test revealed no significant differences in the level of attractiveness for those shown the threat (X=3.97, SD=.65) versus the control condition (X=3.74, SD=.63; $t(69)=-.79, p=.13$).

To assess whether gender differences in preference for the two job positions, the data collected on job attraction were re-analyzed in terms of males (n=33) and females (n=38). No significant difference ($t(69)=1.55, p=.49$) was found (X=3.91, SD=.64; X=3.80, SD=.65, respectfully).

Finally, the two job descriptions were examined to determine whether one inspired more confidence in the interviewees than the other. Again, responses were assessed using a four item (e.g., "The job advertisement makes me believe that I would do well in an interview for the job.") 5-point Likert-type scale. The Cronbach alpha coefficient for this scale was .79. No significant difference ($t(69)=.93, p=.35$) in responses were found for those who read the threat (X=3.41, SD=.67) versus the control (X=3.26, SD=.63) job description. Consequently, these two job descriptions were used to assess stereotype threat in the simulated selection interview.

Simulated Interview Study

Method

Participants

The participants were 20 male and 30 female fourth-year undergraduate business school students enrolled in a Canadian university who were looking for full time employment upon graduation. None of the participants were in the pilot study. Their mean age was 23 years (SD = 5.9). They were recruited through signs posted in a business school asking for volunteers to participate in a workshop for improving interview skills. These students volunteered to take part in the study on their own time. The participants were randomly assigned to a stereotype threat (n = 15 females, 10 males) versus control (n= 15 females, 10 males) condition in a 2 X 2 (male/female) factorial design.

Procedure

The participants were told that this experience would enhance their ability to interview effectively, that the interview would be videotaped so that they could subsequently view their performance, and that they would receive written feedback from four HR managers on ways to improve their interview performance in order to obtain a job.

The interviews were scheduled so that each participant entered and left the interview room individually. Ten minutes before the scheduled interview, each participant was provided with a job description of the position opening, namely a 9-month management trainee program.

Consistent with both Schmader and Johns (2003) and Brown and Josephs (1999), all the participants were interviewed by the same female human resource manager. A female interviewer was used in accordance with the recommendation of Blascovich, Spencer, Quinn, and Steele (2001) as a way to safeguard against experimenter effects by using the same gender as that of the stereotype threat target. The interviewer was blind to the hypotheses of the study as well as the assignment of participants to the experimental conditions. She greeted each candidate in the manner she uses in her department. Specifically, she made welcoming comments to relax the person, and then asked the predetermined structured interview questions.

Six structured questions taken from Latham and Budworth (2006) were asked of each participant: (1) Tell me about a time when you helped someone in need; (2) Do you work well with others? If yes, please provide an example; (3) What two or three accomplishments have given you the most satisfaction? Why?; (4) Tell me about your past work experiences; (5) What do you see yourself doing five years from now? Each interview lasted approximately 10-15 minutes.

The video camera was placed behind the interviewer, somewhat hidden by a pole in the room so as not to be obtrusive. Each applicant sat in the same chair so that the angle of the camera and background were identical for each applicant. After the interview, participants were taken to an adjacent room where they completed a

questionnaire. Participants were then debriefed and thanked for their involvement in this study.

A simulated interview was used because it would be difficult, if not impossible, to observe and evaluate the performance of each interviewee during an actual interview *in vivo*. Previous research has shown that there is no difference in rating accuracy for live versus a videotaped performance (Ryan, Daum, Bauman, Grisez & Mattimore, 1995).

The interviewees' performance was independently rated by four HR managers, two males and two females. Three were Caucasian and one was Asian. The HR managers worked for a bank, law firm, school board, and a union, respectively. The HR managers were blind to the hypotheses of the study, and whether the interviewee was in the stereotype or non-stereotype threat condition. They were told that the purpose of the workshop was to help graduating students improve their interview skills for selection into management trainee positions.

The four HR managers rated each applicant independently on a 5-point Likert type scale on three general managerial skills identified by Baak, Carr-Ruffino and Pelletier (1993), namely, self-confidence, the ability to make logical sense to others, and ability to communicate effectively. The Cronbach alpha coefficient for this scale was .86. In addition, the managers decided independently whether they would hire an interviewee using a 7-point Likert-type scale (e.g., I would hire this candidate, 1=strongly disagree, 7=strongly agree). The correlation between responses to the two scales was high ($r = .91, p < .001$). Responses to the hiring and managerial skills items were averaged, and transformed into z-scores. After the HR managers viewed each videotape and rated the interviewees'

performance, they were thanked and debriefed.

