

# Interpersonal Expectancy Effects and Stereotype Threats in Workplaces

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**Abstract.** This review study explores the effect of stereotype threats and interpersonal expectancy effects (self-fulfilling prophecy) in the workplace, which is a process when individuals realize they are being stereotyped, confirming behaviors will be shown unconsciously. The study specifically focuses research on gender, age, and race social groups by reviewing and analyzing empirical studies to show how these stereotype threats and interpersonal expectancy effects affect minorities, mental health, and workplace representation.

**Keywords:** expectancy effects; stereotype threats; workplaces.

## 1. Introduction

A stereotype is an individual's set of beliefs about the characteristics or attributes of a group. However, the negative stereotypes about a persons' group, and he or she is concerned about being judged or treated negatively on the basis of this stereotype that is described by the stereotype threat (Spencer et al. 1999, Steele 1997, Steele & Aronson 1995). Interpersonal expectancy effects, also called self-fulfilling prophecies, were first described by sociologist Merton (1948) as a process by which a perceiver's beliefs, when acted upon, shape a target's behavior. The stereotype threats caused by negative stereotypes on groups of people are leading to interpersonal expectancy effects, and these effects and stereotypes are significant in various social contexts, especially for minority groups. This review study aims to analyze existing empirical studies about the effects of interpersonal expectancy and stereotypes in the workplace from three different aspects—gender, age, and race. Also, how the representation and work experiences of these minority groups are affected by the expectancy effects and stereotype threats.

Additionally, based on the existing studies about the expectancy effect, this review study aims to address these problems that were caused by expectancy effects and stereotype threats with several possible solutions and provide suggestions for people, thus creating a better work environment for the minorities in society.

## 2. Types of Stereotypes Threats in Workplace

### 2.1. Gender Stereotype Threats in Workplace

When people are on the job market and ready to get into the industry, the interview is always a crucial part for them and also for the employer to determine if applicants fit the position and have the possibility to reach their highest potential in this industry. Several studies did experiments relevant to how interpersonal expectancy effects and stereotype threats affect the result of the interview for female applicants (Dana & Rothenthal, 1982).

The study conducted by Dana and Rothenthal (1982) examined the theory by having 50 male and 50 female undergraduates from universities do interviews in groups. Before the interview began, the interviewer was told that two of the four applicants were particularly sociable, while the personalities of the applicants were actually all randomly selected. Immediately after the interview, participants were asked to rate themselves and also their partners. The results show that male interviewers were more influenced by the pre-interaction information and rated interviewees they expected to be sociable higher than others. On the other hand, female interviewees who perceived they were

expected to be sociable felt more positive about the interview process. They also showed stronger behavioral confirmation compared to male interviewees. This result directly demonstrated how expectations held by interviewers affected applicants' performance and how the gender effect comes into play during the process.

When digging deeper into gender expectancy effects and stereotype threats during the interview, the types of stereotype and expectation interviewers have also affected applicants' performance greatly. In the study conducted by Lata, Mast and Stewart (2015) did experiments that examined how implicit and explicit stereotypes interviewers hold will affect applicants' performance and the result of interviews. They did an experiment by including 30 male interviewers and 30 female applicants to conduct a mock interview. The participants were assigned to their roles just before the interview began to ensure the most realistic and effective in the measuring phase of the experiment. After that, they got a job description for a regional marketing manager position at a large convenience store. In the end, the interviewers evaluated applicants' performance by doing a questionnaire, and applicants also completed self-evaluations. The results indicate that female applicants with higher implicit stereotypes performed worse, and the implicit stereotypes the male interviewers held also indirectly worsened female applicants' performance during the interview. In addition, this study also suggested that female applicants' performance was influenced more by the implicit stereotypes imposed on them than explicit stereotypes, given that female applicants performed the worst when they perceived low explicit stereotypes and high implicit stereotypes. Through those studies, we can identify the direct relationship between the gender stereotypes held by interviewers and the performance of females in the workplace, and those studies also underscore the importance of the stereotypes that female applicants encounter during the interview process, which is the very first step for females to get into the industry.

