Following Community Norms or an Internal Compass? The Role of Prospective Leaders' Social Category Membership in the Differential Effects of Authentic and Ethical Leadership on Stereotype Threat

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Abstract

Increasing racial diversity in organizations remains a challenge, as stereotype threat undermines the performance and career aspirations of minority group members during job recruitment. The present study examines how prospective leaders can leverage their influence on their followers' identities to mitigate the stereotype threat Black individuals face in this context. We explore the effects of two moral leadership styles (ethical vs. authentic) on stereotype threat in the context of recruitment. Specifically, we investigate whether prospective leaders' in-group status moderates the relationship between ethical vs. authentic leadership styles and candidates' stereotype threat during the selection process and candidates' willingness to join the organization. To this end, we conducted four experiments with Black residents of Brazilian *favelas* (impoverished neighborhoods), two of which included real-world job recruitment processes and physiological measures of stress (i.e., salivary cortisol and blood pressure). The results indicate that when the prospective leaders are from the outgroup, displaying ethical leadership by relying on community norms is more helpful in reducing Black candidates' threat and, in turn, promotes willingness to apply for the job. In contrast, when the leader is from the in-group, displaying authentic leadership by emphasizing the importance of an internal moral compass is more helpful in reducing threat, and this effect is mediated by the identity process of inclusion of the leader in the self. Overall, the present study suggests that prospective direct supervisors have the critical ability to reduce stereotype threat, which can negatively affect Black applicants and their desire to join organizations.

Keywords: ethical leadership, authentic leadership, stereotype threat, social identity, diversity, self-expansion

Following Community Norms or an Internal Compass? The Role of Prospective

Leaders' Social Category Membership in the Differential Effects of Ethical and Authentic

Leadership on Stereotype Threat

While many organizations struggle with achieving diversity goals (Dobbin & Kalev, 2016), members of minority groups continue to report that they are not treated fairly during recruitment and that their ethnic background limits their hiring opportunities (Ali, 2020; Powell, 2012). These individuals often experience *stereotype threat*, a psychological sense of discomfort resulting from the likelihood of being evaluated based on a negative stereotype about one's group (Steele et al., 2002). The recruitment settings in which candidates most often interact with members of racial majority groups trigger stereotype threat, which undermines the performance of racial minority candidates in job interviews (Levashina et al., 2014) and their willingness to apply for jobs where they believe they could experience biased treatment (von Hippel et al., 2015). As such, a better understanding of how organizations can diminish the stereotype threat of candidates during the recruitment process could help provide fair conditions for racial minority groups to perform and make career decisions without being set back by identity-related concerns.

Research on stereotype threat in the recruitment context has mainly focused on environmental cues, such as company diversity-oriented policies (Purdie-Vaughns et al., 2008). Although sometimes beneficial, such initiatives can increase stereotype threat by creating the perception that stigmatized groups are being singled out (Leslie et al., 2014). Moreover, the current focus does not explain how the stereotyped applicants' attitudes change during encounters with organizational agents, where the applicants obtain a more realistic view of the future job (cf. McKay & Avery, 2006). Thus, building on previous work that demonstrates that prospective leaders can signal to candidates that a candidate's identity is valued in the company (Avery, 2003) and can shape perceptions of organizational trustworthiness (Klotz et al., 2013),

we argue that prospective leaders play an important role in reducing the threat of stereotyped candidates during job recruitment.

We draw from self-expansion theory (Aron et al., 2013) and recent literature on stereotype threat (Liu et al., 2021) to propose that leaders may reduce candidates' stereotype threat by offering them identity-related resources, which stereotyped candidates can use when they include the leader in their self. Specifically, we argue that ethical and authentic leaders demonstrate contrasting types of moral behaviors (Lemoine et al., 2019), which signal the type of resources the candidate would receive from the leader. In particular, ethical leadership stresses the importance of *community norms* (Giessner & Van Quaquebeke, 2010), fostering similarity with other group members and lessening discrimination concerns (Rosenthal & Crisp, 2006). In contrast, authentic leadership is focused on one's *internal compass* (Lemoine et al., 2019), indicating the value of a distinctive sense of self and thus diminishing threat by promoting candidates' self-affirmation (Bancroft et al., 2017).

Further, consistent with social identity categorization theory (Hogg & Terry, 2000; Turner & Tajfel, 1986), we propose that the leader's social category status relative to that of the follower is a key moderating factor in differentiating the effects of ethical and authentic leadership styles on stereotype threat through the inclusion of the leader in the self. Specifically, we argue that ethical leaders are more helpful in reducing stereotype threat when the leader is an out-group member and applicants are looking for cues that they will not experience unfair treatment from the out-group leader, while less so when the leader is an in-group member and positive treatment is more expected (Moy & Ng, 1996). In contrast, an authentic leader will be more effective when the leader is an in-group member because their internal compass signals opportunities for self-development (Ilies et al., 2005), and less so when the leader is an out-group member because the leader's internal compass may be less predictable or even biased against out-group members. Finally, we argue that these effects extend to applicants' interest in the job

offer, such that leaders' in-group status moderates the indirect effect of ethical vs. authentic leadership on followers' willingness to apply via reduced stereotype threat.

Overall, this work makes three main contributions. Firstly, this research extends the stereotype threat literature in the context of recruitment by moving beyond the current focus on organizational policies (e.g., Hall et al., 2018) and demonstrating how and when the behavior of organizational agents (i.e., prospective leaders) can influence the experience of stereotype threat among racial minority members and their willingness to join less diverse organizations (Breaugh, 2013). Second, the study provides evidence of the contrasting outcomes of authentic vs. ethical leadership styles. We challenge the widespread assumption that these styles are overlapping constructs (Hoch et al., 2016) by showing they can trigger opposing effects on candidates' experiences of stereotype threat and identity processes depending on the leader's social category membership. Finally, our study contributes to the scarce literature on self-expansion in the organizational domain (Gray et al., 2020) by showing that job candidates from minority groups are able to include prospective leaders in their identity even before a formal leader-follower relationship is established, and by doing so, they can experience lower stereotype threat.

Stereotype Threat and Leadership

According to social identity categorization theory, people derive part of their self-image from their group membership (Turner & Tajfel, 1986). Thus, when an individual from a stigmatized social group is aware of a negative stereotype related to their group's public image (Spencer et al., 2016), they experience stereotype threat. Specifically, they perceive that they can be evaluated through the lens of a negative stereotype about the social group to which they belong, which often causes discomfort and anxiety about whether they will be able to disconfirm this negative stereotype, leading to lower performance on a wide variety of tasks (for a review, see Spencer et al., 2016). Further, stereotype threat affects people in the form of physiological stress responses, such as higher blood pressure and increased levels of salivary cortisol

(Blascovich et al., 2001; Townsend et al., 2011), which result in stereotyped individuals having fewer cognitive resources available to perform (Schmader et al., 2008) and avoiding or withdrawing from threatening situations (von Hippel et al., 2011).

Racial minorities (Steele & Aronson, 1995) and low-income individuals (Croizet & Claire, 1998) experience stereotype threat when the activity they engage in has an evaluative character or in settings dominated by an out-group (Inzlicht & Ben-Zeev, 2000; Steele & Aronson, 1995). Some elements of the recruitment process, such as job interviews or site visits (Breaugh, 2013), are likely to trigger stereotype threat among members of racial minorities due to the high stakes related to pre-entry assessment (McCarthy et al., 2021) and the fact that most organizations are managed by White individuals (Cohen & Huffman, 2007). Thus, we argue that it is possible to improve the performance of candidates from racial minority groups and encourage them to join less diverse workplaces by exploring how the threat can be attenuated in this context.

As vulnerable individuals enter work environments vigilant of any cues that signal they may not be treated fairly or may be socially excluded there (Purdie-Vaughns et al., 2008), prospective leaders can influence the candidate's evaluations of company trustworthiness and perceptions of which identities are valued there (Avery, 2003; Klotz et al., 2013). Moreover, we argue that by communicating their moral values, prospective leaders can signal how the candidate will be treated in daily interactions (Lemoine et al., 2019) and indicate what future relationship with them would entail (Dansereau et al., 2013). Thus, by communicating their values, prospective leaders can potentially either diminish or increase the salience of threatening cues during the recruitment process.

Ethical Leadership vs. Authentic Leadership and Stereotype Threat

Two of the most common approaches to leadership based on moral values are ethical and authentic leadership (Lemoine et al., 2019). Ethical leadership is described as the "demonstration

of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown et al., 2005, p. 120). In other words, ethical leaders deliberately intend to improve their followers' moral behavior by informing them of the kinds of actions that are acceptable (Brown & Treviño, 2006) and establishing punishment and reward systems (Treviño et al., 2000, 2003). In contrast, authentic leadership is a leader's behavioral orientation marked by self-awareness, internalized moral perspective, balanced processing of information, and relational transparency (Avolio & Gardner, 2005; Neider & Schriesheim, 2011).

