

The Relationship between Perceived Stereotype Threat, System Justifying Beliefs, and  
Outgroup Attitudes among Women Employees

by

Esra YAMAN

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Esra YAMAN

and have found that it is complete and satisfactory in all respects,  
and that any and all revisions required by the final  
examining committee have been made.

Committee Members:

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Assoc. Prof. Zeynep Cemalcılar

---

Prof. Zeynep Aycan

---

Assoc. Prof. Nida Bikmen

Date:

---

## STATEMENT OF AUTHORSHIP

This thesis contains no material which has been accepted for any award or any other degree or diploma in any university or other institution. It is affirmed by the candidate that, to the best of her knowledge, the thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

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Esra YAMAN



## ABSTRACT

In organizational contexts, previous studies have focused on wide ranging effects of stereotype threat on interpersonal and psychological processes. However, how stereotype threat relate to intergroup processes in the work settings have not been examined before. The current study aimed to investigate how women employees' perceptions of stereotype threat associated with outgroup attitudes toward their male colleagues. We predicted that perception of stereotype threat would be related to women's general, cognitive and affective attitudes toward their male colleagues. Also, we hypothesized that system justifying beliefs of women employees would moderate the relationship between perception of stereotype threat and outgroup attitudes. 199 women living in the United States who were working at least 20 hrs/week participated into our study. Results indicated that women's perception of stereotype threat in their workplace was negatively associated with attitudes toward their male coworkers. However, system justifying beliefs did not moderate this relationship. Women employees changed their perceptions about outgroup members in order to struggle with stereotype threat. Outgroup attitudes relating with perception of stereotype threat might disrupt the quality of peer relationships between male and female employees in the long run. Therefore, intervention programs focusing on how women can cope with stereotype threat might be planned by practitioners.

**Keywords:** Stereotype threat, outgroup attitudes, system justifying beliefs, coworker relationship, intergroup attitudes.

## ÖZET

Çalışma ortamlarında yapılan çalışmalar temel olarak kalıpyargı tehdidinin kişiler arası ve psikolojik süreçler üzerindeki etkisine odaklanmıştır. Kalıpyargı tehdidinin işyerinde gruplar arası süreçleri nasıl etkilediği daha önce incelenmemiştir. Bu çalışmanın, kadın çalışanların çalıştıkları kurumda algıladıkları kalıpyargı tehdidi ve kadınların erkek çalışma arkadaşlarına karşı olan tutumları arasındaki ilişkiyi incelemesi hedeflenmiştir. Algılanan kalıpyargı tehdidinin kadınların erkek çalışma arkadaşlarına karşı olan genel, bilişsel ve duygusal tutumlarını yordayacağını tahmin ettik. Aynı zamanda, katılımcıların sistemi meşrulaştırma inançlarının algılanan tehdit ve dış grup tutumları arasında düzenleyici bir değişken olacağını varsaydık. ABD’de yaşayan ve haftada en az 20 saat çalışan 199 tane kadın çalışmamıza katılmıştır. Algılanan tehdidin kadınların erkek iş arkadaşlarına karşı olan dış grup tutumlarıyla olumsuz yönde ve anlamlı bir şekilde ilişkili olduğu bulunmuştur. Sistemi meşrulaştırma inançları dış grup tutumlarını yordamada kalıpyargı tehdidi ile etkileşim içinde olmamıştır. Bu çalışma kadınların kalıpyargı tehdidi ile mücadele etmek için dış grup hakkındaki algılarını değiştirdiklerini göstermiştir. Algılanan tehdit ile değişen dış grup tutumları çalışanlar arasındaki ilişkinin kalitesine uzun vadede zarar verebilir. Bu yüzden kalıpyargı tehdidini kurumlarda azaltmaya yönelik müdahale programları planlanmalıdır.

**Anahtar Sözcükler:** Kalıpyargı tehdidi, dış grup tutumları, sistemi meşrulaştırma inançları, çalışanlar arasındaki ilişki, gruplar arası tutumlar

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## Chapter 1

### INTRODUCTION

#### 1.1. STATEMENT OF THE PRESENT RESEARCH

Organizations have been trying to eliminate gender prejudice and discrimination in the work settings for a long time. However, women are still underrepresented in many occupations such as management, mathematics, architecture, engineering, science or production (U.S. Department of Labor, 2014). In addition, stereotypes attributed to women employees are affecting both their performance in various organizational tasks and their psychological outcomes (Roberson & Kulik, 2007). The purpose of the current study is to examine stereotype threat as one of the barriers for women employees. The ubiquity of stereotype threat in the organizational settings and its wide-ranging effects beyond short term performance decrements have motivated us to examine how stereotype threat is related to outgroup attitudes in the workplace.

Stereotypes attributed to various groups are salient in work settings, so any employee who belongs to a group having certain stereotypes might experience stereotype threat at any moment of their professional life. Stereotype threat is defined as the fear of being judged and treated according to a negative stereotype about members of your group (Steele & Aronson, 1995). Stereotype threat can result in underperformance in the tasks that belong to domains in which people are negatively stereotyped (Steele, Spencer, & Aronson, 2002). In an early study, African American college students underperformed in a difficult verbal test compared to White students when the test was ‘diagnostic’ of intellectual ability or when they wrote their race on a demographic survey before taking the test (Steele & Aronson, 1995).

In organizational settings, negative effects of stereotype threat have been documented across a wide range of groups and domains, including African Americans employees in

monitoring their performance and in feedback seeking (Roberson, Deitch, Brief, & Block, 2003), LGBT employees in self-reported job performance (Collins, 2007) or older employees in job satisfaction, organizational commitment and turnover intentions (Von hippel, Kalokerinos, & Henry, 2013). Women are one of these groups, too. In organizational contexts, previous studies examining the effect of stereotype threat on women have especially focused on interpersonal and psychological processes. However, to our knowledge, how this threat relate to outgroup attitudes in the work settings have not been studied before. The present study targets to close this important gap. In particular, this study intended to investigate how women employees' perceptions of stereotype threat associated with their attitudes toward male colleagues in their organizations.

Individuals' ideologies and worldviews regarding the legitimacy of existing system indicated how they react to prejudice or discrimination (Major, Gramzow, McCoy, Levin, Schmader, & Sidanius, 2002). In addition, the effect of stereotype threat on women depends on whether they endorse or reject beliefs about the legitimacy of existing gender relations system (Schmader, Johns, & Barquissau, 2004) and depends on the degree to which the political status quo is accepted or rejected (Cheung & Hardin, 2010). Therefore, second purpose of this study is to investigate how women employees' system justifying beliefs will moderate the relationship between perceived stereotype threat and outgroup attitudes toward male colleagues.

## Chapter 2

### LITERATURE REVIEW

#### 2.1. STEREOTYPE THREAT AND ITS EFFECTS ON WOMEN

Stereotype threat has studied across different groups such as African American students in verbal test performance (Steele & Aronson, 1995), White American men in sports performance (Stone, Lynch, Sjomering, & Darley, 1999), gay men in childcare (Bosson, Haymovitz, & Pinel, 2004), low SES students in language skills (Croizet & Claire, 1998), and older people in memory performance (Levy, 1996). “Women” is one of these groups, too. In an early study, Spencer, Steele and Quinn (1999) found that women underperformed on a math test when they thought that math test showed gender differences compared to women who thought the test was ‘gender-neutral’. In addition, changing the gender composition of a group (Inzlicht, Aronson, Good, & McKay, 2006), manipulating the gender of a test administrator (Marx & Roman, 2002) or exposing women to sexist advertisements (Davies, Spencer, Quinn, & Gerhardstein, 2002) disrupts women’s math performance.

Beyond math ability, the effects of stereotype threat on women has widely studied on various domains such as science (Logel, Peach, & Spencer, 2011), political knowledge (McGlone, Aronson, & Kobrynowicz, 2006), spatial reasoning (McGlone & Aronson, 2006), driving (Yeung & von Hippel, 2008), and chess (Maass, D’Ettole, & Cadinu, 2008). In addition to task performance, stereotype threat affected women’s psychological processes such as reducing identification with the ingroup (Pronin, Steele, & Ross, 2004) and distancing themselves from a threatening domain (Steele, 1997; Hoyt, 2005). Another context which stereotype threat can affect women is workplace.

## 2.2. STEREOTYPE THREAT IN THE WORKPLACE

Role Congruity Theory (Eagly & Karau, 2002) states that descriptive stereotypes of women breed negative expectations about them by creating lack of fit between women's attributes and job attributes. On the other hand, every job involves being evaluated by other people, whether by your clients, coworkers or your boss (Roberson & Kulik, 2007). Every organization also gives importance on periodic measurement of employee's performance. Considering both the presence of performance evaluations and existing negative stereotypes about women's performance in the organizational context (Powell, Butterfield, & Parent, 2002), female employees are likely to experience stereotype threat easily in the workplace, which in turn, it might affect their performance or other psychological processes.