To further understand how the stereotypes affect employees' working status after entry into the industry, von Hippel, Sekaquaptewa, and McFarlane (2015) examine how the negative gender stereotypes in the management and accounting field affect their work attitude, intentions to quit the job, and possibility to recommend their job to other younger females. During the experiment, there are 512 women participants who fill out the survey about their work environment and whether they would recommend this job to other women. The results showed that the diminished well-being at work makes women unwilling to recommend this job to other women, and these outcomes were mediated by identity separation, which means the psychological process that women use to differentiate their "work" identities and their "feminine" identities in order to seem more "masculine" and be more dominant in the workplace. However, females feel they cannot express their "true" identities in the workplace and are more likely to experience mental illness like depression and feel unsatisfied with their lives in this process. As a result, they tend not to recommend other women step into this situation.

These interpersonal expectancy effects that appear in the workplaces, such as mock interviews and actual working settings, are one of the key factors that lead to a lack of representation of women; more and more women cannot get into the field because of the stereotypes and negative expectations people hold on them. In addition, these studies and experiments also showed that women were more likely to show confirmation behaviors to these stereotypes unconsciously, so that people would see more female images that fit the stereotypes they hold, further reinforcing the influence of this circulation.

## 2.2. Age Stereotype Threats in Workplace

As the retirement age in many countries, such as France, Germany, and Australia, gradually rises, the average age of the working population tends to be higher in the future, meaning more older workers will be in the labor market. We need to put more emphasis on the negative stereotypes that influence older workers' work performance. Rabl (2010) conducted a study that examined the relationship between age stereotypes or discrimination and perceived organizational support in large German businesses. Using a sample of 631 older employees aged 50 to 64 and 624 younger

employees aged 30 to 40 who completed a standardized questionnaire, the study found that employees with a higher age range typically experience more age discrimination and negative stereotypes. This phenomenon is associated with less organizational support and an increased fear of failure. Which indicates that older employees may not get as many promotions and practice opportunities as younger employees, reinforcing the original stereotype that older workers lack motivation and resistance to change.

In addition, the study examined how the negative stereotype held toward older workers would affect their motivations and performance by having a total of 226 employers and 1,290 older workers (40 years and older, because this age is typically considered a turning point of people's careers) do questionnaires about employers' perceptions of other workers and the career-ending needs and preferences of older workers (BBuyens, Dijk, Dewilde, and Vos, 2009). The questionnaire demonstrated that employers hold negative stereotypes toward older workers, such as that they are less mentally stable and less productive because of their poor physical health; they are also expected to be less flexible and less open to innovations. The older workers' questionnaire found that their perceived negative image has significantly diminished their performance and motivation. This study suggests that addressing the information gap in the workplace is crucial to increasing the labor participation of older workers in the market.

In addition to the lack of motivation among older workers caused by all the negative stereotypes held by managers and younger workers, adaptive abilities, as the abilities individuals use to modify their behavior to meet the demands of a new situation, event, or changed environment, are also being negatively expected. The study illustrated the relationship between age and gender stereotypes and adaptive performance. They conducted an experiment in which 496 undergraduate students rated one of the seven target people, varying in age (40 or 55 years old) and gender, across six dimensions of adaptive performance. The results of the experiment revealed that older targets were perceived as less adaptable across most of the dimensions of adaptability because they were considered less flexible and resistant to change, and this stereotype threat typically led to less challenging work older workers received in the workplace and fewer opportunities for older workers to show and practice their adaptability (DeArmond, Tye, Chen, Krauss, Rogers, and Sintek, 2006). Therefore, subsequently leading to fewer opportunities for promotion and also reinforcing the age stereotype.

Moreover, the intention to retire was also influenced by the negative age stereotype and even discrimination against older workers over 40 years old. Bal, de Lange, Van der Heijden, Zacher, Oderkerk, and Otten (2015) conducted this study that examines the impact of age stereotypes and meta-stereotypes (beliefs that older workers have about how they are perceived by others, particularly by younger colleagues) on older workers' occupational future time perspective (FTP) and retirement intentions. The study found that negative age meta-stereotypes significantly relate to lower occupational FTP and higher intention to retire for older workers, using a sample of 168 Dutch taxi drivers from five different cities in the Netherlands, ranging from 21 to 71 years. Also, whether the workers categorize themselves as "old" or not determines the extent of the influence of age meta-stereotypes. The study highlights self-fulfilling prophecies and stereotype threats by demonstrating that the older workers' intention to retire is directly and significantly related to the negative age meta-stigmas hold toward them. This study emphasizes the importance of addressing age-related stereotype problems in the workplace.