Scholars believe that the two constructs overlap (Hoch et al., 2016; Lemoine et al., 2019), such that they emphasize the leader's behavioral integrity and moral consistency (Lemoine et al., 2019) and present the leader's role as including consideration of followers' psychological well-being and identity experience (Chughtai et al., 2015; Hannah et al., 2011). However, and more importantly, these two leadership styles differ in the source of their beliefs and principles. Specifically, a key difference between them is that while ethical leaders are more other-oriented and focused on aligning with *community norms* so that their behavior is recognized as normatively appropriate (Giessner & Van Quaquebeke, 2010), authentic leaders are more internally focused and rely on their own *internal moral compass* (Leroy et al., 2012; Yukl et al., 2013).

We argue that these differences, in the context of stereotype threat experience (Steele & Aronson, 1995), imply that ethical and authentic leaders provide contrasting identity-related resources that can be helpful to the job candidates under threat. In particular, by enforcing *community norms* that are the same for everyone, an ethical leader will likely make salient similarities between all team members rather than intergroup differences; diminishing concerns that stereotyped individuals will be discriminated against or excluded (Liu et al., 2021). As such, ethical leaders set expectations for providing valuable resources through fair treatment, equity,

and accountability within the team (Brown et al., 2005; Resick et al., 2013). Authentic leaders, on the other hand, who rely on their *internal compass*, engage in the active development of their self-concept through deliberation, self-awareness, and self-regulated positive behaviors, inspiring followers to focus on their own self-development (Avolio & Gardner, 2005; Ilies et al., 2005). Thus, authentic leaders likely become a source of self-affirmation for stereotyped candidates who are reminded of the value of their distinctive sense of self beyond the stereotype and can experience a lower stereotype threat (Hall et al., 2014).

Building on self-expansion theory (Aron et al., 2013), which states that people have an intrinsic drive to include in their self-concept new valuable resources and perspectives that may facilitate the achievement of their goals, we propose that stereotyped candidates are motivated to obtain identity-related resources offered by ethical and authentic leaders to reduce the threat. Specifically, because individuals under threat want to reverse it to avoid discomfort (Spencer et al., 2016), they will likely perceive the identity-related resources offered by ethical and authentic leaders as useful and would like to acquire them to increase their own competence and adaptability (Aron et al., 2022). However, the process of self-expansion is influenced by the perceived *desirability* of the resources and the *probability* of the relationship with the target offering the resources lasting and being meaningful (Aron & Aron, 1996). In the following sections, in line with social identity categorization theory (Billig & Tajfel, 1973; Turner & Tajfel, 1986), we theorize that whether the prospective leader belongs to the candidate's in-group will be a key determinant of which of these styles result in lower levels of stereotype threat due to their effect on the candidate's self-expansion.

Social Category Membership and Stereotype Threat

People define themselves in terms of the social groups to which they belong (Tajfel & Turner, 1979) and have different expectations of others based on whether they share group membership. When confronted by out-group members, individuals tend to expect unfair

treatment and even discriminatory behavior (e.g., Moy & Ng, 1996). For instance, Black people tend to see White people as harboring negative stereotypes about them, which can trigger defensive self-regulation processes in the presence of an out-group member (Najdowski et al., 2015). In-group members, however, are perceived as more likable (Marques et al., 1988), and people are more inclined to help them (Kogut & Ritov, 2007) because they expect that the other party would do the same, a phenomenon known as in-group favoritism (Billig & Tajfel, 1973).

Due to differential interpersonal expectations stemming from social category membership (Brewer, 1996), ethical and authentic leadership behaviors and the identity-related resources they offer are likely to be perceived differently and impact stereotype threat differently, depending on whether the prospective leader and candidate belong to the same social group. In particular, when a prospective leader is a member of a racial out-group, a stereotyped follower is likely to perceive the ethical leader as a desirable and probable relationship partner because their behavior can diminish uncertainty about possible unfair treatment expected from out-group members (Moy & Ng, 1996) through the use of socially salient *community norms*. Providing a clear message regarding group values and accepted behaviors, emphasizing universal ethical principles, and a clear reward and punishment system proposed by the ethical leader (Jordan et al., 2013; Mayer et al., 2012) should appeal to the stereotyped candidate when the leader is an out-group member because these standards are easily recognizable and shared with other employees. As long as the follower can learn the norms in this context, they can become part of the group and expect fair treatment from such a leader (Shore & Chung, 2021). Thus, an ethical out-group leader can support the stereotyped candidate and diminish their stereotype threat.

At the same time, we argue that a prospective authentic out-group leader, compared to an ethical one, can be deemed untrustworthy by the stereotyped candidates. Thus, the resources they share with the future follower would be perceived as less attractive. The behavior of authentic leaders who emphasize individual experiences and beliefs (Avolio & Gardner, 2005; Ilies et al.,

2005), which are less familiar to an out-group follower, can be interpreted as ambiguous, more difficult to verify, and less predictable than the behavior of ethical leaders who reference universal moral principles or clear community norms in their discourse (Jordan et al., 2013; Lehman et al., 2019). Thus, some stereotyped candidates may even consider that an out-group leader's internal compass might be biased against the follower's own group (Guimarães, 1999; Roberts & Rizzo, 2021).

Taken together, a prospective out-group ethical leader is more likely than an authentic one to reassure the candidates that prejudices and biases will not guide the leader's behavior in their relationship with the followers. As such, we predict:

Hypothesis 1: When the leader is a member of the prospective followers' out-group, ethical leadership will have a stronger diminishing effect on the prospective followers' stereotype threat than authentic leadership.

Conversely, when a leader is a member of an in-group, ethical leaders' resources stemming from the community norm (Giessner & Van Quaquebeke, 2010; Yukl et al., 2013), such as fairness and accountability, should be redundant or less valuable to the stereotyped candidate, because the expectation of negative bias towards the follower is lower and the odds of in-group favoritism are higher (Brewer, 1996). Specifically, given that ethical leaders hold everyone to the same standard in the intragroup context, such behavior may signal that expectations of favorable differential treatment from the fellow in-group member will not be met (Brewer, 1996). Thus, resources of an ethical in-group leader may seem less desirable. This is in line with prior research showing that people prefer those in-group members who demonstrate in-group favoritism rather than egalitarian attitudes (Castelli et al., 2008).

However, an authentic leadership style may mitigate candidates' stereotype threat more effectively when the leader is an in-group member. This is because the stereotyped applicant, no longer concerned about possible unfair treatment, is likely to see authentic leadership as a

valuable resource that enables them to develop their unique sense of self at work. Stereotyped

followers wonder whether they can be themselves at a prospective organization, and seeing

someone similar to them acting authentically in a managerial role suggests they could. By

becoming potential models of self-development through their self-awareness and search for self-

consistency (Ilies et al., 2005), authentic in-group leaders offer resources that can promote self-

growth and self-affirmation in their future followers (Hannah et al., 2011; Hirst et al., 2016),

which have been shown to reduce stereotype threat (Hall et al., 2014). Moreover, prospective

followers are more likely to believe in the good intentions of an authentic manager who bases

their behavior on their moral compass (Peus et al., 2012) when they belong to the same social

category due to the shared group experiences on which this behavior is based. Therefore, we

predict the following:

Hypothesis 2: When the leader is a member of the prospective followers' in-group,
authentic leadership will have a stronger diminishing effect on the stereotype threat of the
prospective followers than ethical leadership.

Overall, we posit that a prospective leader's in-group status is an important boundary

condition for the relationship between authentic versus ethical leadership styles and the

stereotype threat experienced by followers from a stigmatized, underrepresented group.

Specifically, we contend that different leadership behaviors under conditions in which the leader

is a racial in-group or out-group member will elicit differential perceptions and responses related

to the experience of stereotype threat among followers. We thus integrate the directionality-

flipping essence of the first two hypotheses to fit a 2x2 model and predict that:

Hypothesis 3: Leader in-group status will moderate the effect of leadership style on
stereotype threat, such that the beneficial effects of authentic (vs. ethical) leadership on reducing
stereotype threat will be stronger when the leader is a member of the prospective follower's in-
group (vs. a member of the out-group).

The Mediating Role of the Inclusion of Other in the Self

As mentioned above, individuals are motivated to engage in self-expansion to acquire valuable resources and achieve their goals (Aron et al., 2013). One way of doing this is by forming relationships with others, in which relational closeness with another person results in their inclusion in the self, such that the identities of the two become subjectively linked together (Mattingly & Lewandowski, 2013). Although including others in the self is complicated for stigmatized individuals who worry about being excluded or stereotyped, entering relationships with others allows them access to resources that can help them overcome stereotype threat (McLaughlin-Volpe, 2006).