Participant interviewees were asked to rate the position for which they interviewed on two dimensions, namely masculinity and status. They were asked to state their level of agreement on a 9-point Likert-type scale (1=strongly disagree, 9=strongly agree) for the following statements, “The position of management trainee for which I applied is a high status position,” and “The position of management trainee for which I applied reflects masculine characteristics.” It was important that participants did not see either of the two positions as being higher in status, because this could pose an alternative explanation for the results.

Results

Manipulation Checks

An arguable limitation of laboratory experiments is that participants may not see the outcome of their performance as important to them. A pre-requisite for stereotype threat is that the participants must care about doing well on the task, and the task must have an impact on self-identity (Steele, Spencer, & Aronson, 2002). Consequently, Spencer, Steele and Quinn’s (1999) scale was adapted to assess task importance/identity to the participants (e.g., “How important is it for you to do well in the job interview?” “How important is it for your self-esteem that you do well in the job interview?”) using a 9-point Likert-type scale.

The Cronbach’s alpha coefficient for the responses was .72. The means were relatively high. There was no difference in mean scores between men ($M=7.38$, $SD=1.06$) and women ($M=7.13$, $SD=.90$; $t(48)=.87$, $p=.41$). A second independent two-tailed t-test revealed that there was also no significant difference on perceived task importance between those in the threat ($M=7.02$, $SD=1.06$) versus the control condition ($M=7.44$, $SD=.87$; $t(48)=-1.56$, $p=.13$).

A univariate analysis of variance showed a significant effect of sex-typing ($F(1,46)=10.39$, $p < .05$, $d = .89$), with the masculine sex role job description condition ($X = 4.5$, $SD = 2.01$) being seen as significantly more masculine than the control condition ($X = 2.6$, $SD = 2.26$). A univariate analysis of variance indicated that the participants did not view the masculine sex role typed job description ($X = 6.08$, $SD = 2.17$) as differing in status from the neutral condition ($X = 6.04$, $SD = 1.88$; $F(1,46)=.23$, $p = .64$, $d = .02$).

Main Results

The two male HR managers did not rate the interviewees ($X = 3.81$ $SD = .98$) significantly different from the two female HR managers ($X = 3.79$ $SD = .92$, $t(49) = .52$, $p = .61$). An independent two tailed t-test showed that there was no significant difference in the scores given to female ($X = 3.8$, $SD = .86$) versus male interviewees ($X = 3.77$, $SD = 1.02$; $t(48) = .12$, $p = .19$) by the two female HR managers. Similarly, the two male HR managers did not rate female interviewees ($X = 3.76$, $SD = .91$) significantly different from male interviewees ($X = 3.89$, $SD = 1.09$; $t(48) = .44$, $p = .34$).

A two-way between-groups analysis of variance was conducted to explore the effect of gender versus threat/control conditions on interviewee performance. There was a significant interaction effect between the threat/control condition and gender for interviewee performance [$F(1,46) = 14.1$, $p < .05$]. In addition, there was a significant main effect for the sex-role typed job position on interviewee performance [$F(1,46) = 2.6$, $p < .05$]. The main effect for gender was not significant [$F(1,46) = .09$, $p = .63$].

Consistent with the hypothesis, a planned t-test revealed that the interviewee performance of women was lower in the threat ($X = 3.47$, $SD = .89$) than in the

control condition ($X = 4.1$, $SD = .76$; $t(28) = 2.08$, $p < .05$, $d = .76$). An unanticipated finding was that the opposite pattern of results was found for men. Men in the control condition ($X = 3.04$, $SD = .83$) performed worse than those in the threat condition ($X = 4.61$, $SD = .48$; $t(18) = 5.23$, $p < .05$, $d = 2.3$).

Within the threat condition, there was a significant difference between the performance of men ($X = 4.61$, $SD = .48$) versus women ($X = 3.47$, $SD = .89$; $t(23) = 3.7$, $p < .05$, $d = 1.6$). Thus the hypothesis was supported. Another unanticipated finding in the control condition was the significant difference in the performance of women versus men ($t(23) = 3.29$, $p < .05$, $d = 1.3$). The female interviewees in the control group performed better ($X = 4.1$, $SD = .76$) than their male counterparts ($X = 3.04$, $SD = .83$). See Figure 1.