Studies which examine how stereotype threat affects women's performance in organizational tasks are rare and were mostly conducted with student samples instead of employees. For instance, Hoyt and Blascovich (2007) examined female students' performance in a leadership task when they were exposed to media images of male leaders and were informed about the gender gap in leadership roles. They found that women who have low leadership efficacy performed worse in the leadership task (a simulated hiring committee) after they experienced stereotype threat compared to more efficacious women. In addition, Bergeron, Block, and Echtenkamp (2006) examined female students' performance in a managerial task. Findings showed that female students gave less correct answers than male counterparts when the previous manager was described with stereotypically masculine characteristics.

Furthermore, there were psychological consequences of stereotype threat on women employees. Hoyt (2005) indicated that women decreased their identification with leadership domain when they were exposed to stereotype threat about women's leadership abilities.

Also, von Hippel, Issa, Ma, & Stokes (2011) found that women working in an international law firm were less likely to feel confidence about reaching their career goals when they perceived stereotype threat in the workplace. In addition to avoidance from stereotyped domain, women employees disidentified from some features of their gender identity when they were exposed to stereotype threat (Von Hippel, Issa, et al., 2011). Besides the effect of stereotype threat on perceptions about stereotyped domain and the ingroup, women employees might also change their perceptions about outgroup members in order to cope with stereotype threat. However, how stereotype threat is related to outgroup attitudes has not examined before. The current study will try to fill this gap.

Besides contributing to the previous literature, this study is important, because understanding how stereotype threat is related to outgroup attitudes will shed light on how managing gender diversity and intergroup relationship in workplaces must be structured. Women's rate of entry into the labor force is increasing day by day, and women began to work into occupations that had been mostly dominated by men before. Stereotype threat might negatively relate to outgroup attitudes, which in turn, attitudes might disrupt relationships with male colleagues. However, female and male colleagues must work together. Since unmanaged gender diversity might damage peaceful peer relationships at work by decreasing employee morale, team building abilities, cooperative and supportive behaviors of employees toward each other (Bergen, Soper & Foster, 2002) it is important to examine how stereotype threat might relate to outgroup attitudes.

### **2.3.STEREOTYPE THREAT AND OUTGROUP ATTITUDES**

In the present study, our aim is to demonstrate how women employees' perception of stereotype threat might associate with outgroup attitudes toward their male colleagues. Whereas some of previous studies supported the expectation that stereotype threat might be related positively to outgroup attitudes, other studies supported that there might be a negative relationship between stereotype threat and attitudes toward men. We will mention both sides respectively in order to constitute the basis of our expectation about the relationship between stereotype threat and outgroup attitudes. Although previous studies showed mixed results, an exploratory research is needed to gain familiarity with the subject area for future investigations must be done.

A series of negotiation studies showed that when women were exposed to the stereotype of women as a poor negotiator explicitly, they outperformed men by starting a negotiation more aggressively and assertively with a higher starting price (Kray, Thompson, & Galinsky, 2001, Study 3). Similar to negotiation, von Hippel, Wiryakusuma, Bowden and Shohet (2011) found that women were explicitly reminded of a masculine stereotype of leadership and associated gender differences, they adopted a more masculine communication style by speaking assertively and confidently with fewer hedges, hesitations, and tag questions compared to women who were not reminded gender differences in leadership. These studies have demonstrated that women challenged the adverse effect of stereotype threat and performed as well as men. They outperformed men by negotiating and communicating exactly just as men behave in these situations. Since women chose to adopt behavioral styles of men, they might identify with some masculine features and feel themselves close to men. Therefore, their perception of stereotype threat might be positively related to attitudes toward men.

Evidence for in support of this position can also be found in studies about ingroup identification and common ingroup identity in the work settings. Women employees who experienced stereotype threat selectively disidentified from aspects of being woman which was perceived to be associated with negative stereotypes while retaining identification with aspects of the group which was unrelated to the stereotyped domain (Pronin et al., 2004; von Hippel, Issa et al., 2011; Von Hippel, Walsh & Zouroudis, 2011). Although identity separation in response to stereotype threat did not mean that women totally rejected their ingroup, decrease in identification with some aspects of their identity might make them close to outgroup members.

Along with decrease in ingroup identification, the presence of common organizational identity in the workplace might reinforce closeness between female and male colleagues. It is also reasonable to take into consideration the presence of superordinate identity and interdependence in the workplace. Female and male employees share a common organizational identity. Superordinate identity increases cooperative intergroup relations and decrease prejudice between groups (Hogg & Terry, 2000; Gaertner, Dovidio, Rust, Nier, & Banker, 1999; Richter, Vest, Dick & Dawson, 2006). In addition, when women thought about characteristics shared between men and women, and about overlapping characteristics between two genders, effect of stereotype threat on their performance reduced (Crisp & Abrams, 2009; Rosenthal & Crisp, 2006). Having a common identity or thinking about commonalities both alleviated negative effects of stereotype threat and improved outgroup attitudes. Since female employees separated their identity in the face of stereotype threat, and organizational superordinate identity is salient, they might be more likely to feel close to male employees. Therefore, women might be more likely to have positive attitudes towards their male colleagues.



On the other hand, women's perception of stereotype threat might also be negatively related to outgroup attitudes toward male colleagues. This counter argument is supported by evidence from spill-over effects of stereotype threat and studies about social identity threat. Individuals were less able to engage in tasks requiring self-control after they have cope with stereotype threat, and it is called as spill-over effect (Inzlicht, Tullett, Legault, & Kang, 2011). The findings related to aggression suggested that women who exposed to stereotype threat about their mathematical ability showed more aggressive behavior towards their partners (Inzlicht & Kang, 2010). Coping with threat caused women to experience interpersonal conflict (Kang & Inzlicht, 2014). This conflict may transfer into relationship with outgroup members, as well. Therefore, perception of stereotype threat might be negatively related to outgroup attitudes in a similar way that it evoked aggression in an interpersonal situation.

Furthermore, studies about social identity threat may be helpful in understanding how stereotype threat might be negatively related to outgroup attitudes. Social identity is portion of an individual's self-concept which is based on their group membership (e.g. social class, religion, gender or sexual orientation etc.), and this identity were important source of self-concept and self-esteem for individuals (Tajfel & Turner, 1979; Rubin & Hewstone, 1998). Individuals divide the world into "them (outgroup)" and "us (ingroup)" based on their social identities. Social identity threat is defined as the feeling of threat because of cultural knowledge or situational cues that indicate one's group is devalued and marginalized (Steele et al., 2002). Previous studies indicated that individuals can cope with social identity threat by explicitly favoring their ingroup over outgroup members (Cadinu & Cerchioni, 2001; Ellemers & Van Rijswijk, 1997; Scheepers, Spears, Doosje, & Manstead, 2006). Derks and Inzlicht's (2008) study which investigating how female participants evaluated men and women when they experienced social identity threat also had found similar results. When women were confronted with threat to group value favored the ingroup and derogated

outgroup in self-report measures (as cited in Derks, Inzlicht, & Kang, 2008). Moreover, women who view a science workshop that was heavily male dominated were less interested in attending this workshop compared to women who view the gender-balanced workshop (Murphy, Steele & Gross, 2007). In sum, social identity threat caused women to have negative attitudes toward men, and also to distance themselves from men.

Unlike social identity threat which is based on a particular social identity they hold, stereotype threat felt by women is based on a group-based stereotype (Steele, 1997). Two are slightly different from each other. However, stereotype threat might also led women to compensate their identity by endorsing negative attitudes toward outgroup members like social identity threat did. Although stereotype threat is not coming directly from the male employees, stereotype threat made people take into consideration both ingroup and outgroup members as a source of comparison (Elizaga & Markman, 2008). Intergroup comparisons evoked by stereotype threat might arouse the presence of outgroup members (Abrams, Eller, & Bryant, 2006; Steele & Aronson, 1995).

Based on studies about interpersonal tasks, ingroup identification and common ingroup identity, perception of stereotype threat might be positively related to outgroup attitudes. On the other hand, studies about social identity threat and spill-over effects of stereotype threat suggested that women employees' perception of stereotype threat might be negatively related to outgroup attitudes toward male colleagues. Therefore, we thought that it would be more reasonable to explore how two variables would be related to each other without forming a directional hypothesis. We hypothesized that women's perception of stereotype threat will be related to outgroup attitudes toward their male colleagues.

In this study, we measured how much women employees perceive stereotype threat in their own workplaces through a self-report measure. It is suggested that an alternative way of

studying stereotype threat in an applied setting is to use self-report measure rather than manipulating it experimentally (Sackett, 2003). Dependent variables are general attitudes toward male colleagues, cognitive attitudes and affective attitudes toward male colleagues. Literature shows that cognitive and affective components of intergroup attitudes might be independent from each other (Hewstone, Rubin, & Willis, 2002; Mackie, & Smith, 1998). For instance, women may believe men to have desirable traits such as intelligent and responsible, but women may dislike them and have negative feelings towards them at the same time. Individual's affective and cognitive attitudes toward outgroup members might differ from each other, because there are situational factors (e.g. times of social change) and individual (e.g. right wing authoritarianism) factors which determine this difference (Esses, Haddock, & Zanna, 1993). Therefore, we added measures of both affective and cognitive attitudes. In addition, we used another scale called *general attitudes* in order to assess women's attitudes toward peer relationship with their male colleagues. Since we do not have any behavioral measures, we added this scale to catch women's attitudes toward working with their colleagues or interacting with them.