We propose that prospective leader's social category membership will affect stereotyped candidates' willingness to include the leader in the self because the candidates would be willing to form relationships with those leaders who offer them more valuable resources in a given situation and thus are perceived as attractive relationship partners (Aron et al., 2013; Moy & Ng, 1996). Consequently, the newly acquired identity-related resources should allow the stereotyped candidate to experience a lower stereotype threat. Specifically, in contact with an out-group leader, when the applicant is vigilant toward any cues that signal they could be marginalized based on their identity (Purdie-Vaughns et al., 2008), they will be more likely to include in their self a leader that is known not to discriminate against the out-group (Everett et al., 2015; Locksley et al., 1980). As such, we contend that an out-group ethical prospective leader who emphasizes the fair application of clear community norms (Lemoine et al., 2019) will motivate stereotyped candidates to build a close relationship more than an authentic out-group leader referencing a more ambiguous internal moral compass (Shamir & Eilam, 2005).

On the other hand, when the prospective leader and follower share the same category membership, the ethical leader's resources stemming from the community norm may seem unnecessary, or even off-putting, because people expect that in-group members will help further

each other's interests and the community membership is implied (Foddy et al., 2009; Mao et al., 2019). Thus, the candidate prefers to establish relational closeness with an authentic leader who offers them resources that facilitate personal growth (Woolley et al., 2011). For stigmatized individuals who struggle with positive self-view and confidence (Cadaret et al., 2017; Spencer et al., 2016), the possibility of forming a relationship with someone who models self-efficacy and self-congruence (Hannah et al., 2011; Hirst et al., 2016) is likely to be particularly desirable. Moreover, the fact that the leader is from the in-group can suggest that the candidate can also improve their self-image (Marx & Ko, 2012). Therefore, we predict the following:

Hypothesis 4a: Leader in-group status will moderate the effect of leadership style on a prospective follower's inclusion of the leader in the self, such that the effect of authentic (vs. ethical) leadership will be more positive when the leader is a prospective follower's racial in-group (vs. out-group) member.

Hypothesis 4b: Leader in-group status will moderate the indirect effect of leadership style on a prospective follower's stereotype threat via the prospective follower's inclusion of the leader in the self, such that the effect of authentic (vs. ethical) leadership will be more positive when the leader is a prospective follower's racial in-group (vs. out-group) member.

The Indirect Effect of Ethical Versus Authentic Leadership on Willingness to Apply for a Job Through Stereotype Threat

While the impact of moral leadership on the applicant's stereotype threat is in itself of great interest due to its consequences for the candidate's well-being, this study also aims to explore whether these effects translate into the behavioral intentions of applying for a position in a potentially threatening organization. Although the majority of research on stereotype threat has focused on underperformance (e.g., Steele & Aronson, 1995) as its primary outcome, avoidance of the threatening domain is another behavioral reaction that results from stereotype threat (Spencer et al., 2016). In the form of a self-protective response, the individuals under threat

disengage from and place lower importance on situations and activities that could potentially confirm stereotypes about their group (Silverman & Cohen, 2014), which suggests that stereotyped candidates could avoid applying to an organization or discontinue their application if they experience stereotype threat during the recruitment process. Indeed, prior work shows that job applicants from minority groups are more likely to withdraw their applications (e.g., Schmit & Ryan, 1997), even though they initially demonstrate higher interest in the job position than their White counterparts (Griepentrog et al., 2012).

McKay and Avery (2006) suggested that candidates perceive cues of implicit bias against their social group during interactions with those organizational members with whom they will interact most in their future job (e.g., supervisors) and decide to withdraw their application. Based on this and the differences between moral leadership behaviors mentioned above, we propose that candidates experiencing a higher stereotype threat when interacting with a prospective leader should be less willing to apply for a job and that stereotype threat should be the mechanism underlying the effect of authentic versus ethical leadership style on willingness to apply.

As such, we hypothesize that leaders' in-group status moderates the indirect relationship between leadership styles and their willingness to apply for a job through stereotype threat. Specifically, we posit that if the leader is a member of the prospective follower's racial in-group (vs. out-group), the indirect effect of authentic (vs. ethical) leadership on willingness to apply through stereotype threat should be more positive.

Hypothesis 5: Leader in-group status will moderate the indirect effect of leadership style on willingness to apply for a job via stereotype threat, such that the beneficial effect of authentic (vs. ethical) leadership will be more positive when the leader is a prospective follower's racial in-group (vs. out-group) member.

Overview of the Present Research

We conducted five experiments (pilot and four main studies) with members of a negatively stereotyped social group (Black residents of *favela* [impoverished neighborhoods] in Rio de Janeiro, Brazil). We first conducted a proof-of-principle pilot study. Specifically, we manipulated the level of threat in the workplace and the social category membership of the leader, aiming to establish whether environmental cues influence the perception of stereotype threat in the population of Black *favela* residents and whether a leader's in-group status increased the perceived similarity between leader and follower during the recruitment process.

Next, we conducted two field experiments involving real recruitment processes for positions where *favela* residents traditionally constitute a minority of employees. In those two experiments, we assessed the stress reactions of *favela* residents to threatening environmental cues using physiological measures of salivary cortisol and systolic blood pressure. In Study 1, we manipulated leadership styles using scripts delivered by a White actor who played the role of a future supervisor of the study participants, who were applying for a temporary research assistant position. Thus, we tested the effect of ethical and authentic leadership styles on stereotype threat under the condition of an out-group leader (Hypothesis 1). In Study 2, the procedure mirrored that of Study 1 and involved a recruitment process for a bank teller position. However, the actor who played the supervisor role was Black (in-group), allowing us to test the effects of these leadership styles in the in-group leader condition (Hypothesis 2).

In Study 3, reactions to stereotype threat were tested in both the in-group and out-group leader conditions, with the setting controlled so that the potential confounders of Studies 1 and 2 were eliminated. We conducted a 2x2 experiment with *favela* residents, where we manipulated social category membership (a White leader from a rich neighborhood or a Black leader from a *favela*) and leadership style (ethical vs. authentic). By doing so, we were able to assess the interaction effects of a leader's social category membership and leadership style on participants'

subjective experience of stereotype threat (Hypothesis 3) and the indirect effect on its attitudinal consequence, namely, the willingness to apply for a job (Hypothesis 5).

Finally, Study 4 tested the mechanism underlying the interactive effects of moral leadership styles and a leader's social category membership on stereotype threat (Hypotheses 4a and 4b). We assessed the interaction effects of a leader's social identity and authentic vs. ethical leadership on followers' self-expansion that occurs by including the future leader in their self and consequently on their stereotype threat. The overall conceptual research model is presented in Figure 1.

All five experiments included in this paper were carried out with the approval and following the recommendations of The Committee for Ethical Compliance in Research Involving Human Beings of Fundação Getulio Vargas (ID 21/2017). The studies' design and their analyses were not pre-registered. The study materials, datasets, and the syntax needed to reproduce the analyses in this paper are available upon request from the corresponding author. All analyses were conducted using STATA 17 software, except for mediation and moderated moderation models, which were assessed using SPSS 27 Process Models 4 and 7 (Hayes, 2013). We described all data exclusions and measures taken in the studies and adhered to the Journal of Applied Psychology methodological checklist. More information about the measures taken to mitigate risks regarding vulnerable individuals and more details regarding sampling strategy, procedures, and power analysis can be found in Online Supplements A and B. The sample sizes per condition are reported in Table 1.

Pilot Study

Prior studies indicate that *favela* residents struggle with negative stereotypes related to being Black and their economic status (dos Santos Oliveira, 1996; Jacob et al., 2022). However, to our knowledge, no empirical evidence exists regarding their experience in the organizational context, especially in recruitment. Therefore, in this proof-of-concept study, we aim to establish

that the work environment is a source of stereotype threat for *favela* residents. We also sought to demonstrate that the racial social category membership of the leader affects how dissimilar *favela* resident participants perceive leaders to be from themselves. By doing this, we performed a manipulation check of the work environment and social category membership of the leader experimental conditions that will be used in the next studies. As such, we evaluated: a) if stereotype threat among Black *favela* residents is higher in a high (vs. low) socio-economic status (SES) organizational context, and b) if dissimilarity perceived by Black *favela* residents is higher when the leader is White (racial out-group member) vs. Black (racial in-group member).

Furthermore, we tested if the SES of the organizational context predicted levels of dissimilarity and if the leader's social category membership interacted with the effect of the SES of the organizational context on perceived dissimilarity. As such, we wanted to evaluate the possibility that it would diminish the perceived dissimilarity with the leader to a greater extent in a more threatening context, which could pose validity problems for our manipulations. In this sense, we expect no interaction effect between work context and leader social category membership.