Discussion

The results of this experiment show that stereotype activation prior to a job interview represents a threat for women, which in turn leads to a hiring disadvantage. The rival hypotheses that the participants did not care how well they performed in the simulated interview workshop for which they volunteered was rejected as were the rival hypotheses that one job description was preferred more by women than men, or that the differences in length of the two job descriptions affected the attractiveness of the managerial job position that was being advertised, or that one job description instilled more confidence in the interviewees than the other.

This research provides external validity for Steele's (1997, 1999) findings in social psychology. Threat of being viewed through the lens of a negative stereotype has an adverse effect on female interviewee performance relative to females who are not stereotyped. The present findings also provide support for

Bergeron et al.'s (2006) conclusions regarding the low performance of women on an in-basket test and those of Kray et al. (2001) involving the low performance of women in a negotiating exercise relative to men.

In previous studies on stereotype threat, objective measures of a targeted person's performance were typically assessed (e.g., the number of mathematical problems solved). The present experiment is only the second to assess a targeted person's performance through the eyes of others. Bosson, Haymovitz and Pintel's (2004) study involved observations of the interactions of gay males with children. The present experiment examined the performance of females and males in the domain of human resource management, namely, their performance in a selection interview as viewed by HR managers.

Previous research has shown that reducing stereotype threat improves the performance of those who have been stigmatized to the point where their performance is similar to those who have not been stigmatized (Spencer et al., 1999; Steele & Aronson, 1995). The practical significance of the present study is that it suggests a way human resource managers can minimize stereotype threat in the selection process. In the present study, only 7 descriptors embedded within a job description were needed to elicit stereotype threat and hence bring about a deleterious effect on the interview performance of women. The performance of women in the control group suggests that to negate stereotype threat, HR managers must ensure that job descriptions are gender neutral. Doing so, ironically, may be to the advantage of female interviewees. When the job description was written in neutral terms, women were seen by HR managers in this study as performing better in the interview than men. A speculative explanation is the fact that women are often found to be more

expressive than men (Briton & Hall, 1995).

An unanticipated finding was that males in the experimental condition performed significantly better in the interview than men in the control group. This finding may be due to stereotype lift (Steele, 1999), whereby a positive stereotype such as “think manager, think male” augments or lifts performance. Evidence for this lift was found in a study by Stone, Lynch, Sjomeling and Darley (1999) on an athletic and an intellectual task involving Black and White Americans.

Limitations and Future Research

An arguable limitation of this study is the use of senior level students in a simulated interview. However, these students were, or soon would be on the job market. It is unlikely that this experiment can be subsequently replicated by following them or fellow cohorts into an actual job interview. Nor is it likely that there is a necessity to do so. The findings from laboratory experiments in organizational psychology generalize quite well to organizational settings (Locke, 1986). As J. Campbell (1986) noted: “Perhaps college students really are people. After all, probably the vast majority of them work, or have worked at a job. Why their disguise fools many observers into thinking otherwise is not clear” (p. 276).

A second limitation is that participants may have behaved differently in an interview for which they were told that the experience would enhance their ability to interview effectively, than in an interview for which they were applying for a job. It is possible that the participants may have taken the opportunity to take more risks in a “training” interview because there were no repercussions for poor performance. Anecdotal evidence, observations of the participants and the manipulation checks for task importance however, suggest that the fourth year students did their best to

perform effectively in the simulated interview.

Future research should investigate other workplace domains that may be susceptible to the effect of stereotype threat (e.g., performance appraisals). Future research should also address whether changing dysfunctional to functional self-talk of women, using techniques developed by Meichenbaum (1971, 1975, 1977) mitigates stereotype threat. This technique has proven to be effective for displaced managers (Millman & Latham, 2001) as well as native North Americans (Latham & Budworth, 2006) and Muslim women over the age of 40 in Turkey (Yanar, Budworth, & Latham, 2009) in finding jobs.

Conclusion

The present study shows that stereotype threat may be partially responsible for women’s underrepresentation in management. The results revealed that women whose identities are threatened due to the “think manager, think male” stereotype underperform in an interview for a managerial position relative to men. Hence, it is imperative for human resource managers to minimize stereotype threat in order to support female managers. Such steps will enable businesses to avoid engaging in behaviors that may reinforce domain-related stereotypes, which may in turn decrease the negative consequences related to stereotype threat.