#### **2.4. PERCEPTION OF STEREOTYPE THREAT, SYSTEM JUSTIFICATION BELIEFS AND OUTGROUP ATTITUDES**

According to System Justification Theory (Jost & Banaji, 1994), individuals have motivation to defend and rationalize the legitimacy of existing social arrangements despite of inequalities in them. People differ in terms of the extent to which they believe the current economic and social system as fair and legitimate (Huddy, 2004). Individual differences in system-justification beliefs determine how likely and unlikely people engage in supporting and justifying the system. Besides, the motivation to justify existing status systems can sometimes exceed motives to enhance self and the ingroup (Jost & Banaji, 1994; Jost & Burgess, 2000).

There are important consequences of system justifying beliefs for attitudes toward social groups. Previous studies indicated that endorsement of legitimizing beliefs resulted in less ingroup favoritism and ingroup identification (Ellemers, Wilke, & Van Knippenberg, 1993), increased outgroup favoritism (Schmader, Major, Eccleston, & McCoy, 2001; Jost, Kivetz, Rubini, Guermendi, & Mosso, 2005) among lower status groups. In addition, women who endorsed system legitimizing beliefs about status differences in society were more likely to endorse gender stereotypes (Schmader et al., 2004; Jost & Banaji, 1994), and were more likely to be distracted by stereotype threat (Cheung et al., 2010). System justifying beliefs are related to both outgroup attitudes and stereotype threat. Therefore, we expected that the relationship between stereotype threat and outgroup attitudes might be moderated by women's system legitimizing beliefs.

Research about the relationship between perceived discrimination might be helpful in understanding how system justification beliefs might this relationship. Women's greater endorsement of system justifying ideologies was associated with lower perception of discrimination when they experienced discrimination by an outgroup (Major et al., 2002). In addition, women's greater endorsement of meritocratic ideology was positively related to attribution of blame to their ingroup members when women experienced discrimination against their ingroup (Major, Kaiser, O'Brien, & McCoy, 2007). Women who strongly endorsed system justifying beliefs were more likely to favor men and to blame women because of the discrimination targeted themselves. This occurs, because individuals who strongly endorsed system legitimizing beliefs were more likely to be stressed in the face of discrimination (Jost, Pietrzak, Liviatan, Mandisodza, & Napier, 2008; Eliezer, Townsend, Sawyer, & Major, 2011). They got stressed, because discrimination is a challenge to the legitimacy of the existing system (Major et al., 2007). Therefore, they favored men and blamed women because of discrimination in order to restore legitimacy of the system which

was challenged by the event of discrimination. Those who less strongly endorsed system justifying beliefs might not experience stress as much as others, because it confirms their worldview about illegitimacy of the system.

Similar to discrimination, acknowledging stereotype threat might pose a threat to the perceived legitimacy of system in the workplace. Women who strongly endorsed system justifying beliefs might be more likely to feel stress, and to have motivation to restore the legitimacy of the system than those who less strongly endorsed these beliefs. Therefore, women who strongly endorsed system justifying beliefs would be more likely to have positive attitudes toward men compared to those who less strongly endorsed these beliefs.

An equally significant aspect of system justifying beliefs is reducing negative affect and frustration; increasing positive affect and satisfaction with one's situation among both disadvantaged and advantaged groups (Jost, Pelham, Sheldon & Sullivan, 2003; Wakslak, Jost, Tyler & Chen, 2005). The more they believed system justifying ideologies, the more they report being satisfied with their own economic situation. Relating to satisfaction with current situation, they were more likely to resist social change which target to improve their disadvantaged status. Because of increased satisfaction and decreased desire for social change, women who strongly endorsed system justifying beliefs might be less likely to cope with stereotype threat and challenge outgroup members.

We measured women employees' system justification beliefs that were operationalized as the degree of ideological support a women employee shows for the existing state of gender relations and sex role division in their workplaces. We assessed women's specific system justification beliefs based on workplace instead of measuring diffuse form of system justification, because we wanted to investigate the relationship between perception of stereotype threat and outgroup attitudes at work. Asking beliefs about the fairness and

legitimacy of the prevailing social system in general might not relate to workplace experiences. We predicted that system justifying beliefs of women employees would moderate the relationship between perception of stereotype threat and outgroup attitudes in such a way that women who strongly endorsed system justifying beliefs would be more likely to have positive attitudes toward male colleagues than those who less strongly endorsed these beliefs.

## 2.5. THE PRESENT STUDY

The first aim of the current study is to examine whether women employees' perception of stereotype threat is related to outgroup attitudes toward male coworkers. Second aim of the current study is to examine whether women employees' system justification beliefs will moderate the relationship between stereotype threat and attitudes toward men. To test our hypotheses, we chose a population of female employees working in USA. There were several reasons of choosing a sample from USA. To our knowledge, any study about the relationship between stereotype threat and women employees has not conducted in Turkey. We were not sure whether gender stereotypes about working women were also applicable for Turkish culture or not. In addition, we wanted this study to be comparable with other existing studies about stereotype threat in the literature. We used a survey design. We measured three dependent variables: women employees' general attitudes, cognitive attitudes and affective attitudes toward male coworkers. We included three control variables: Domain identification, gender identification and stigma consciousness.

*Domain identification* refers to the degree to which an individual personally values achievement in a given domain. Research suggested that the stronger individuals identified with the domain, the more their performance in that domain were affected by stereotype threat (Aronson, Lustina, Good, Keough, Steele, & Brown, 1999). Therefore, women employees'

identification with their current job was included as a control variable. *Stigma consciousness* is the extent to which targets of a stereotype expect to be stereotyped (Pinel, 1999). Individuals are more likely to be affected by stereotype threat when they have high stigma consciousness than those who have low stigma consciousness (Brown & Pinel, 2003). Also, women's levels of stigma consciousness were associated with evaluations toward men (Pinel, 2002). Since stigma consciousness was related to both stereotype threat and outgroup attitudes, it was included as a control variable, too. *Gender identification* refers to the importance individuals place on their gender identity. Schmader (2002) demonstrated that gender identification moderated women's experience of stereotype threat in math performance. Ingroup identification was also positively associated with negative outgroup attitudes and hostility (Duckitt & Mphuthing, 1998). Therefore, identification with being women was also included as a control variable. In sum, women employees with high stigma consciousness, high job identification and high ingroup identification might perceive stereotype threat more than other women. Therefore, it is necessary to control these variables in the relationship between stereotype threat and outgroup attitudes.

## Chapter 3

### METHOD

#### 3.1 PARTICIPANTS AND PROCEDURES

One hundred ninety nine English-speaking women living in the United States participated in a web-based survey through Amazon's Mechanical Turk (MTurk; [www.mturk.com](http://www.mturk.com)). MTurk is an online crowd-sourcing marketplace where people can complete short tasks for small amounts of compensation. Individuals register as "requesters" (task creators) or as "workers" (paid task completers) there. As a requester, we created the survey and posted it virtually by linking workers to an external online survey tool, Qualtrics. The title of the task was "Working women's employment experiences (FEMALE PARTICIPANTS ONLY)". As workers, participants browsed the link of the task, and participated into the survey. The survey took about 14 minutes to complete on average. They were compensated with \$0.70 when participants completed the task successfully.

Research has shown that participants from MTurk are better than American college student samples and other internet samples in terms of demographic diversity and it produces reliable data (Buhrmester, Kwang, & Gosling, 2011). When well-established findings in psychology literature have been replicated with MTurk samples, it has produced valid data as well (Horton, Rand, & Zeckhauser, 2011). However, there is concern that the worker in MTurk simply answered questions randomly or rushes through the study. In order to prevent it, we only accepted Workers with a 95% approval rating or above to participate into study. Approval rating is the percentage of assignments submitted that have been approved for the WORKER. Another possible solution is to be sure to check the "Time Completed" data column for each Worker (Johnson & Borden, 2012). We checked "Time Completed" data column for each worker, and they took a reasonable amount of time to complete the survey.



Table 3.1 shows percentage of participants' demographic characteristics. Average age was 36.22 years ( $SD=12.45$ ). The sample as a whole was relatively young. The majority of the participants were in the range of 20 to 45 years old. More than half of the participants had college degree or above. The majority of the participants earns less than \$60,000 and has been working in their current position since more than 1 year.