Sample

A research assistant recruited 200 Black adult residents of a Rio de Janeiro *favela* on the streets of their neighborhood, who participated in the study voluntarily. The data were collected via tablet so the research assistant could present the scenario and record the participants' answers. Twelve participants failed the attention check regarding the shop's location. The final sample consisted of 188 participants (51.06% female; M_{age} = 33.94 years, SD = 12.34; $Mdn_{household\_income}$ = R\$901—R\$1500, average number of household members = 3.15, SD = 1.21) who were randomly assigned to a 2 (SES of organizational context: high vs. low SES) by 2 (leader social category membership: in-group vs. out-group) between-subjects experimental design.

Materials and Measures

Materials

After providing their demographic information, the participants were asked to imagine they were looking for a job. They were presented with a description of a job offer for a shop assistant position in an appliance store located in either a high-end shopping mall in a rich neighborhood (high SES organizational context) or in a low-end store in a *favela* (low-SES organizational context). Next, the participants saw a series of photos showing the mall and the people working in the store. In the high-SES organizational context, the colleagues were White; in the low-SES organizational context, the colleagues were Black. The salary and employment details were the same across all groups. Consequently, the participants saw a picture of the male store manager (leader), who was either White from a rich neighborhood (out-group) or Black from a *favela* (in-group), depending on the experimental condition.

Measures

After seeing the materials, the respondents completed the measure of stereotype threat, which consisted of six items adapted from previous studies on stereotype threat (Marx & Goff, 2005; Steele & Aronson, 1995) and based on discrimination items from the acculturative stress scale (Sandhu & Asrabadi, 1994), anchored on a 5-point scale (1 = "totally disagree" to 5 = "totally agree"). This measure showed good reliability ($\alpha = 0.95$; $M = 3.35$, $SD = 1.10$). In addition, the participants completed a one-item reverse-coded measure of perceived dissimilarity created for the purpose of this study, anchored on a 5-point scale (1 = "totally disagree" to 5 = "totally agree"). One item was: "The manager is similar to me" ($M = 3.13$, $SD = 1.25$). All measures from this and other studies and information about their adaptation can be found in Online Supplement C. Finally, the subjects responded to attention checks regarding whether the shop was located in the *favela* ("yes" or "no") and whether it was selling furniture ("yes" or "no"). The descriptive statistics and correlations are presented in Table 2.

Results

First, we conducted an ordinary least square (OLS) regression analysis with stereotype threat as the dependent variable (Table 3). As predicted, the results showed that participants in the high-SES organizational context condition experienced higher levels of stereotype threat (M = 4.32, SD = .43) than in the low-SES mall context condition (M = 2.28, SD = .40; b = 2.04, SE = .06, p <.001, r^2 = .85). Results also showed there was no significant interaction effect between work environment and leader's in-group membership (b = -.13, SE = .12, p =.30, r^2 =.006), meaning that a social category membership of the future manager did not diminish the sensation of threat stemming from the environment (White leader: M_{High_SES} = 4.29, SD = .42; M_{Low_SES} = 2.31, SD = .33; Black leader: M_{High_SES} = 4.35, SD = .45; M_{Low_SES} = 2.24, SD = .49).

Next, we analyzed whether the leader-in-group membership manipulation affected the perceived similarity between the participants and the leader (Table 3). As expected, the results of the OLS regression analysis showed that the White leader was perceived as more dissimilar (M = 4.23, SD = .57) than the Black leader (M = 1.93, SD = .39; b = 2.33, SE =.07, p < .001, r^2 = .85). In addition, we did not find any significant interaction effects between the environment and the leader's in-group vs. out-group status (b = .13, SE =.15, p = .39, r^2 = .00), which means that regardless of the environment, the participants reported higher levels of perceived dissimilarity to the White leader compared to the Black leader (high-SES mall: M_{White_Leader} = 4.34, SD = .48; M_{Black_Leader} = 1.96, SD = .38; low-SES store in *favela*: M_{White_Leader} = 4.15, SD = .62; M_{Black_Leader} = 1.88, SD = .40).

Discussion

We expected that *favela* residents would experience a higher level of stereotype threat in environments with more threatening cues to their identity and that a future Black manager would be considered more similar to them than a White manager. The results from the pilot study confirm that our manipulations were successful in the sense that Black *favela* residents indeed do

experience stereotype threat in high-SES business environments and that leaders' in-group status significantly influences their perceived similarity with the leader. These results support the use of a high SES working environment as a setting that poses high levels of stereotype threats for *favela* residents. Furthermore, these findings validate the use of racial in-group membership as a manipulation of perceived dissimilarity.

Moreover, the fact that the interaction between the level of threatening cues in the workplace and the leader's in-group status was not significant indicates that the leader's social category membership did not diminish stereotype threat stemming from the threatening environment, supporting the use of these two conditions as independent manipulations in our studies.

Study 1

The purpose of Study 1 was to examine whether an authentic or ethical leadership style can have an alleviating effect on the stereotype threat of prospective followers when the leader belongs to the candidate's racial out-group (H1). To that end, we conducted a field experiment where we tested the impact of these leadership styles on candidates applying for a position in a high-profile (i.e., threatening) organization. Stereotype threat symptoms were measured by assessing the participants' levels of salivary cortisol and blood pressure.

Sample

To reach a sample from our population of interest, we partnered with a nongovernment agency located in a Rio de Janeiro *favela*. Participants were contacted and invited to participate in a recruitment session for a real temporary job position as a research assistant in exchange for monetary compensation of approximately US$17 and the results of a basic medical checkup involving blood pressure and salivary cortisol levels. Additionally, the participant selected for the research assistant position would receive an additional US$107 for the three working days and could be offered a permanent position afterward.

Sixty-one adult participants were recruited. The majority of them were Black ($N = 47$ out of 61), thus representing typical residents of low-income Brazilian *favela* communities. Because our goal was to recreate an out-group leader situation, 14 White participants received compensation but were excluded from the analysis. As such, the final sample consisted of 47 Black *favela* residents (67% female, one individual missing their demographic information about gender, $Mdn_{household\_income}$ = R\$901—R\$1500, average number of household members = 3.67, SD = 1.28). The participants were randomly assigned to 2 (leadership style: authentic vs. ethical) by 1 (White and high-income out-group leader) between-subjects experimental design. The descriptive statistics and correlations are presented in Table 4.[1]

Procedure and Manipulation

Setting

The experiment was conducted in a setting likely to be threatening for negatively stereotyped subjects (i.e., *favela* residents), following procedures from prior literature (Derks et al., 2007; Jacob et al., 2022). Namely, the sessions took place in a Brazilian private research institution in a high-income neighborhood. They contained many potentially threatening social identity cues for the *favela* residents (e.g., underrepresentation of Black and low-income individuals, out-group members as leaders, White *favela* residents with whom they were competing, work demanding high intellectual ability, and heavy security screening).

Procedure

The participants arrived in groups of around 15 via private transport offered by the research team. Upon their arrival, under the pretense of participating in an unrelated study, they were invited to a room where they completed a questionnaire. The form included demographics (race, household income, and gender) and the measure of perceptions of the stereotyped image of *favela* residents on the job market to confirm that participants were aware of the negative perceptions of their social group in the workplace and to control for the level of these perceptions

across experimental conditions. Then, a trained pharmacologist measured participants' blood pressure, and the participants were randomly assigned to a leadership manipulation condition in which a White male actor, trained to act as their potential direct supervisor, was presented to them and behaved as either an authentic or an ethical leader.

After the leader's interaction with the participants, the pharmacologist measured the participants' blood pressure again under the pretense of confirming the results of the first measure. She also collected participants' saliva to conduct an analysis of salivary cortisol levels. The physiological measures were taken only from participants who agreed to it again on the day of the experiment. Next, participants responded to a manipulation check, received the due payment, and were debriefed. When the analysis of salivary cortisol levels was performed, the results were sent to the participants via email.

Leadership Manipulation

The leader, played by a trained actor, explained how he worked with his team and what rules he followed regarding his team and the institution. Although there are previous studies that have manipulated authentic and ethical leadership styles (Bhal & Dadhich, 2011; Cianci et al., 2014), we decided to design our own materials consistent with the experiences of leadership in job selection contexts (e.g., Lin et al., 2009). We made this decision because the existing manipulations were written vignettes and contained corporate vocabulary or references that may not have been familiar to the population we studied.