As the age of global working populations increases, it is critical to underscore the importance of age-related stereotypes in the workplace. The negative stereotypes held against older employees, such as the insistence on change, lack of motivation, and lower productivity, further impact them and lead to a circulation that reinforces these negative images.

### **2.3. Race Stereotype Threats in Workplace**

As globalization continues to expand, diverse racial groups increasingly work together in the workplace, and stereotype threats against some racial groups can significantly affect people's performance. When students enter the industry as interns, they already face negative stereotypes in

the workplace. The study conducted by Boulton (2016) examines the psychological burdens like stereotype threats and the need to code-switch between different cultural and linguistic norms faced by African American interns participating in the Multicultural Advertising Internship Program (MAIP) in New York City. The program conducted five focus groups, involving a total of 11 African American interns, and held conference meetings with them in the residence hall. Boulton argues that stereotype threats faced by African American interns created more difficulties for them to navigate a predominantly white industry. The negative images held against black interns, such as intellectual inferiority and social exclusivity, were particularly harmful for people working in the advertising industry. They also put pressure on them, making them afraid to express themselves in ways that were related to their race. African American interns often avoid these negative images, but this behavior reinforces the stereotype in the eyes of others. These stereotypes also led to underperformance and more stress for African American interns, which further reinforced the stereotypes and created a vicious cycle that examines self-fulfilling prophecy.

Moreover, not only Black people face the stereotype threats, but East Asians in North America. The study conducted by Berdahl and Min (2012) examines how racial stereotypes had negative effects on their workplace performances. The researchers conducted four studies, particularly focusing on descriptive stereotypes, prescriptive stereotypes, coworker liking, and racial harassment against East Asians in the workplaces. Using methods such as rating East Asians and Whites on their characteristics and surveying East Asian employees in community service centers about their racial harassment experiences, these studies suggest that East Asians are stereotypically viewed as highly competent but less warm and dominant. This type of image may lead to social marginalization in the workplace networks and may also increase stress and emotional exhaustion when managing others' perceptions to avoid negative consequences.

In addition, these challenges faced by specific racial groups not only appeared in the typical office setting but also in the grocery stores. Glover, Pallais, and Pariente (2017) investigated how manager bias affected the performance of minority cashiers in a French grocery store chain. The researchers conducted a psychological experiment by having managers perform the IAT (Implicit Association Test) to determine their level of bias. During this test, managers needed to categorize the names on the screen that indicate different ethnic origins for the adjective words as fast as possible in order to test the implicit bias they may have. After the test, the researchers paired up the managers who were more biased and minority cashiers to work together. The results demonstrated that managers with bias tended to interact less with the cashiers, resulting in the cashiers putting in less effort, being absent more frequently, and spending more time scanning items. This study provides empirical evidence of how the prejudice and bias managers hold could significantly affect employee performance, and this stereotype further emphasizes the negative image managers hold toward employees and leads to self-fulfilling prophecies.

The above-mentioned studies illustrated how Black people, East Asians, and other minorities in the workplaces were influenced by the negative stereotypes people hold toward them. These prejudices reinforce the stereotypes that minority workers work to dispel, leading to a vicious cycle of poor performance and elevated stress. The cumulative effect poses a threat to diversity, so to break this cycle and establish truly unbiased work environments, greater awareness and proactive interventions are needed.

### **3. Strategies to Reduce Stereotype Threats in Workplaces**

Based on the meta-analytic review conducted by Liu, Liu, Wang and Zhang(2021), there are several ways of interventions to reduce stereotype threats. This review study categorized stereotype threats into three types: belief-based, identity-based, and resilience-based stereotype threat interventions (STIs). By analyzing 251 effect sizes from 181 experiments, the study found primary-appraisal-based (i.e., belief-based and identity-based) STIs were more effective than secondary-appraisal-based (i.e., resilience-based) STIs.