References

- Aronson, J. M. (Ed.). (2002). *Improving academic achievement: Impact of psychological factors in education*. San Diego, CA: Academic Press.
- Aronson, J., Lustina, M. J., Good, C. Keough, K., Steele, C. M. & Brown, J. (1999). When White men can’t do math: Necessary and sufficient factors in stereotype-threat. *Journal of Experimental Social Psychology*, 35, 29-46.

- Baak, J. Carr-Ruffino, N. & Pelletier, M. (1993). Making it to the top: Specific leadership skills. *Women in Management Review*, 8, 17-23.
- Bartol, K. M. (1999). Gender influences on performance evaluations. In G. N. Powell (Ed.), *Handbook of gender in organizations* (pp. 165–178). Thousand Oaks, CA: Sage.
- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, 31, 634-643.
- Bergeron, D. M., Block, C. J. & Echtenkamp, B. A. (2006). Disabling the able: Stereotype threat and women's work performance. *Human Performance*, 19, 133-158.
- Blascovich, J., Spencer, S. J., Quinn, D., & Steele, C. (2001). African Americans and high school blood pressure: The role of stereotype threat. *Psychological Science*, 12, 225-229.
- Bosson, J. K., Haymovitz, E. L., & Pinel, E. C. (2004). When saying and doing diverge: The effects of stereotype threat on self-reported versus non-verbal anxiety. *Journal of Experimental Social Psychology*, 40, 247-255.
- Boyce, L. A. & Herd, A. M. (2003). The relationship between gender role stereotypes and requisite military leadership characteristics. *Sex Roles*, 49, 365-378.
- Briton, N. J., & Hall, J. A. (1995). Beliefs about female and male nonverbal communication. *Sex Roles*, 32, 79-90.
- Brown, R. P., & Josephs, R. A. (1999). A burden of proof: Stereotype relevance and gender differences in math performance. *Journal of Personality and Social Psychology*, 76, 246-257.
- Cabrera, S. F., Sauer, S.J., Thomas-Hunt, M. C. (2009). The evolving manager stereotype: the effects of industry gender typing on performance expectations for leaders and their teams. *Psychology of Women Quarterly*, 33 (4): 419 DOI: 10.1111/j.1471-6402.2009.01519.x
- Cadinu, M., Maass, A., Rosabianca, A. & Kiesner, J. (2005). Why do women under perform under stereotype-threat? Evidence for the role of negative thinking. *Psychological Science*, 16, 572-578.
- Campbell, J. P. (1986). Labs, fields and straw issues. In E. A. Locke (Ed.), *Generalizing from laboratory to field settings* (pp. 269-279). Lexington, MA: Lexington Books.
- Welbourne, T. (2005). *Women "Take Care," Men "Take Charge": Stereotyping of US Business Leaders Exposed*. New York: Catalyst Publication Code D62; ISBN#0-89584-252-1
- Croizet, J. C., & Claire, T. (1998). Extending the concept of stereotype-threat to social class: The intellectual underperformance of students from low socioeconomic backgrounds. *Personality and Social Psychology Bulletin*, 24, 588-594.
- Davies, P. G., Spencer, S. J., Quinn, D. M., & Gerhardstein, R. (2002). Consuming images: How television commercials that elicit stereotype threat can restrain women academically and professionally. *Personality and Social Psychology Bulletin*, 28, 1615-1628.
- Davies, P. G., Spencer, S. J. & Steele, C. M. (2005). Clearing the air: Identify safety moderates the effects of stereotype threat on women's leadership aspirations. *Journal of Personality and Social Psychology*, 88, 276.