The leader's discourse was manipulated to create a scenario of ethical or authentic leadership (around 3 minutes long) based on the most-cited literature on these leadership styles (Brown et al., 2005; Neider & Schriesheim, 2011; Yukl et al., 2013). For example, the authentic leader openly spoke about his limitations and mistakes, the role of past experiences in shaping his choices, and being true to one's beliefs. Contrastingly, the ethical leader said that he believed

the ends did not justify the means and that he followed ethical norms in and outside of work, which he also expected from his subordinates, who would be disciplined otherwise.

In addition, to reinforce the manipulation and demonstrate the leader's style in practice, the leader interacted with two confederates from the subjects' out-group (White, seemingly high-income), who were supposed to be the leader's subordinates. Confederate 1 (male) simulated a late arrival at the session that he was supposed to participate in with the rest of the team. Consequently, we manipulated the way each leader dealt with the follower's transgression. Specifically, while the ethical leader reprimanded the confederate by referencing a broken group norm against tardiness and the negative impact of late arrival on others and the institution, the authentic leader reprimanded the confederate by referencing his past experiences, in which being late negatively affected his performance. In this way, we aimed to manipulate the moral manager dimension of the *ethical* leader (Brown et al., 2005; Treviño et al., 2000) and the relational transparency and self-awareness of the *authentic* leader (Walumbwa et al., 2008).

In contrast, Confederate 2 (female) played the role of a subordinate who was praised by the leader in front of everyone. In particular, the *ethical* leader mentioned the follower's contribution to the achievement of a team goal obtained by sacrificing her free time (staying late the night before preparing the recruitment session), and the *authentic* leader mentioned the follower's dedication to the achievement of a personal goal (receiving a scholarship from a foreign university). Here, we aimed to signal to the participants what the key values of the leader were: the group's well-being and compliance with higher-order priorities related to good team performance in the case of the ethical leader (Yukl et al., 2013) and the commitment to the follower's well-being and personal development typical of the authentic leader (Ilies et al., 2005). The full text of the scripts can be found in Appendix A.

Because the manipulations were created for the purpose of this study, we tested their validity in a separately recruited sample of participants at the Prolific platform ($N = 201$, 71.14%

female, M_{age} = 34.06). Due to the theoretical and empirical overlap of the two constructs (Hoch et al., 2016; Lemoine et al., 2019), we opted for a within-person design. The participants were presented with two leaders' speeches: ethical and authentic, immediately followed by definitions of ethical (Brown et al., 2005) and authentic leadership (Avolio & Gardner, 2005; Shamir & Eilam, 2005). The participants were asked to match the managers' names to the definition that best described their working style. The logistic regression results showed that most participants correctly identified the authentic and ethical manager (83%, b = 3.11, SE = .37, p < .001), supporting our manipulation of each leadership style.[2]

Finally, we conducted additional analyses in which we controlled for the level of income and number of family members, as these factors may vary among *favela* residents and can contribute to the feeling of stereotype threat they experience (Abdou & Fingerhut, 2014). We also controlled for gender and age since women and older individuals have been shown to experience additional stereotype threats in the work environment (Cadaret et al., 2017; Lamont et al., 2015). The results of the further analyses with the control variables for this and other studies are presented in Online Supplement H.

Measures

Perceptions of the Stereotyped Image of Favela Residents in the Working Environment

We used three items from the public dimension of the collective self-esteem scale (Luhtanen & Crocker, 1992). A sample item was: "In general, the residents of my neighborhood/community are respected in the job market." The response format ranged from 1 (strongly disagree) to 7 (strongly agree). This measure showed a sufficient reliability (α= .71, M = 4.05, SD = 1.23).

Change in Systolic Blood Pressure

Based on previous research, we used blood pressure change (M = -.30 mmHg, SD = 10.29 mmHg) as a threat marker before and after leadership manipulation (Wright & Kirby,

2003). Our results follow the approach most commonly used in previous work by measuring

participants' variations in systolic blood pressure before and after the manipulated interactions

with the leaders (Wright & Kirby, 2003). While diastolic blood pressure measures the resistance

the heart has to overcome (Chobanian et al., 2003; Scheepers et al., 2009), systolic blood

pressure represents the maximum force of the heart that pressures the artery following each

heartbeat and is considered a more reliable measure of stress (Hirata et al., 2006).

Salivary Cortisol

We collected participants' saliva to conduct the analysis of salivary cortisol levels using

salivettes developed by the company IPRO®. Cortisol is produced by the hypothalamic-

pituitary-adrenal (HPA) axis, which regulates responses to acute and chronic stress (Golden et

al., 2011). When activated by a stressor, the HPA axis produces a corticotropin-releasing

hormone that stimulates the anterior pituitary gland to produce an adrenocorticotropic hormone

(ACTH). Consequently, ACTH stimulates the release of cortisol from the adrenal glands. Thus,

cortisol levels are a robust test of physiological symptoms of stress previously used in the

psychological and biological literature (e.g., Townsend et al., 2011). Because of budgetary

constraints, we assessed the salivary cortisol of only 36 randomly selected participants,

according to their arrival at the site ($M = 4.41$ ng/ml, $SD = 3.60$ ng/ml). They were all Black

participants from both conditions, assessed after their exposure to leadership manipulation.

Manipulation Check

Participants responded to a one-item binary manipulation check measure that assessed

whether the respondents believed they interacted with an authentic leader ("He relies a lot on his

own past experiences. He seems real and expresses his thoughts and emotions openly") or an

ethical leader ("He conducts his personal life based on rules. He seems very just in his

relationships with his team."). The participants were asked to choose one of two descriptions that

better fit the supervisor with whom they interacted. The descriptions were based on the most

contrasting characteristics of ethical and authentic leadership, such that individuals with lower

education levels could easily comprehend their meaning.

Results

First, we conducted balance checks to confirm that the pre-treatment distribution of

relevant measures across treatment groups was balanced. These checks indicated successful

randomization (results of all balance checks can be found in Online Supplement D).

Consequently, we used a chi-square test to perform the manipulation check. The results showed

that the manipulation was effective ($\chi^2(1, N = 47) = 7.52$, $p = .006$, Table 5): 76% of the

participants in the ethical leader condition correctly identified the leadership style, compared to

67% in the authentic leader condition.

As for hypothesis testing, when the leader belonged to an out-group, the ethical leader

reduced the candidates' systolic blood pressure ($M_{pressure\_difference} = -3.20$ mmHg, $SD = 8.59$

mmHg), while the authentic leader increased the candidates' systolic blood pressure

($M_{pressure\_difference} = 3.00$ mmHg, $SD = 11.24$ mmHg; $b = 6.20$, $SE = 2.90$, $p = .038$, $r^2 = .09$, Table

7). Additionally, the analysis of the cortisol level revealed that candidates exposed to the ethical

leader had significantly lower salivary cortisol levels ($M_{cortisol} = 3.23$ ng/ml, $SD = 2.23$ ng/ml)

than participants exposed to the authentic leader ($M_{cortisol} = 5.73$ ng/ml, $SD = 4.39$ ng/ml) right

after the leadership manipulation ($b = 2.50$; $SE = 1.14$, $p = .036$, $r^2 = .12$; Table 7, Figure 2).

Discussion

The results of this study provide evidence in support of Hypothesis 1, such that when the

leader and follower belong to two different social groups (low-income Black participants vs.

high-income White leaders), ethical leadership will be more effective than authentic leadership

in alleviating the physiological symptoms of stress among stereotyped followers from low-

income neighborhoods. However, the results of Study 1 do not inform us about the effects of

these two leadership styles when the leader is an in-group member. As such, Study 2 was conducted to address this issue and empirically test Hypothesis 2.

Study 2

The main goal of Study 2 was to examine the effects of authentic and ethical leaders on diminishing the stereotype threat of prospective followers in the context of a leader's in-group status. To that end, we conducted a field experiment similar to the one in Study 1, but with candidates applying for the entry position of a bank teller in a local bank (i.e., threatening organization and job position) and a Black male actor to perform the role of a prospective leader. As in Study 1, physiological measures of salivary cortisol and systolic blood pressure levels were used to assess the stereotype threat of the participants.

Sample

Seventy participants were recruited using the same recruitment method as in Study 1. Participants were informed that they would participate in the first round of the recruitment process for the bank teller position at a local bank agency in their neighborhood. Given that the procedure was conducted close to the participants' residence and thus their participation was less time-consuming than in Study 1, they received a lower participation fee (around US$7) and the results of a basic medical checkup involving blood pressure and salivary cortisol levels. Additionally, the participants were advised that some of the data related to the job offer (name, phone number, and education level obtained) would later be shared with the bank, which would organize a second phase of the selection process in the following months.