Table 3.1  
*Demographic characteristics of the participants (N=199)*

	Percentage
Age	
20-29 years old	37,7
30-44 years old	39,2
45-64 years old	19,6
65+ years old	2,5
Education	
High school diploma or less	11,6
Some college, no degree	25,1
College degree	50,8
Graduate degree	12,6
Income	
Under \$20,000	21,6
\$20,000 - \$40,000	43,2
\$40,001 - \$60,000	22,6
\$60,001 - \$80,000	7,5
\$80,001 +	5,0
Current Employment Status	
One full-time job	88,4
One part-time job	9,0
Two or more part time jobs	2,5
Tenure	
0 - 6 months	6,0
6 - 12 months	10,6
1 - 5 years	45,7
5-10 years	27,1
More than 10 years	10,6

Table 3.2 shows percentage of three workplace characteristics: Employee size, percentage of women colleagues, and percentage of women managers. More than half of the participants worked for companies that employed more than 100 employees (58%). In addition, more than half of the participants (60%) worked for companies in which female

employees composed of more than half of the work force. On the other hand, less than half of the participants (44%) worked for organizations in which women managers composed of more than half of managerial positions.

Table 3.2  
*Frequency distributions of workplace characteristics (N=199)*

Percentage of women colleagues			
		0 %-24%	12,6
		25%-49%	27,1
		50%-74%	35,7
		75%-100%	24,6
Percentage of women managers			
		0 %-24%	35,2
		25%-49%	20,6
		50%-74%	29,6
		75%-100%	14,6
Employee Size			
		< 100 employees	41,2
		100-499 employees	22,6
		500-1,000 employees	11,1
		1,001 to 10,000 employees	16,6
		>10,000 employees	8,5

Table 3.3 shows the industry in which women employees were employed. The occupations listed by the respondents were categorized by Job Families and their accompanying Occupational Code Assignment (OCA) in accordance with the O\*NET-SOC (Occupational Information Network-Standard Occupational Classification) based system (O\*NET Resource Center, 2006). More than half of the participants (55 %) came from four areas: Education, Training, and Library occupations; Healthcare Practitioners and Technical Occupations; Sales and Related Occupations; Business and Financial Operations Occupations. This pattern indicated that the participants' occupations have diversity.

Table 3.3  
*Distributions for Occupational Type (N=199)*

Occupations	%
Education, Training, and Library	19,1
Healthcare Practitioners and Technical Occupations	13,6
Sales and Related Occupations	13,6
Business and Financial Operations Occupations	11,5
Information Technologies	9,5
Community and	6,5
Production Occupations	5,5
Food Preparation and Serving Related Occupations	5,0
Office and administrative support occupations	4,0
Arts, Design, Entertainment, Sports, and Media Occupations	3,5
Legal Occupations	1,5
Construction and Extractions Occupations	1,5
Architecture and Engineering Occupations	0,5
Protective Service Occupations	0,5
Transportation and Material Moving Occupations	0,5
Not Reported	3,5
Total	100

### 3.2. MEASURES

The survey consisted of nine measures and demographic questions (See Appendices for all scales). Demographic section requested information regarding participants' age, level of education, income, current employment status, tenure in current position, position in the organization, and industry in which they were working. In addition, we asked them about three characteristics of the workplace: the number of employees, percentage of women employees and percentage of women managers in the organizations.

#### 3.2.1. Predictor variables

**3.2.1.1. Perceived stereotype threat.** A total 24 items were generated on the basis of von Hippel, Issa et al. (2011)'s 5-items Stereotype Threat Scale, Ployhart, Ziegert, and McFarland (2003)'s 11-items Stereotype Threat Questionnaire, and 8-items that we

constructed. Likert-type response scale was ranging from 1 “strongly disagree” to 7 “strongly agree”. Higher scores indicate that women employees experience higher stereotype threat in their workplace.

Sample items from von Hippel, Issa et al. (2011)’s scale include “Some of my colleagues feel that I have less ability because I’m a woman.” and “None of my colleagues feel that I’m limited in my career because I’m a woman.”(Reverse coded). We used 11 of 15 items from Ployhart et al. (2003)’s scale. Because their scale was developed to measure stereotype threat among African American students, all items were not appropriate for a job setting and women employees. Hence, we adapted 11 items to reflect stereotypes relevant to women in the workplace. Sample items include “In the workplace I want to show that women can perform as well as men.” and “I rarely wonder if my supervisors judge my job performance based on my gender” (reverse coded). Last, we prepared 8 items to tap attentional and emotional outcomes of stereotype threat in the job setting. Scale items and newly added items were submitted to an exploratory factor analysis. Newly added items were highly correlated with other old items. They have enough factor loadings in an initial factor analysis. The two factor solution, which explained 49% of the variance, was preferred because of its previous theoretical support (Ployhart et al., 2003). All items had primary loadings over .5. Sample items include “When I think that I am a woman, I get distracted from the work”, and “When I think that I am a woman, I do not have difficulty in regulating my attention in complex tasks” (reverse coded). We combined scores of three stereotype threat scales in order to have one score of perceived stereotype threat. The Cronbach’s  $\alpha$  for 24 items were found to be .917.

**3.2.1.2. System justification beliefs.** Jost & Kay (2005)’s 8-items Gender-Specific System Justification Questionnaire was used to measure women employees’ system justification beliefs about current system of gender relations in their workplaces. While

original scale assessed how much an individual believe that the current state of gender relations and sex role division in the world is fair and just, we adapted it into workplace context. Sample items include, “In general, relations between men and women are fair in the workplace” and “Most workplace policies relating to gender and the sexual division of labor serve the greater good”. Likert-type response scale was ranging from 1 “strongly disagree” to 7 “strongly agree”. Higher scores indicated that women had more support for the current state of gender relations, in other words, they had stronger system justifying beliefs. Cronbach’s  $\alpha$  was .81, which is higher than what Jost and Kay (2005) found across their undergraduate or graduate students sample ( $\alpha = .65$ ).

### **3.2.2. Dependent Variables**

**3.2.2.1 General Attitudes toward Male Colleagues.** A total of 23 items were generated on the basis of Ely (1994)'s Peer Relationships Questionnaire, and Liden and Maslyn (1998)'s Leader-Member Exchange Scale. Additionally, 6 items were created in order to measure women employees’ attitudes toward their male colleagues. Likert-type response scale was ranging from 1 “strongly disagree” to 7 “strongly agree”. Higher scores indicated that women employees had more positive attitudes toward their male colleagues.

Leader-Member Exchange Scale measures women employees’ attitudes about their relationship with male colleagues. We adapted items by changing the word “supervisor” into “my male coworkers” to tap women’s out-group attitudes relevant to job setting. We included 9 of 12 items that were appropriate for coworker relationship instead of leader-employee relationship. Sample item includes, “I do not mind working my hardest for my male coworkers” and “My male coworkers are a lot fun to work with”. Ely (1994)'s Peer Relationships Questionnaire originally measures women employees’ attitudes toward other female coworkers. We adapted 8 items by changing the word “women partners” into “male

coworkers”. Sample item includes, “I feel that the men I have worked with do not work hard and/or not as competent as they should be” (reverse-coded) and “The male colleagues in my firm present positive image of men”. Remaining 6 items were constructed with respect to behavioral instances in any workplace setting. Sample items include, “I often discuss with my male colleagues about politics, current affairs, crafts or cooking”. We combined responses to all items into a single mean to serve as a global measure of attitudes toward male colleagues. Cronbach's  $\alpha$  for 23 items was .909.

**3.2.2.2. Cognitive Attitudes.** We used Coworker subscale of Job Descriptive Index to measure cognitive attitudes toward male colleagues (Balzer, Smith, Kravitz, Lovell, Paul, Reilly & Reilly, 1990). We used 13 negative and 13 positive adjectives. Sample items include “Stimulating, Smart, Honest” for positive and “Boring, Lazy, Rude” for negative. Participants were asked to evaluate how much each adjective describes their male colleagues in general. Likert-type response scale was ranging from 1 “not at all” to 5 “Extremely very much”. Negative adjectives were reverse-coded and higher scores indicated more positive cognitive attitudes toward male coworkers. Cronbach's  $\alpha$  for all items is .945.

**3.2.2.3 Affective Attitudes.** Participants were asked to indicate the degree to which they felt positive/warm toward coworkers on a widely used and validated feelings thermometer (Esses, Haddock, & Zanna, 1993). The thermometer is labeled at 10° increments starting from 0 °C (extremely negative) to 100 °C (extremely positive). Participants provided a rating on this scale separately for women and men coworkers. The evaluation thermometer items were considered reliable. Jaccard, Weber, and Lundmark (1975) has revealed that single-item attitude measures that are purely evaluative are as reliable as multi-item measures and yield the same results as multiple-item assessment devices. The thermometer measure has been successfully used in past research in the domain of intergroup attitudes (Esses et al., 1993).

### 3.2.3 Control Measures

**3.2.3.1. Stigma consciousness questionnaire.** Pinel (1999)'s 10 item Stigma Consciousness Questionnaire (SCQ) was used to assess the extent to which women employees expect to be stereotyped by others. Sample items include "When interacting with men, I always feel as though they interpret my behavior in terms of the fact that I am a woman," and "Stereotypes about women have never affected me personally" (reverse scored). Likert-type response scale was ranging from 1 "strongly disagree" to 7 "strongly agree". Higher scores indicate a higher expectation of being stereotyped by others. Cronbach's  $\alpha$  was .860 for our sample, which is similar to what Pinel (1999) found across their student sample ( $\alpha = .77$ ).