- Davison, H. K. & Burke, M. J. (2000). Sex discrimination in simulated employment contexts: A meta-analytic investigation. *Journal of Vocational Behavior*, *56*, 225-248.
- Dipboye, R.L. (1987). Problems and progress of women in management. In K.S. Koziara, M. H. Moskow, and L. D. Tanner (Eds.), *Working women: Past, present and future* (pp.118-153). Washington, DC: Bureau of National Affairs.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, *109*, 573-598.
- Fernandes, E., & Cabral-Cardoso, C. (2006). The social stereotypes of the Portuguese female and male manager. *Women In Management Review*, *21*(2), 99 – 112.
- Fletcher, C. (1989). Impression management in the selection interview. In R. A. Giacalone & P. Rosenfeld (Eds.), *Impression Management in the Organization* (pp.269-81). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Foschi, M. (1996). Double standards in the evaluation of men and women. *Social Psychology Quarterly*, *59*, 237-254.
- Gmuer, M. (2006). The Gendered Stereotype of the “Good Manager”: Sex Role Expectations towards Male and Female Managers. *The International Review of Management*, *17*(2), 104-121.
- Jones, E. E. (1990). *Interpersonal perception*. New York: W. H. Freeman.
- Hall, E. J. (1993). Waitering/waitressing: Engendering the work of table servers. *Gender and Society*, *7*, 329-346.
- Heilman, M. E. (1995). Sex stereotypes and their effects in the workplace: What we know and what we don't know. *Journal of Social Behavior and Personality*, *10*, 3-26.
- Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues*, *57*, 657-674.
- Heilman, M. E., Block, C. J., Martell, R. F. & Simon, C. (1989). Has anything changed?: Current characterizations of males, females, and managers. *Journal of Applied Psychology*, *74*, 935-942.
- International Labor Organization (2005). Women's employment: Global trends and ILO responses. *ILO Contribution to the 49th Session of the Commission on the Status of Women*. New York: United Nations.
- Klein, O., Pohl, S., & Ndagijimana, C. (2007). The influence of intergroup comparisons on Africans' intelligence test performance in a job selection context. *The Journal of Psychology*, *141*, 453-467.
- Kmec, J. A. (2005). Setting occupational sex segregation in motion: Demand-side explanations of sex traditional employment. *Work and Occupations*, *32*, 322-354.
- Kray, L. J., Thompson, L., & Galinsky, A., (2001). Battle of the sexes: Gender stereotypic confirmation and reactance in negotiations. *Journal of Personality and Social Psychology*, *80*, 942 – 958.
- Kray, L. J., Galinsky, A., & Thompson, L. (2002). Reversing the gender gap in negotiations: An exploration of stereotype regeneration. *Organizational Behavior and Human Decision Processes*, *87*, 386-410.

- Latham, G. P., & Budworth, M. H. (2006). The effect of training in verbal self-guidance on the self-efficacy and performance of Native North Americans in the selection interview. *Journal of Vocational Behavior, 68*, 516-523.
- Latham, G. P., & Sue Chan, C. (1999). A meta-analysis of the situational interview: An enumerative review of reasons for its validity. *Canadian Psychology, 40*, 56-67.
- Link, B. G. & Phelen, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology, 27*, 363-385.
- Locke, E. A. (1986). Generalizing from laboratory to field: Ecological validity or abstraction of essential elements. In E. A. Locke (Ed.), *Generalizing from laboratory to field settings* (pp. 3-9). Lexington, MA: Lexington Books.
- Mayer, D. M. & Hanges, P. J. (2003). Understanding the stereotype threat effect with "culture-free" tests: An examination of its mediators and measurement. *Human Performance, 16*, 207-230.
- McFarland, L. A., Lev-Arey, D. M. & Ziegert, J. C. (2003). An examination of stereotype threat in a motivational context. *Human Performance, 16*, 181-205.
- McGraw, K. O., & Wong, S. P. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods, 1*, 30-46.
- Meichenbaum, D. H. (1977). *Cognitive behavior modification. An integrative approach*. New York: Plenum Press.
- Millman, Z., & Latham, G. P. (2001). Increasing reemployment through training in verbal self-guidance. In E. Miriam, U. Kleinbeck, H. Thierry, (Eds.), *Work Motivation in the Context of a Globalizing Economy*. (pp. 87-97). Mahwah: Lawrence Erlbaum Associates Publishers.
- Nguyen, H. D., O'Neal, A. & Ryan, A. M. (2003). Relating test-taking attitudes and skills and stereotype threat effects to the racial gap in cognitive ability test performance. *Human Performance, 16*, 261-293.
- Nguyen, H. D., & Ryan, A. (2008). Does stereotype threat affect test performance of minorities and women? A meta-analysis of experimental evidence. *Journal of Applied Psychology, 93*, 1314-1334.
- Pierce, J. L. (1996). Reproducing gender relations in large law firms: The role of emotional labor in paralegal work. In C.L. MacDonald & C. Sirianni (Eds.) *Working in the Service Society* (pp.184-219). Philadelphia: Temple University Press.
- Pingitore, R., Dugoni, B. L., Tindale, R. S., & Spring, B. (1994). Bias against overweight job interviewees in a simulated employment interview. *Journal of Applied Psychology, 79*, 909-917.
- Ployhart, R. E., Ziegert, J. C., & McFarland, L. A. (2003). Understanding racial differences on cognitive ability tests in selection contexts: An integration of stereotype threat and applicant reactions research. *Human Performance, 16*, 231-259.
- Powell, G. N., Butterfield, D. A. & Parent, J. D. (2002). Gender and managerial stereotypes: Have the times changed? *Journal of Management, 28*, 177-193.