The number of recruited White residents of the *favela* was small (10 participants). This group of participants took part in the experiment and recruitment sessions but were excluded from further analysis, as the primary goal of this study was to analyze the effects of interacting with an in-group leader. Moreover, one of the participants refused to have his blood pressure measured the second time, and another refused to have his cortisol taken after the session. Thus,

they were excluded from the sample as well. Furthermore, three outliers were excluded due to the extremely high level of salivary cortisol (> 20 ng/ml), which was too high to be related to the experimental procedure and likely resulted from medical conditions (Popma et al., 2007). Finally, two of the participants reported their gender as "other." Considering that non-binary individuals may suffer from additional threats in the work context (Lewis & Pitts, 2017), we conducted further analyses where we excluded them from the sample (Online Supplement G). The final sample consisted of 55 Black *favela* residents (66% female, M_{age} = 27.84 years old, *SD* = 10.49, $M_{household\_income}$ = R$901—R$1500, average number of household members = 3.59, *SD* = 1.43). Six individuals did not report their gender, income, or number of household members. Eleven participants did not indicate their age. The participants were randomly assigned to 2 (leadership style: authentic vs. ethical) by 1 (Black in-group leader) between-subjects experimental design. Descriptive statistics and correlations are presented in Table 6.

Procedure and Measures

Setting

The experiment took place at a nongovernment organization's headquarters in a Rio de Janeiro *favela*. It consisted of the first round of the recruitment process for the bank teller position at a local bank agency located in their neighborhood. Because *favela* residents often report banks as places where they are likely to experience inferior treatment and discrimination (Oliveira, 2018) and bank agencies are rarely present in *favela* neighborhoods due to violence (Euclides, 2022), we considered this setting to be threatening.

Procedure

The experiment followed the procedure of Study 1, with minor differences. First, participants had their salivary cortisol and systolic blood pressure taken before and after interaction with the male actor who played the role of their potential supervisor. Second, the actor who was introduced to the participants as a bank manager was Black.

Results

Our balance check showed that the sample was similar across conditions (Online

Supplement D). Consequently, we used a chi-square test to perform the manipulation check. The

results showed that the manipulation was effective (χ^2 (1, $N = 53$) = 5.03, $p =$.025, Table 5):

79.31% of the participants in the ethical leader condition correctly identified the leadership style,

and 50% did so in the authentic leader condition.

Further, consistent with the predictions of Hypothesis 2, our results show the authentic

leader reduced systolic blood pressure ($M_{pressure\_difference}$ = -3.85 mmHg, SD = 8.04 mmHg), while

the ethical leader increased the candidates' systolic blood pressure ($M_{pressure\_difference}$ = 4.14

mmHg, SD = 11.81 mmHg; b = -7.98, SE = 2.76, p = .005, r^2= .14, Table 7). Further, the

analysis of the changes in cortisol levels revealed that the authentic leader reduced the cortisol

levels of participants ($M_{cortisol\_difference}$ = -.53 ng/ml, SD = 2.12), while the ethical leader increased

those levels ($M_{cortisol\_difference}$ = .53 ng/ml, SD = 1.80; b = -1.06, SE = .53, p = .049, r^2= .07, Table

7). The results are depicted in Figure 3.

Discussion

The results of Study 2 indicate that in the presence of a prospective leader from the in-

group (a Black leader), stereotyped individuals experience a lower stereotype threat if the leader

demonstrates authentic leadership compared to ethical leadership. Together with the results of

Study 1, our findings confirm that the effectiveness of ethical versus authentic leadership styles

in reducing stereotype threat in the form of psychophysiological symptoms of stress is contingent

on the leader's in-group (vs. out-group) social category status. However, given that the job and

setting characteristics varied across these two studies, we cannot exclude the possibility that

these differences might have influenced our results.

Study 3

The purpose of Study 3 was threefold. First, we aimed to rule out the alternative explanation that differences between settings and job characteristics may have influenced the results of Studies 1 and 2. Thus, in Study 3, the job description was the same across conditions, with the only differences being the manipulated factors of leadership style and the leader's social category membership. Second, we tested whether our results hold when using other measures of identity threat by employing a self-reported measure of stereotype threat instead of physiological markers, as in Studies 1 and 2. Finally, in order to confirm the vital role of moral leadership in influencing important outcomes for candidates experiencing negative stereotypes, we assessed willingness to apply for a job as a more distal outcome of leadership that could be triggered by a stereotype threat.

Sample

A research assistant recruited 207 Black adult residents of one of the Rio de Janeiro *favelas* (46.53% female; M_{age} = 32.21 years, SD = 12.54; $Mdn_{household\_income}$ = R\$901—R\$1501, the average number of household members depending on family income = 2.97, SD = 1.19) who participated in the study voluntarily on the streets of their neighborhood. Five participants did not report their gender. Participants were randomly assigned to a 2 (leadership style: authentic vs. ethical) by 2 (leader social category membership: in-group vs. out-group) between-subjects experimental design. The data were collected via tablet so that the research assistant could present the scenario and record the answers given by the participants. The descriptive statistics and correlations are presented in Table 9.

Procedure

The respondents were first asked to provide information about demographics (race, family income, and family size). Then, they were all presented with the manipulation materials from Study 1 regarding a threatening job setting: a job offer for a shop assistant in a high-end shopping mall in a rich neighborhood. The participants then saw a picture of the store manager

(leader), who was either from an out-group (White and lived in a rich neighborhood) or an in-group (Black and was born and lived in a *favela*), depending on the experimental condition. Finally, the respondents read a brief description of the manager's leadership style, which was either authentic or ethical (see Appendix B), based on the literature and adapted from Studies 1 and 2. The scripts were shortened and simplified to keep the participants' attention during the data collection, given that they were conducted in the street. Then, the participants completed the measures of stereotype threat, willingness to apply for the position, and gender.

Measures

The measures were anchored on a 5-point scale from 1 ("totally disagree") to 5 ("totally agree").

Stereotype Threat

To measure the level of stereotype threat, we adapted a 3-item bias expectation measure (Jacob et al., 2022; Wilton et al., 2015). A sample item is "I think that I would encounter bias in this team." ($\alpha = .56$; $M = 3.05$, $SD = .83$).

Willingness to Apply

In order to measure the participants' interest in the job offer, we developed a 3-item measure ($\alpha = .83$; $M = 3.09$, $SD = .98$). A sample item is "Would you like to work in this job with this manager?"

Manipulation Check

The respondents answered a binary manipulation check regarding the leadership style: "The manager is authentic: he knows himself and speaks his mind" vs. "The manager is ethical: he is fair, always follows moral norms, and hopes the others will do the same."

Results

As expected, in a logistic regression, the manipulation check indicated a main effect of the leadership manipulation ($b = 4.75$, $SE = .52$, $p < .001$) but not of the leader's out-group status

($b = .68$, $SE = .51$, $p = .178$) on perceived leadership style. A full factorial model including the product term indicated a significant interaction between leadership style and the leader's out-group status ($b = 2.81$, $SE = 1.18$, $p = .017$). The authentic leaders were less likely to be identified as authentic if they belonged to the out-group ($b = .17$, $SE =.07$, $p = .011$). However, the perception of ethical leadership did not differ depending on the leader's social category membership ($b = -.05$, $SE =.05$, $p = .289$). Overall, 86% of participants correctly identified the leadership style in the out-group condition, compared to 96% in the in-group condition (Table 8). Balance check results showed that randomization was successful.

The results of the OLS regressions (Table 10) show that participants who saw an in-group leader indicated lower stereotype threat ($M = 2.70$, $SD =.73$) than those who saw an out-group leader ($M = 3.42$, $SD = .76$; $b = .73$, $SE = .10$, $p < .001$, $r^2 = .19$). Further, as expected, the direct effects of leadership style (controlling for the leader's social category membership) on stereotype threat ($M_{authentic} = 3.64$, $SD = 1.07$ vs. $M_{ethical} = 3.68$, $SD = 1.20$; $b = .13$, $SE = .10$, $p =.215$, $r^2 = .01$) and on willingness to apply ($M_{authentic} = 3.10$, $SD = .97$ vs. $M_{ethical} = 3.07$, $SD = .99$; $b = -.05$, $SE = .12$, $p = .686$, $r^2 = .00$) were not significant.

Regarding our hypotheses testing, the results revealed a significant interaction effect of leadership style and the leader's social category membership on stereotype threat ($b = .42$, $SE = .21$, $p = .042$, $r^2 = .02$), thus providing support for Hypothesis 3. Specifically, participants in the out-group leader condition reported a lower stereotype threat if the leader was ethical ($M_{ethical} = 3.26$, $SD = .83$) rather than authentic ($M_{authentic} = 3.61$, $SD = .64$). This difference was statistically significant ($b =.35$, $SE =.15$, $t = 2.34$, $p = .020$, $r^2=.05$), further corroborating H1. In contrast, when the participants were assigned to an in-group leader condition, the experienced stereotype threat did not differ depending on whether the leader was authentic ($M_{authentic} = 2.67$, $SD = .64$) or ethical ($M_{ethical} = 2.75$, $SD = .83$), contrary to what we proposed in H2 ($b = -.07$, $SE =.14$, $t = -$

.52, p = .605, r^2= .00). The results are depicted in Figure 4. Further, stereotype threat was negatively related to willingness to apply (b = -.34, SE =.08, p < .001, r^2 = .09).