**3.2.3.2. Gender identification scale.** A total 15 items were generated on the basis of Private collective self-esteem and Importance to Identity subscales of Collective Self-Esteem Scale (Luhtanen & Crocker, 1992), Women Centrality Scale (Sellers, Rowley, Chavous, Shelton, & Smith, 1997), Doosje, Ellemers & Spears (1995)'s scale, and Inclusion of Ingroup into Self Scale (Wright, Aron, & Tropp, 2002). Sample items include: "Being a woman is an important reflection of who I am.", "Being a woman is not a major factor in my social relationships." (Reverse coded), and "I identify myself with other women." Likert-type response scale was ranging from 1 "strongly disagree" to 7 "strongly agree". The higher scores indicate stronger identification with other women. We combined responses to these four scales into a single mean to serve as a global measure of gender identification. Cronbach's  $\alpha$  for 15 items was .864.

**3.2.3.3 Job identification scale.** Math Identification Questionnaire (MIQ) (Brown & Josephs, 2000) was adapted to job domain. Five new items were added to the original four items. Sample items include: "My job is very important for me" and "My job abilities and skills do not inform about my personality." (reverse-coded). The items that we

added as follows: “I want other people to know me with my success in the work life” and “Success in my job affects my self-confidence”. Higher scores indicated that women felt greater identification with their job and success in job performance. Cronbach's  $\alpha$  of 9 items was .636. There was increase in  $\alpha$  achieved by eliminating two items (.720). Thus, we did not include these items into total score.





## Chapter 4

### RESULTS

To examine the relationship between perceived stereotype threat and outgroup attitudes, separate hierarchical regression analyses were carried out by using IBM SPSS Statistics 21. Before main analysis, bivariate correlations were computed. Lastly, to examine the moderating effect of system justification beliefs, separate hierarchical regression analyses were carried out.

#### 4.1. DESCRIPTIVE FINDINGS AND PEARSON CORRELATION COEFFICIENTS FOR THE STUDY VARIABLES

Summary of descriptive statistics of study variables are presented in Table 4.1. As can be seen, average of perceived stereotype threat in this sample was less than midpoint which suggested that women employees were experiencing stereotype threat moderately. However, average of system justification beliefs was more than midpoint which suggested that this sample of women employees highly believed that current gender relations in their organization are fair and just.

Bivariate correlations were computed to see the pattern and the strength of the associations among variables. Correlations were presented in Table 4.1, too. Only significant correlations were reported below. Perception of stereotype threat was significantly and negatively correlated with general attitudes ( $r = -.39, p < .001$ ), cognitive attitudes ( $r = -.49, p < .001$ ), and with affective attitudes ( $r = -.39, p < .001$ ) toward male coworkers. The more they perceived stereotype threat in the workplace, the less positive attitudes toward male colleagues they reported.

Furthermore, there was a negative correlation between women employees' perception of stereotype threat and their system justification beliefs ( $r = -.40, p < .001$ ), job identification

( $r = -.17, p < .05$ ), gender identification ( $r = -.23, p < .05$ ). However, stigma consciousness ( $r = -.41, p < .001$ ) was positively correlated with perception of stereotype threat.

Among the demographic variables, women employees' age ( $r = -.27, p < .001$ ) and tenure ( $r = -.19, p < .01$ ) were negatively associated with women's perception of stereotype threat. Participants' age ( $r = .19, p < .01$ ) and tenure ( $r = .17, p < .05$ ) were also positively correlated with cognitive attitudes. Older women employees perceived more stereotype threat in the workplace, and also, they had more positive cognitive attitudes toward their male colleagues compared to younger women. Also, the longer women employees worked in their current position, the less they experienced stereotype threat, and also the more positive cognitive attitudes toward their male colleagues. Perception of stereotype was also negatively correlated with number of women employees ( $r = -.34, p < .001$ ), and number of women managers ( $r = -.27, p < .001$ ) in participants' organizations.

Table 4.1

*Bivariate Correlations, Means and Standard Deviations of Study Variables (N=199)*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	M	SD
1-Perceived Stereotype Threat	1	-.40**	-.39**	-.49**	-.39**	-.17*	-.23**	.41**	-.27**	.00	-.19**	-.02	-.34**	-.27**	3.06	.89
2-System Justification Beliefs		1	.48**	.45**	.35**	.17*	.17*	-.59**	.05	-.14*	.04	.06	-.05	.06	4.44	.93
3-General Attitudes			1	.76**	.68**	.34**	.20**	-.36**	.09	-.06	.14*	.10	-.06	-.04	4.86	.72
4-Cognitive Attitudes				1	.72**	.33**	.20**	-.35**	.19**	-.05	.17*	.01	.06	.02	4.84	.58
5-Affective Attitudes					1	.23**	.19**	-.25**	.08	.02	.07	.08	.04	-.03	70.83	17.33
6-Job Identification						1	.42**	.07	.08	.02	.09	.09	.05	.07	5.22	.77
7-Gender Identification							1	-.00	.12	-.03	.09	.01	.13	.04	5.07	.88
8-Stigma Consciousness								1	-.07	.13	-.07	-.13	-.01	.02	4.12	.99
9-Age									1	.09	.48**	.02	.19**	.13	36.22	12.45
10-Education										1	.16*	.36**	.03	.08		
11-Tenure											1	.22**	.06	.11		
12-Income												1	-.21**	-.07		
13- % of women employee													1	.29**		
14-% of women manager														1		

Note: Correlations marked with an asterisk (\*) were significant at 0.05 level (2-tailed)

Correlations marked with an asterisk (\*\*) were significant at 0.01level (2-tailed)

## 4.2. TESTING THE PERCEPTION OF STEREOTYPE THREAT

A series of three hierarchical multiple regression analysis were run separately to examine if perception of stereotype threat contributed a unique proportion of variance to general attitudes, cognitive attitudes and affective attitudes toward male colleagues after controlling for the job identification, gender identification and stigma consciousness. The results were summarized in Table 4.2.

In the first analysis, general attitudes toward male colleagues were dependent variable. The results indicated that job identification ( $\beta = -.35, p < .001$ ), gender identification ( $\beta = -.05, p = .442$ ), and stigma consciousness ( $\beta = -.38, p < .001$ ), were significantly correlated with general attitudes toward male colleagues  $F(3,195) = 24.29, p < .001$  in the first step. In the second step, perception of stereotype threat ( $\beta = -.21, p < .01$ ) significantly and negatively related to general outgroup attitudes, ( $F(1,194) = 10.05, p < .01$ ).

In the second of analysis, dependent variable was cognitive attitudes toward male colleagues. The results showed that job identification ( $\beta = .33, p < .001$ ), gender identification ( $\beta = .06, p = .370$ ), and stigma consciousness ( $\beta = -.37, p < .001$ ), were significant predictors of cognitive attitudes toward male colleagues  $F(3,195) = 22.63, p < .001$  in the first step. In the second step, women's perception of stereotype threat significantly and negatively related to cognitive attitudes toward male colleagues ( $\beta = -.34, p < .001$ ),  $F(1,194) = 26.77, p < .001$ .

In the third analysis, affective attitudes toward male colleagues were the dependent variable. Job identification ( $\beta = .20, p < .01$ ), gender identification ( $\beta = .10, p = .139$ ), and stigma consciousness ( $\beta = -.26, p < .001$ ), were significant related to affective attitudes  $F(3,195) = 10.434, p < .001$  in the first step. In the second step, results indicated that women's perception of stereotype threat significantly and negatively associated with affective attitudes toward their male coworkers ( $\beta = -.29, p < .001$ ),  $F(1,194) = 15.87, p < .001$ . Results of three

regression analyses confirmed our research hypotheses that perception of stereotype threat and outgroup attitudes were significantly related to each other. As women perceived stereotype threat in the workplace, they reported less positive attitudes toward their male coworkers.

Table 4.2  
*Hierarchical Multiple Regression Analysis Predicting Positive Attitudes toward Male Colleagues from Perceived Stereotype Threat (N=199)*

Criterion: General Attitudes		B	St. $\beta$	R <sup>2</sup>	$\Delta$ R <sup>2</sup>	F	$\Delta$ F
Step 1				.27	.27	24.29	24.29***
	Stigma Consciousness	-.28	-.38***				
	Gender Identification	.04	.05				
	Job Identification	.32	.35***				
Step 2	Perceived Stereotype Threat	-.17	-.21**	.30	.03	21.58	10.05***
Criterion: Cognitive Attitudes		B	St. $\beta$	R <sup>2</sup>	$\Delta$ R <sup>2</sup>	F	$\Delta$ F
Step 1				.25	.24	22.63	22.63***
	Stigma Consciousness	-.22	-.37***				
	Gender Identification	.04	.06				
	Job Identification	.25	.33***				
Step 2	Perceived Stereotype Threat	-.22	-.34***	.34	.09	25.91	26.77***
Criterion: Affective Attitudes		B	St. $\beta$	R <sup>2</sup>	$\Delta$ R <sup>2</sup>	F	$\Delta$ F
Step 1				.13	.13	10.43	10.43***
	Stigma Consciousness	-4.67	-.26***				
	Gender Identification	2.13	.10				
	Job Identification	4.55	.20**				
Step 2	Perceived Stereotype Threat	-5.05	-.29***	.20	.06	12.39	15.87***

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Higher scores on general attitudes, cognitive attitudes and feeling temperature indicate positive attitudes and feelings toward male colleagues.