First of all, belief-based interventions mentioned in the review study focused on changing one's beliefs about the negative stereotype. Several strategies could be applied, such as blurring group boundaries, promoting social belonging, and providing in-group role models. The strategy of providing group models is relatively more effective for gender stereotype threats based on the analysis. In order to make people change their beliefs about the group, make them aware of similar and successful others who disconfirm the negative stereotypes. In the experiments conducted by Marx and Roman (2002), belief-based provide in-group role models had a moderate to strong effect size ( $d=0.56$  to  $1.05$ ). Moreover, Marx et al.'s (2005) experiments on the same type of group had a strong effect size ( $d=0.85$  to  $1.78$ ). From these experiments data, we can see the significant effect of belief-based providing in-group role models strategy on gender stereotype threats. On the other hand, through the experiments conducted by Walton and Cohen (2011), they used the strategy that promotes social belonging and had a moderate to strong effect size ( $d=0.65$  and  $1.09$ ). We can see the strategy is especially effective for reducing the effectiveness of race stereotype threats.

Identity-based interventions were the second way to reduce the effectiveness of stereotype threat that was mentioned in the review study. This intervention suggests that by altering the strength of connection between focal individuals and the group, the risks of stereotype threats against the group may be reduced. Three strategies involved in these STIs are activating a single positive identity, activating multiple identities and reducing distinctiveness. Among them, the most salient one was the strategy of activating multiple identities, the experiments conducted by Rydell et al. (2009), activating multiple identities strategies were used to reduce gender stereotype threats, and the study had a strong effect size ( $d=0.92$  to  $1.28$ ). In this study, researchers present narratives and messages to activate multiple social identities of participants, and we could see this strategy is significantly effective for reducing the effectiveness of gender stereotypes.

Lastly, resilience-based interventions is the last type of interventions mentioned in the review. This type of STIs focus on enchanting an individual's resilience to combat stereotype threat, strategies such as reappraisal and reattribution, improving confidence, eliciting a promotion, teaching learning orientation and tactics, self-affirmation are involved in the STIs. In order to reduce the effectiveness of race stereotype threats, the self-affirmation strategy is especially effective. In studies conducted by Shapiro et al. (2013), by practicing a series of exercises that enable people to demonstrate their ability and show their core personal values, they had a moderate to strong effect size ( $d=0.65$  to  $1.40$ ) for the experiment groups. In addition, the reappraisal and reattribution strategy can decrease the effectiveness of gender stereotype threats. This strategy mainly focuses on helping individuals to manage their emotions and thoughts of negative stereotypes by instructing individuals to reappraise the test/performance context in an objective and neutral manner. In the experiments conducted by Logel et al. (2009), moderate to strong effect sizes were shown ( $d=0.56$  to  $1.18$ ). Also, the strategy of improving confidence is demonstrating a relatively great effect on reducing the effectiveness of age stereotype threats. In the experiments conducted by Geraci and Miller (2013) there was a strong effect size ( $d=0.79$ ).

In summary, from the 181 experiments studies reviewed, in order to reduce the effectiveness of gender stereotype threats, all of the three interventions could work effectively and significantly. For the race group, belief-based and resilience-based interventions are more helpful compared to identity-based interventions. Lastly, the improving confidence strategy in resilience-based intervention had an effect size of  $d=0.79$  for reducing the effectiveness of age stereotypes in the experiments conducted by Geraci and Miller(2013). However, there is not a strategy or intervention that is significantly effective for reducing the effectiveness of age stereotype threats.

#### 4. Conclusion

In conclusion, stereotype threats and interpersonal expectancy effects (self-fulfilling prophecy) have profound effects on minority group representation and mental health in the workplaces. Gender stereotype threats made less females have the courage to step into specific industries, for example,

finance and accounting. Age stereotype threats lead to a decrease in older workers' passion. Race stereotype threats make African Americans less willing to express themselves and afraid to say things related to their identity and race. These prejudices reinforce the stereotypes that minority workers work to dispel, leading to a vicious cycle of poor performance and elevated stress. In order to improve and solve the underrepresentation of these minority groups in the workplaces and achieve globalization to be more inclusive, greater awareness of the public is needed. Interventions that are belief-based, identity-based, and resilience-based can be used in businesses' employee training and education to improve workplace environments sustainably.

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