Finally, we assessed the indirect effect of leadership style (authentic vs. ethical leadership) on the willingness to apply via stereotype threat in the leader in-group and out-group conditions. The results from 10,000 bootstrap samples support the conditional indirect effect of leadership styles on willingness to apply through stereotype threat (*moderated mediation index* = -.23, Boot *SE* = .11, 95% CI: [-.43, -.01]). In particular, when the leader belonged to the out-group, authentic leadership (relative to ethical leadership) increased the candidates' stereotype threat and subsequently diminished their willingness to apply (*indirect effect* = -.19, Boot *SE* = .08, 95% CI: [-.36, -.03]). No evidence for mediation was found for candidates exposed to an in-group leader (*indirect effect* = .04, Boot *SE* = .08, 95% CI: [-.11, .19]), thus providing partial support for Hypothesis 5 (Table 11).

Discussion

The results of Study 3 provide further support for the hypothesis that the effectiveness of ethical and authentic leadership styles in reducing stereotype threat is contingent on the leader's social category membership. In addition, the current study eliminates possible alternative explanations related to the setting characteristics that may have confounded the results from Studies 1 and 2. Specifically, we found that authentic leaders reduce their followers' stereotype threat to a lesser extent than ethical leaders when they belong to an out-group. Unexpectedly, however, the results showed no difference between authentic and ethical leaders when they belonged to the in-group.

In addition, Study 3 extends previous findings by showing the subsequent effects of stereotype threat on willingness to apply for a position. Specifically, we determined that the indirect effect of authentic leadership on willingness to apply through stereotype threat is negative when the leader and follower belong to different social categories. In another version of

this study (see Online Supplement E), where we compared the attitudes of White and Black

favela residents, we also found that ethical and authentic leadership styles had differential effects

on Black *favela* residents' willingness to apply depending on the leader's race. This confirms the

robustness of the contrasting outcomes of these leadership styles among negatively stereotyped

individuals contingent on the leaders' social category membership.

Finally, it must be acknowledged that manipulation of the leader's social category in

Study 3 included elements of both the leader's SES status and race. Therefore, it is difficult to

determine which of the two factors influenced our results. However, since they are strongly

correlated in Brazilian society (Sorj & Fraga, 2020), they likely represent the reality with which

the participants are familiar.

Study 4

In Study 4, we tested the mechanism underlying the relationship between moral

leadership styles and stereotype threat. In particular, we examined whether including the

prospective leader in the self mediates the relationship between leadership behaviors and

stereotype threat and whether the leader's social category membership moderates this indirect

relationship.

Sample

A research assistant recruited 154 Black adult residents of one of the Rio de Janeiro

favelas who voluntarily participated in the study on the streets of their neighborhood. One of the

participants reported their gender as "other"; thus, as in Study 2, we conducted additional

analyses excluding them (see Online Supplement G). The final sample consisted of 154

participants (51% female; $M_{age} = 32.51$ years, $SD = 10.93$; $Mdn_{household_income} = $ R\$1501—

R\$2000, average number of household members depending on family income = 2.97, $SD = 1.07$)

who were randomly assigned to a 2 (leadership style: authentic vs. ethical) by 2 (leader social

category membership: White vs. Black leader) between-subjects experimental design. The data

were collected via tablet so that the research assistant could present the scenario and record the answers given by the participants. The descriptive statistics and correlations are shown in Table 12.

Procedure and Measures

The study followed the same procedure as Study 3. We collected information about participants' race, family income, and family size and then exposed them to the same manipulation materials concerning leadership style and the leader's social category membership. After that, the respondents completed the same measure of stereotype threat as in Study 3(α = .73, M = 2.94, SD = .89; Wilton et al., 2015). Finally, the participants completed a one-item measure of inclusion of the other in self (Aron et al., 1992), where "other" was their prospective leader, anchored on a 7-point scale (M = 2.45, SD = 2.02), replied to the same manipulation check as in Study 3, and then reported their gender.

Results

As expected, in a logistic regression, the manipulation check indicated a main effect of the leadership manipulation (b = 5.09, SE = .68, p < .001) but not of the leader's out-group status (b = .05, SE = .59, p = .926) on perceived leadership style. A full factorial model, including the product term, indicated that the interaction between leadership and the leader's out-group status was not significant (b = 2.77, SE = 1.69, p = .101). In the out-group condition, 96% correctly identified the leadership style, compared to 87% in the in-group condition (Table 8). The balance checks indicated that there were significant differences in terms of distribution of gender across the leader's social category membership manipulation ($\chi^2(1, N$ = 153) = 5.51, p = .019) and in terms of distribution of income according to the manipulation of leadership style ($F(1, 153)$ = 3.55; p = .044) across conditions.

We conducted a series of regression analyses to test our hypotheses (Table 13). The results show that participants who saw an in-group leader indicated lower stereotype threat (M =

2.46, SD =.78) than those who saw an out-group leader (M = 3.40, SD = .75; b = .94, SE =.12, p

< .001, r^2 = .28). Furthermore, as expected, leadership style was not significantly related to

stereotype threat ($M_{ethical}$ = 2.90, SD = .86 vs. $M_{authentic}$ = 2.96, SD = .92; b = -.03, SE = .12, p =

.780, r^2 = .00).

The results also revealed a significant interaction effect of leadership style and leader's

social category on stereotype threat (b = .67, SE = .24, p = .006, r^2 = .05), providing additional

support for H2 and H3. Specifically, consistent with H2, the participants in the in-group leader

condition reported lower stereotype threat if the leader was authentic ($M_{authentic}$ = 2.27, SD = .68)

rather than ethical, ($M_{ethical}$ = 2.64, SD =.82). This difference was significant (b = -.37, SE =.17, t

= -2.16, p = .033, r^2 = .08). In contrast, when the participants were assigned to an out-group

leader condition, according to what was proposed by H1, the difference between ethical ($M_{ethical}$

= 3.22, SD = .82) and authentic conditions ($M_{authentic}$ = 3.52, SD = .68) was not significant (b =

.30, SE =.17, t = 1.76, p = .081, r^2 = .04).

Further, the inclusion of the other in the self was negatively related to stereotype threat (b

= -.16, SE =.04, p < .001, r^2 = .10). Moreover, the interaction between leadership and the leader's

social category membership was negatively related to the inclusion of the leader in the self (b = -

1.86, SE = .50; p < .001, r^2 = .08). Simple main effects analysis showed that in the in-group

leader condition, the participants were more likely to include the authentic leader in the self

($M_{authentic}$ = 4.51, SD = 2.19) rather than the ethical one ($M_{ethical}$ = 2.77, SD = 1.97; b = 1.80, SE =

.35, t = 4.92, p < .001, r^2 = .15). However, when the leader was from an out-group, participants

were not more willing to include the ethical leader ($M_{ethical}$ = 1.37, SD =.98) in the self than the

authentic one ($M_{authentic}$ = 1.26, SD = .44, b = -.11; SE =.36, t = -.32, p = .749, r^2 = .01, Figure 5).

Thus, these results partially support Hypothesis 4a.

Finally, we assessed the indirect effect of leadership styles (authentic vs. ethical

leadership) on stereotype threat via the inclusion of other in self in the leader in-group and out-

group conditions. Results from 10,000 bootstrap samples support the conditional indirect effect (*moderated mediation index* = .46, *Boot SE* = .15, 95% CI: [.18, .77]). In particular, when the leader was from an in-group, authentic leadership (relative to ethical leadership) increased the candidates' likelihood of inclusion of the leader in the self and subsequently diminished the stereotype threat (*b* = -.43, *Boot SE* =.15, 95% CI: [-.73, -.17]). For candidates exposed to an out-group leader, no evidence for mediation was found (*b* = .03, *Boot SE* = .04, 95% CI: [-.05, .12]), thus providing partial support for Hypothesis 4b (Table 14).

Discussion

Study 4 further supports the notion that a leader's social category membership moderates the effect of moral leadership styles on stereotype threat. In particular, we found that in-group leaders are more effective in diminishing stereotype threat when they exhibit authentic rather than ethical behaviors. However, contrary to our expectations, in the out-group condition, the ethical leader did not have a direct alleviating effect on the stereotype threat. Further, the results revealed that authentic behaviors encourage prospective candidates to include the in-group leader in their self, which in turn is related to lower levels of the stereotype threat of the candidate. Surprisingly, the inclusion of a manager in the self was not confirmed as a mechanism that accounted for the effect of ethical leadership on stereotype threat in the out-group condition.