In addition, a series of three hierarchical multiple regression analysis were run separately to examine the relationship of stereotype threat with outgroup attitudes toward male colleagues after controlling for three demographic variables: participants' age, education level, and tenure; two variables about workplace characteristics: percentage of women colleagues and percentage of women managers in their organizations. These five variables did not predict any three variable of outgroup attitudes, so we did not report further analysis.

### **4.3. TESTING THE MODERATOR**

We aimed to find out whether the relationship between perception of stereotype threat and outgroup attitudes altered as women's system justification beliefs changed. To test the hypothesis that women employees' perception of stereotype threat would be positively associated with negative attitudes toward male colleagues as the endorsement of system justification beliefs decreased, three steps hierarchical multiple regression analysis was performed.

First, a new variable (interaction term) is computed by taking cross products of predictor (perceived stereotype threat) and moderator variable (system justification beliefs). Second, a hierarchical regression analysis is conducted, entering control variables (Job Identification, Stigma Consciousness and Gender identification) in the first step. Perceived stereotype threat and system justification beliefs were entered to the second step. Lastly, the interaction term was entered to the analysis in the third step. Table 4.3 summarizes the result of analyses.

In the first analysis, general negative attitudes toward male colleagues are the outcome variable. Results showed that interaction of system justification beliefs and stereotype threat could not explain additional variance on general attitudes toward men,  $F(1,192) = .016$ ,  $p = .898$ . It was found that interaction between women's perception of stereotype threat and

system justification beliefs did not predict negative general attitudes toward male ( $\beta = -.03, p = .898$ ). Our hypothesis was not supported.

Similarly, interaction between women's perception of stereotype threat and system justification beliefs did not explain additional variance on cognitive attitudes,  $F(1,192) = .03, p = .855$ , and on favorable thermometer evaluations,  $F(1,192) = .008, p = .928$  toward male colleagues.

Table 4.3

*Hierarchical Multiple Regression Analyses Testing the Moderating Effect of System Justification Beliefs on the Relationship between Perceived Stereotype Threat and Attitudes toward Male Colleagues (N=199).*

General Attitudes		B	St. $\beta$	R <sup>2</sup>	$\Delta R^2$	F	$\Delta F$
Step 1.	Job Identification	.32	.35***	.27	.27	24.29	24.29
	Stigma Consciousness	-.28	-.38***				
	Gender Identification	.04	.05				
Step 2	Perceived Stereotype Threat	-.14	-.18**	.35	.08	21.15	12.23
	System Justification Beliefs	.22	.28***				
Step 3.	PST X SJBs	-.00	-.03	.35	.00	17.54	.01
Cognitive Attitudes		B	St. $\beta$	R <sup>2</sup>	$\Delta R^2$	F	$\Delta F$
Step 1	Job Identification	.25	.33***	.25	.252	22.63	22.63
	Stigma Consciousness	-.22	-.37***				
	Gender Identification	.04	.06				
Step 2	Perceived Stereotype Threat	-.20	-.31***	.37	18.26	23.29	18.26
	System Justification Beliefs	.13	.22**				
Step 3	PST X SJBs	.00	.04	.37	.00	19.32	.03
Affective Attitudes		B	St. $\beta$	R <sup>2</sup>	$\Delta R^2$	F	$\Delta F$
Step 1	Job Identification	4.55	.20**	.13	.13	10.43	10.43
	Stigma Consciousness	-4.67	-.26***				
	Gender Identification	2.13	.10				

Step 2	Perceived Stereotype Threat	-5.14	-.26***	.22	.08	11.21	10.81
	System Justification Beliefs	3.60	.19*				
Step 3	PST X SJBs	.11	.02	.22	.00	9.30	.00

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Higher scores on general attitudes, cognitive attitudes and feeling temperature indicate positive attitudes and feelings toward male colleagues.



## Chapter 5

### DISCUSSION

#### 5.1. THE KEY FINDINGS OF THE STUDY

The main objective of this study was to examine the relationship between perception of stereotype threat and outgroup attitudes. Since there were not enough study in this field and there were conflicting results in the literature, we predicted that women employees' perception of stereotype threat would be related to outgroup attitudes toward their male colleagues. We found that women employees' perception of stereotype threat was negatively related with attitudes toward male colleagues. The more stereotype threat women employees perceived the less positive outgroup attitudes toward male employees they reported. It could also be said that women employees felt threatened because of their colleagues' and other people's stereotypical beliefs and thoughts about women's job performance and ability. In turn, they endorsed less positive attitudes toward their male colleagues. Surprisingly, system justifying beliefs did not moderate this relationship. The results were discussed considering the relevant previous literature, implications and limitations of the study.

The current study has made a contribution to the debate about the applicability of stereotype threat outside the laboratory settings. Although the negative effects of stereotype threat on performance which were commonly showed in laboratory settings, studies in applied settings often failed to replicate same results (Mayer & Hanges, 2003; McFarland, Lev-Arey, & Ziegert, 2003; Nguyen, O'Neal, & Ryan, 2003; Ployhart, Ziegert, & McFarland, 2003; Sackett, 2003). It has reasoned that the decrease in performance are less relevant in organizational settings because employees are highly motivated and performance-based incentives and recognitions exist to perform highly (Sackett, Schmitt, Ellingson & Kabin, 2001; Sackett, 2003). This debate leads many I-O psychologists not to focus on studies

investigating how stereotype threat might be related to other important outcomes in the workplace beyond performance deficits (Kalekorinos, Von Hippel & Zacher, 2014; Inzlicht, Tullett, Legault, & Kang, 2011). Since stereotype threat might be more likely to affect employees' work-related and organization-related outcomes (Von Hippel, Issa et al., 2011; Von Hippel et al., 2013), it is crucial to examine how stereotype threat is associated with other domains beyond job performance. Current study also examined one of other domains that was outgroup attitudes toward male colleagues, and we found that stereotype threat and outgroup attitudes were related negatively to each other. As we have seen, investigation of stereotype threat beyond performance deficits might be more relevant and meaningful for workplace settings.

Women employees may experience prejudice, discrimination or sexist remarks in their organizations. These negative experiences targeted women's resources or values not surprisingly might lead women to have negative attitudes or feelings toward male employees (Pennekamp, Doosje, Zebel & Fischer, 2007; Sabbagh, Hare, Wheelhouse, & McFarland, 2011). It is more likely to perceive men as a threat to themselves when women experience discrimination by a man. Although being discriminated and feelings of stereotype threat go hand in hand (Steele, 1998), stereotype threat is in the mind of women. Women can experience stereotype threat even in contexts where risks of discrimination are quite small or even non-existent. Because of lack of a direct discrimination or sexist behaviors coming from male employees; it is eye-opening to reveal that perception of stereotype threat negatively related to outgroup attitudes toward male colleagues in the workplace. Stereotype threat includes only the possibility of being threatened by the imagined possibility of being negatively stereotyped. Just the belief that women employees' performance and abilities might be viewed through the lens of a stereotype became enough for them to endorse negative attitudes toward male colleagues.

For employees, Block, Koch, Liberman, Merriweather and Roberson (2011) suggested a framework of three responses to cope with stereotype threat that include fending off the stereotype, discouraged by the stereotype, and resilient to the stereotype. In the first one, women increasing their effort to overcome the effects of stereotype threat such as outperforming in negotiation tasks (Kray et al., 2002) or communication tasks (Von Hippel et al., 2011). When individuals respond to stereotype threat with discouragement, they distanced themselves from some ingroup features (Von Hippel, Walsh et al., 2011) and from the stereotyped domain (Hoyt et al., 2005; Von Hippel, Issa et al., 2011). However, some of women employees might also choose to be resilient in the face of stereotype threat. It requires using group-focused coping strategies which help improve the status of ingroup like showing favorable attitudes toward ingroup (Block et al., 2011). Our findings about outgroup attitudes also supported that women preferred to be resilient against the threat by communicating unfavorable attitudes toward men. This study has expanded our knowledge of how women might cope with stereotype threat in the long term. Women did not only change their performance, their perceptions about stereotyped domain, and ingroup identity, but also took into account outgroup member in order to fight with the threat. These different consequences of stereotype threat might imply that each woman can engage in different type of responses depending on which mechanism is an adaptive response which allows individuals to protect their self-concept and identity.

Our finding are similar with studies suggesting that individuals favored their ingroup over outgroup members (Cadinu & Cerchioni, 2001; Ellemers & Van Rijswijk, 1997) or derogate outgroup on explicit measures (Hogg & Abrams, 1988; Derks et al., 2008) when they faced with social identity threat. Although our study did not measure outgroup attitudes in comparison with ingroup attitudes, we found that women employees' report of stereotype threat was negatively associated with attitudes toward male coworkers, too. Since women

employees share common organizational identity and common goals with male colleagues, this result is inconsistent with prior research indicating that superordinate identity between ingroup and outgroup members reduce intergroup bias and increase cooperative behaviors between groups (Gaertner et al., 1994; Gaertner et al., 1999; Richter et al., 2006). There might be several explanations of this finding.