- Roberson, L., & Kulik, C. T. (2007). Stereotype threat at work. *Academy of Management Perspectives*, 21, 24-40.
- Roberson, L., Deitch, E., Brief, A. P., & Block, C. J. (2003). Stereotype threat and feedback seeking in the workplace. *Journal of Vocational Behavior*, 62, 176-188.
- Roos, P. A., & Manley, J. E. (1996). Staffing personnel: Feminization and change in human resource management. *Sociological focus*, 29, 245-261.
- Ryan, A., Daum, D., Bauman, T., Grisez, M. & Mattimore. (1995). Direct, indirect, and controlled observation and rating accuracy. *Journal of Applied Psychology*, 80(6), 664-670.
- Sackett, P. R., Hardison, C. M., & Cullen, M. J. (2004). On interpreting stereotype threat as accounting for African American-White differences on cognitive tests. *American Psychologist*, 59, 7-13.
- Schein, V. E. (1973). The relationship between sex role stereotypes and requisite management characteristics. *Journal of Applied Psychology*, 57, 95-100.
- Schein, V. E. (1975). Relationships between sex role stereotypes and requisite management characteristics among female managers. *Journal of Applied Psychology*, 60, 340-344.
- Schmader, T. (2002). Gender identification moderates stereotype threat effects on women's math performance. *Journal of Experimental Social Psychology*, 38, 194-201.
- Schmader, T., & Johns, M. (2003). Convergent evidence that stereotype threat reduces working memory capacity. *Journal of Personality and Social Psychology*, 85, 440-452.
- Sczesny, S. (2003). A closer look beneath the surface: Various facets of the think-manager-think-male stereotype. *Sex Roles*, 49, 353-363.
- Skuratowicz, E., & Hunter, L.W. (2004). Where do women's jobs come from? Job resegregation in an American bank. *Work and Occupations*, 31, 73-110.
- Spencer, S. J., Steele C. J. & Quinn, D. M. (1999). Stereotype-threat and women's math performance. *Journal of Experimental and Social Psychology*, 35, 4-28.
- Steele, C. M., (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613-629.
- Steele, C.M. (1999). The psychology of self-affirmation: Sustaining the integrity of the self. In R. F. Baumeister (Ed.), *The self in social psychology: Key readings in social psychology* (pp. 372-390). New York: Psychology Press.
- Steele, C. M. (2003). Stereotype-threat and African-American student achievement. In *Young, Gifted and Black* (p.109-130). Boston: Beacon Press.
- Steele, C. M. & Aronson, J. (1995). Stereotype-threat and the intellectual test performance of African-Americans. *Journal of Personality and Social Psychology*, 69, 797-811.
- Steele, C. M., & Davies, P. G. (2003). Stereotype threat and employment testing: A commentary. *Human Performance*, 16, 311-326.
- Stone, J., Lynch, C. I., Sjomeling, M., & Darley, J. M. Stereotype threat effects on Black and White athletic performance. *Journal of Personality and Social Psychology*, 77, 1213-1227.

- Wheeler S. C., & Petty, R. E. (2001). The effects of stereotype activation on behavior: A review of possible mechanisms. *Psychological Bulletin*, 127, 797-826.
- Willemsen, T. M. (2002). Gender typing of the successful manager – A stereotype reconsidered. *Sex Roles*, 46, 385-391.
- Yanar, B., Budworth, M., & Latham, G.P. (2009) . The effect of training in verbal self-guidance on self-efficacy and reemployment of Turkish women. *Applied Psychology: An International Review*, 58(4), 586-601.

FIGURE 1
The Effect of Stereotype Threat on the Interview Performance of Men and Women