First, women's identification with their organization might not be as strong as their identification with ingroup members. Subtle cues of stereotype threat might cause decrease in sense of belonging to the organization (Walton & Cohen, 2007), which in turn, low sense of belonging might be related to decreased organizational identification. Cues about how much organizations value diversity also determine how much employees from disadvantaged groups will trust their organization (Purdie-Vaughns, Steele, Davies, Dittmann, & Crosby, 2008). Because of less identification with organization, female employees might not feel that they share a common identity with male colleagues. Second, women with low self-esteem did not escape from stereotype threat when they were presented with a positive common identity (Rydell & Boucher, 2010). However, women who were high in self-esteem were buffered the negative effect of stereotype threat. Since low sense of belonging to the organizations and low levels of self-esteem might be easily experienced by women employees in the workplace, common organizational identity may not benefit women employees in terms of outgroup attitudes.

We hypothesized that system justifying beliefs of women employees would moderate the relationship between perception of stereotype threat and outgroup attitudes in such a way that women who strongly endorsed system justifying beliefs would be more likely to have positive attitudes toward male colleagues than those who less strongly endorsed these beliefs. However, our hypothesis was not supported. There might be several explanations of this finding. Previous studies indicated that endorsement of system justifying beliefs resulted in

outgroup favoritism mostly on implicit measures, because it is more likely to catch the cognitions that cannot reach the consciousness through use of implicit measures (Jost, Banaji & Nosek, 2004).

Furthermore, there are number of ideologies that individuals use to legitimize the status quo beyond system justifying beliefs that we measured (Jost & Kay, 2005). While some of these beliefs based purely on social and cultural issues, other beliefs focused on economic issues (Jost & Hunyady, 2005). However, our scale of system justifying beliefs did not include economic matter (e.g. Everyone (male or female colleagues) has a fair shot at salary and benefit) as much as social and cultural matters. Since system of gender inequality at work is especially related to economic issues, it might be more reasonable to choose another system justifying ideology which taps into economic matters more than others.

As a final explanation for this finding, organizations also might have legitimizing myths along with system justifying beliefs of individuals. Institutional environments might be either hierarchy-enhancing (HE) (e.g. higher levels of hierarchical attitude toward outgroups) and hierarchy-attenuating (HA) (e.g. more inclusive attitudes toward people from outgroups) (Sinclair, Sidanius, & Levin, 2003). Rigid hierarchical differences might boost stereotype threat for individuals who are stereotyped (Kray & Shakiro, 2011). Since, legitimizing beliefs of individuals and institutions mutually might relate to each other's, it is important to take into consideration the ideology of the workplace together with ideologies of individuals.

## **5.2. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH**

Although current study has offered us an insight about the relationship between stereotype threat and outgroup attitudes, there are some limitations. First, like most research on the stereotype threat in organizational settings, our study was also correlational. While women's perception of stereotype threat in a real-world job setting was associated with

outgroup attitudes, the causality between the variables is ambiguous. Because of the risk of harm to research participants' real world job performance, testing stereotype threat experimentally in a real-world setting is unethical and impractical (Sackett, 2003). Longitudinal designs can be used in future studies to examine how stereotype threat affect outgroup attitudes (Kalekorinos, Von Hippel & Zacher, 2014). Second, our sample was composed of American women employees who were educated, middle class and working mainly in white collar jobs. The role of stereotype threat on outgroup attitudes also should be studied with women employees who work in blue collar jobs, are less educated and have lower income. Blue-collar, mechanical, and other stereotypically "male" works includes less than five percent of female employees (Jolls, 2000).

Furthermore, future studies might use focus groups or interview methods in order to gain more insight about experience of stereotype threat and relationship with outgroups in the workplaces. Also, how much women employees generalize their outgroup attitudes toward other men (e.g. male friends or male family members) outside of the job context might be examined in future studies. Not only women, there are also other groups which have been stereotyped based on age, religion, sexual orientation or weight in the workplace. It is unclear whether stereotype threat would affect other groups' outgroup attitudes in the same manner, too. Various stereotyped social groups like older employees (Abrams et al., 2006), LGBT employees (Collins, 2007), younger employees, disabled people (Silverman, & Cohen, 2014) or overweight individuals (Seacat & Mickelson, 2009) were also experiencing stereotype threat and this threat might also related to their attitudes in the workplace. The relationship between outgroup attitudes and stereotype threat for other disadvantaged groups might differ depending on the permeability and stability of group boundaries between ingroup and outgroup. As a last point, since being disabled, ethnic minority, immigrant, old together with

being women might have different outcomes for outgroup attitudes, double minority status should be also taken into consideration.

The current findings revealed the negative association between stereotype threat and outgroup attitudes among women employees that historically have experienced prejudice and discrimination at work. While outgroup attitudes might be related to occasional stereotype threat, more chronic exposure to stereotype threat might disrupt the quality of relationships and interactions between male and female employees in the long run. Outgroup attitudes worsening with perception of stereotype threat might disrupt positive and supportive behaviors toward male colleagues. Women who dislike men tend to be anxious about interacting with them (Stephan, Stephan, Demitrakakis, Yamada, & Clason, 2000). Decreasing the possibility of outgroup interaction among women and negative interactions might reinforce negative attitudes toward men (Tolbert, Graham & Andrews, 1999). Since negative relationships between two genders damage morale and cause significant communication problems and conflict within the organization (Jackson et al., 1991; Jehn, Neale, & Northcraft, 1999; Tsui, Egan, & O'Reilly, 1992; Zenger & Lawrence, 1989), understanding how stereotype threat is related to outgroup attitudes in a diverse work environment is important to manage the gender diversity in the workplace.

Women employees might be reluctant to participate into a group work with male employees, might avoid from interaction with men or they might not work in an effective way with men if they join a mixed gender work group. The nature and quality of one's relationships with peers has important implications for both the individuals in the relationship and the organization as a whole. Employees with positive and functional peer relationships are more likely to receive effective mentoring, are better informed, and are received social supported (Sias, 2009). If a woman employee who cannot receive effective mentoring in their

career path, exchange information with their colleagues, and receive social support from colleagues, it is even likely for her to quit job.

Organizations focused on hiring non-prejudiced managers, redesigning selection procedures or promotion procedure (Roberson & Kulik, 2007) in order to create equal workplace environment and eliminate stereotypes from organizational decision making. However, stereotypes are in the mind of women employees and they feel that their managers or colleagues also know and believe these stereotypes, too. Think about a female employee who is experiencing stereotype threat, she holds unfavorable and negative attitudes toward male colleagues. As the diversity in the workplace increases, there is a great need to fully understand the unique factors that impact outgroup attitudes. In addition, much work is needed to fully understand how stereotype threat is related to other outcomes, such as intergroup behavior, intergroup conflict, group formation and group cohesion beyond outgroup attitudes.



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**APPENDIX A**

## Perception of Stereotype Threat Scale

The items shown below describe various attitudes related to your gender in the workplace. Please mark the number for each item that best reflects your opinion regarding attitudes toward you based on your gender using the scale on the right.

1. Some of my colleagues feel that I have less ability because I'm a woman.
2. Some of my colleagues feel that I'm as committed to my career because I'm a woman.
3. \*Being a woman does not affect people's perception of my job performance.
4. \*In work situations, I never worry that people will draw conclusions about me based on my gender.
5. Job evaluations have been used to discriminate against women.
6. \*As my job gets more difficult, I never worry about confirming the negative opinions about the job performance of women.
7. In work situations, I feel anxious, because I'm a woman.
8. When I think that I am a woman, I get distracted from the work.
9. In work situations, I feel threatened, because I'm a woman.
10. I must work hard to perform as well as men.
11. \*I rarely wonder if my supervisors judge my job performance based on my gender.
12. \*None of my colleagues feel that I'm limited in my career because I'm a woman.
13. Sometimes I worry that my behavior will cause my male colleagues to think that there is a mismatch between being women and my job.
14. In the workplace, I want to show that women can perform as well as men.
15. Sometimes I think stereotypes about women apply to me.
16. \*I never worry that my behavior will cause my male colleagues to think that stereotypes about women are true.
17. When I think that I am a woman, I have difficulty in concentrating on my job.

18. \*I do not feel stressful that my performance will cause my male colleagues to think that stereotypes about women are true of me.
19. \*When I am not able to complete a job task, I can ask for help from my colleagues regardless of what people think.
20. \*My job may be easier for women.
21. Some people feel I have less ability to do my job because of my gender.
22. My employers expect me to perform poorly on my job because of my gender.
23. \*When I think that I am a woman, I do not have difficulty in regulating my attention in complex tasks.
24. \*In the workplace, I did not face biased evaluation of my performance because of my gender.

## Appendix B

### Gender and Context Specific System Justification Scale

The statements below are about the current state of gender relations. Please read each statement carefully, and respond by using the following scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

1. In general, relations between men and women are fair in the workplace.
2. The division of labor in the workplace generally operates as it should.
3. \*Gender roles need to be radically restructured.
4. For women, my workplace is the best company in the world to work in.
5. Most workplace policies relating to gender and the sexual division of labor serve the greater good.
6. Everyone (male or female employees) has a fair shot at salary and benefit.
7. \*Sexism in the workplace is getting worse every year.
8. My workplace is set up so that men and women usually get what they deserve.



## Appendix C

### General Attitudes toward Male Coworkers Scale

The items shown below describe various attitudes about relationship with your male coworkers. To the right of each item is a 7-point scale that ranges from a low of 1 (Strongly Disagree) to a high of 7 (Strongly Agree). Please circle the number for each item that best reflects your opinion regarding attitudes toward your male coworkers.

1. I provide support and resources for my male coworkers that go beyond what is specified in my job description.
2. I am impressed with my male coworkers' knowledge of their job.
3. I work with my male colleagues in a productive and satisfying way without feelings of competition getting in the way.
4. My male coworkers are a lot of fun to work with.
5. \*I find there is an undercurrent of competitiveness in my relationships with male colleagues which hinders our ability to work together.
6. My male coworkers are the kind of people one would like to have as a friend.
7. I like working with male colleagues.
8. \*I feel that the men I have worked with do not work hard and/or are not as competent as they should be.
9. I do not mind working my hardest for my male coworkers.
10. I often discuss with my male colleagues about politics, current affairs, crafts, cooking, etc.
11. I like my male coworkers very much as a person.
12. The men with whom I work are very good at supporting each other, sharing work-related insights and information.

13. I admire my male coworkers' professional skills.
14. I am willing to apply extra efforts, beyond those normally required, to help my male coworkers meet their work goals.
15. If I was involved in a teamwork, I would prefer that my teammates were men.
16. I often go to lunch with other male colleagues.
17. \*I get the sense that male colleagues do very little to be supportive to each other.
18. The male colleagues in my firm present a positive image of men.
19. I often discuss with my male colleagues about our jobs.
20. \*I'm concerned that other male colleagues in my firm present a negative image of professional men that may reflect poorly on me.
21. I feel that the male colleagues I have worked with are quite competent.
22. I respect my male coworkers' knowledge of and competence on the job.
23. \*If I was involved in a teamwork, I would prefer that my teammates were women.

**Appendix D****Cognitive Attitudes toward Male Colleagues Scale**

Think of your male coworkers with whom you work or meet in connection with your work. How well does each of the following words or phrases describe these people? To the right of each item is a 5-point scale that ranges from a low of 1 (Not at all) to a high of 5 (Extremely very much). Please mark the number for each item that best reflects your opinion regarding your male coworkers.

- |                         |                   |
|-------------------------|-------------------|
| 1-Stimulating           | 14-*Stubborn      |
| 2-*Boring               | 15-Friendly       |
| 3-*Slow                 | 16-*Rejecting     |
| 4-Helpful               | 17-*Distant       |
| 5-Responsible           | 18-Warm           |
| 6-Likeable              | 19-*Quarrelsome   |
| 7-Intelligent           | 20-*Backbiting    |
| 8-*Easy to make enemies | 21-Trustworthy    |
| 9-*Rude                 | 22-*Inconsiderate |
| 10-Smart                | 23-Sincere        |
| 11-*Lazy                | 24-Kind           |
| 12-*Unpleasant          | 25-Honest         |
| 13-*Frustrating         | 26-Cooperative    |



## Appendix F

### Stigma Consciousness Questionnaire

The items shown below describe various attitudes related to your gender. To the right of each item is a 7-point scale that ranges from a low of 1 (Strongly disagree) to a high of 7 (Strongly Agree). Please circle the number for each item that best reflects your opinion regarding attitudes toward your gender.

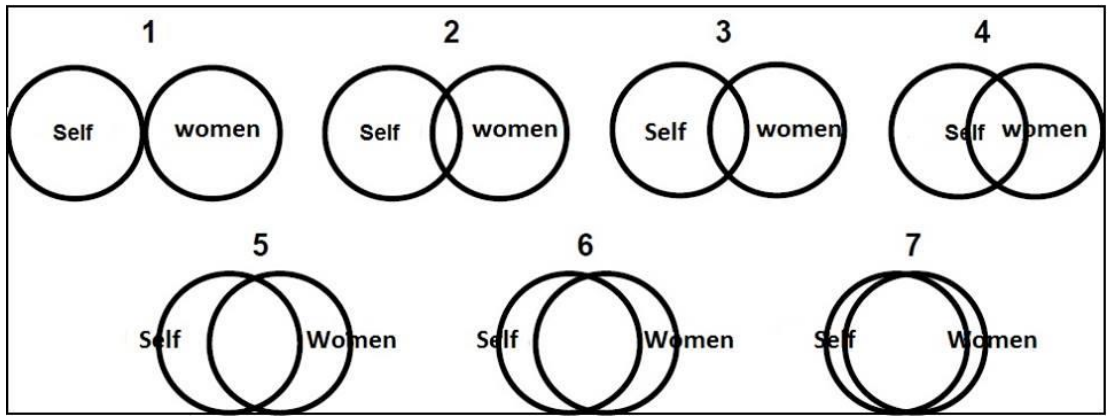
1. \*Stereotypes about women have not affected me personally.
2. \*I never worry that my behaviors will be viewed as stereotypically female's behavior.
3. When interacting with men, I feel like they interpret all my behaviors in terms of the fact that I am a woman.
4. \*Most men do not judge women on the basis of their gender.
5. \*My being women does not influence how men act with me.
6. \*I almost never think about the fact that I'm female when I interact with men.
7. \*My being female does not influence how people act with me.
8. Most men have a lot more sexist thoughts than they actually express.
9. \*I often think that men are unfairly accused of being sexist.
10. Most men have a problem viewing women as equals

## Appendix G

### Gender Identification Scale

We are all members of different social groups or social categories such as gender, religion, or nationality. We would like you to consider your memberships in gender and respond to the following statements on the basis of how you feel about this group and your memberships in it. There is no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully, and respond by using the following scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

1. \*Overall, being a woman has very little to do with how I feel about myself.
2. I have a strong attachment to other women.
3. Being a woman is an important reflection of who I am.
4. \*I often regret that I am a woman.
5. I identify myself with other women.
6. \*Overall, I often feel that the being a woman is not worthwhile.
7. I feel good about being a woman.
8. My destiny is tied to the destiny of other women.
9. \*Being a woman is unimportant to my sense of what kind of person I am.
10. I have a strong sense of belonging to women.
11. In general, being a woman is an important part of my self-image.
12. In general, I'm glad to be a woman.
13. \*Being a woman is not a major factor in my social relationships.
14. I feel strong ties with other women.
15. Please choose the picture below which you feel best represents your own level of identification with other women as a whole.



- 1
- 2
- 3
- 4
- 5
- 6
- 7



## **Appendix H**

### Job Identification Scale

We would like you to consider your job now and respond to the following statements on the basis of how you feel about your job. There is no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully, and respond by using the following scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

1. My job is very important for me.
2. \*My job abilities and skills do not inform about my personality.
3. If my job abilities and skills were evaluated, and I got lower ratings in this evaluation, this would bother me a lot.
4. \*It is not important for me that other people think that I'm successful in my job.
5. Success in my job affects my self-confidence.
6. My job performance is very important to me.
7. I have been a successful employee in my career.
8. In my career, I have been more successful in my work life compared to my relationships in social and family environment.
9. I want other people to know me with my success in the work life.



**Appendix I**  
Demographics Form

Please fill in, or mark, the following items that best apply to you.

1- How old are you?

2- What is the highest grade or level of school you completed?

- Some high school  High School Diploma  Some college  Associate's degree  
 Bachelor's degree  Master's degree  Doctoral degree

3- What is your current employment status?

- I work one full-time job  I work one part-time job  I work two or more part time jobs

4- How long have you been working in your current position?

- 0 to 6 months  6 month to 12 months  1 to 5 years  5 to 10 years  More than 10 years

6- What is your current position (check all that applies)?

- Temporary  Part-time/intern  Contract  Hourly employee  Salaried employee  
 Unit supervisor  Supervisor over several units  Manager  
 Executive officer (President, Vice-President, CEO, CFO, etc.)  Other (please specify)

7-What is your current yearly income (just you, not your household)?

- Under \$20,000 a year  \$20,000 to \$40,000 a year  \$40,001 to \$60,000 a year  
 \$60,001 to \$80,000 a year  \$80,001 to \$100,000 a year  more than \$100,000

8- Please indicate the industry in which you work \_\_\_\_\_

9- How many employees in your company approximately?

- Less than 100 employees  100-499 employees  500-1,000 employees  
 1,001 to 10,000 employees  Over 10,000 employees

10-What percentage of your colleagues are women?

11-What percentage of your managers are women?