Meta-Analytic Synthesis of Findings

The results of the effects of leadership styles on stereotype threat presented above demonstrate a rather consistent pattern. However, given that some of the expected effects were not confirmed in all four studies and due to the small sample sizes in Studies 1 and 2, we conducted an internal meta-analysis (Goh et al., 2016) combining the simple main effects across Studies 1 to 4 separately for the in-group and out-group leader conditions. We also evaluated the interaction terms between the dummy variables of the leader's social category membership (in-group vs. out-group) and the leadership style (authentic vs. ethical) of Studies 3 and 4.

We used standardized regression coefficients as inputs to a random-effects REML model. As predicted, we observed that the overall simple main effect of authentic leadership (compared to ethical leadership) on the candidate's stereotype threat was significant and negative ($b = -.20$, 95% CI: [-.34, -.06]) for an in-group leader and significant and positive for an out-group leader ($b = .23$, 95% CI: [.12, .34]). These results, depicted in Figure 6, provide further support for H1 and H2. In other words, the combined results of the four studies, considering physiological and self-reported measures, suggest that authentic leaders are more effective in reducing the stereotype threat when the leader is from the in-group. In contrast, ethical leaders are more effective if they are from the out-group of the stereotyped candidates. Furthermore, the interaction effect of a leader's social category membership and leadership style was also significant across Studies 3 and 4 ($b = .16$; 95% CI: [.07, .25]), thus corroborating H3.

Overall, results indicate a non-significant heterogeneity of the effect of authentic leadership for the out-group, $Q(3) = 1.27$, $p = .74$, and in-group conditions, $Q(3) = 5.15$, $p = .16$, as well as for the interaction term, $Q(1) = .43$, $p = .51$, showing that the results are relatively homogeneous across studies, which increases the robustness of the reported findings.

General Discussion

Given the detrimental influence of stereotype threat in recruitment contexts, such as diminished performance (Levashina et al., 2014) and avoidance of potentially threatening organizations (von Hippel et al., 2015), research needs to explore possible buffers against such effects. The present study builds upon social categorization (Billig & Tajfel, 1973; Turner & Tajfel, 1986) and self-expansion theories (Aron & Aron, 1996) and connects them with the leadership literature (Brown & Treviño, 2006; Yukl et al., 2013) to highlight prospective leaders' critical role in reducing the experience of stereotype threat among negatively stereotyped applicants.

Overall, the results of our studies and the meta-analysis show that during a recruitment process, the prospective manager's social category membership determines whether the display of ethical (i.e., focusing on community norms and compliance with them) or authentic leadership behaviors (i.e., relying on an internal moral compass) reduces the applicants' stereotype threat. Specifically, ethical leadership reduces stereotype threat to a greater extent when the future leader belongs to the out-group. In contrast, authentic leadership is more effective when the future leader belongs to the in-group. Furthermore, prospective authentic in-group leaders are more effective in diminishing stereotype threat indirectly to a greater extent than ethical leaders by promoting the inclusion of the leader in the candidate's self-concept.

However, contrary to our expectations, prospective ethical leaders from the out-group do not encourage the inclusion of the leader in the self more than the authentic ones. Finally, we find that when the prospective out-group leader displays ethical leadership, they are more likely than authentic leaders to alleviate the stereotype threat and thus increase the candidates' willingness to apply for the position. In contrast, unexpectedly, when the candidate and the manager shared the same social category, leadership style was not indirectly related to willingness to apply. Next, we elaborate on the theoretical and practical implications of our findings.

Theoretical Contributions

Our study advances current knowledge on stereotype threat in recruitment settings, moral leadership, and self-expansion processes in several ways. First, the present research contributes to the literature on stereotype threat by showing that the behaviors of organizational members (i.e., prospective leaders) can predict levels of stereotype threat experienced by negatively stereotyped candidates, which subsequently influence the candidates' willingness to join less diverse organizations. So far, scholars have mainly explored the role of organizational policies in buffering job applicants' stereotype threat (e.g., Klysing et al., 2022), which are not always

effective (Cropanzano et al., 2005). By acknowledging the role of organizational actors'

behaviors in diminishing job candidates' stereotype threat, we can theorize about how

interpersonal elements of the recruitment process, such as encounters with recruiters and future

colleagues (Boswell et al., 2003; Chapman et al., 2005), can potentially interact with threatening

environmental cues, such as the evaluative character of selection tests and underrepresentation

(Avery, 2003; Nguyen et al., 2003). Moreover, our findings could help to design new

interventions aimed at reducing stereotype threat during recruitment based on subtle differences

in the behavior of organizational agents. This would be a departure from the majority of

interventions focused on asking stereotyped individuals to engage in some form of coping

strategy (e.g., Kinias & Sim, 2016), which can cause further psychological burden (Leigh &

Melwani, 2019; 2022).

  Second, this research advances our understanding of leadership processes. In particular,

the present study constitutes the first step toward integrating leadership theories with stereotype

threat literature by showing that moral leadership behaviors can influence the experience of

stereotype threat. In addition, our findings contribute to the stream of research that calls for a

closer examination of moral leadership styles due to their possible redundancy (Banks et al.,

2016; Hoch et al., 2016). Our results corroborate that authentic and ethical leadership styles are

based on distinct moral foundations (Lemoine et al., 2019). These differences are meaningful

because they trigger different psychological processes and render opposing outcomes depending

on the leader's social category status. This aligns with the signaling theory perspective, in which

leaders send observable signals in the form of behaviors and speech content to diminish

informational asymmetry with their stakeholders and influence them (Connelly et al., 2011). The

signals are then subjected to interpretation. Our findings indicate that ethical and authentic

leadership behaviors signal that leaders can offer potentially valuable identity-related resources

to negatively stereotyped candidates and that social category membership can change the perception of these resources.

Moreover, the results reported here contribute to the scarce literature on self-expansion processes in the organizational domain (Gray et al., 2020). Although prior research shows that leaders can influence followers to include them in their sense of self (Mao et al., 2019), our findings demonstrate that this process a) can occur even before the formal leader-follower relationship is established and b) allows job candidates to experience a lower stereotype threat. Specifically, we show that when the future manager and a negatively stereotyped candidate come from the same group, authentic leadership behaviors (rather than ethical ones) are more likely to encourage the candidate to include the leader in their self-concept, resulting in lower levels of stereotype threat. This finding aligns with research stressing the importance of forming relationships with members of the same social groups in the context of stigmatized identities (McLaughlin-Volpe, 2006), which is crucial from the social justice perspective because negatively stereotyped candidates are less likely to know anyone in the companies to whom they apply (Seidel et al., 2000). More importantly, it uncovers the unique role of authenticity among leaders from minority groups in facilitating social connections. This is relevant because stereotyped individuals tend to experience social conformity pressures in organizations and are given fewer opportunities to express their true selves at work (Cha et al., 2019).

We also contribute to the literature on diversity, equity, and inclusive leadership by demonstrating the relative effectiveness of leadership behaviors designed to emphasize either a distinctive sense of self based on an internal moral compass or similarity to other group members by referencing community norms. Past research suggests that leaders should *simultaneously* apply both strategies to help followers thrive (Shore et al., 2011), and it does not distinguish between the experiences of minority and majority groups in the workplace (Shore & Chung, 2021). Our results challenge these assumptions by demonstrating that, in certain situations,

valuing distinctiveness and promoting equity can function in isolation to improve the well-being of stigmatized individuals and potentially facilitate their inclusion.

Finally, we shed light on the organizational consequences of stereotype threat in an understudied context (Swab et al., 2021): the South American *favelas*. Most evidence in the identity threat literature comes from studies conducted in developed English-speaking countries (e.g., Davies et al., 2005; von Hippel et al., 2015), which puts their generalizability to developing countries into question (Henrich et al., 2010). In contrast, we assess the effects of negative stereotypes among *favelados*—residents of poor neighborhoods in Rio de Janeiro whose social stigma is related to their ethnicity, low-income status, and the incidence of violence in places where they reside (da Rocha et al., 2015; Jacob et al., 2022). By doing so, our study confirms the existence of the negative consequences of stereotype threat in other contexts and expands our understanding of more complex, intersectional forms of negatively stereotyped identities.

Managerial and Social Implications

Given the increasing level of diversity in modern organizations (Homan et al., 2020), managers are likely to be paired with potential and actual subordinates representing groups suffering from negative stereotypes at some point. A key practical implication of this study is that, during the recruitment process, leaders may want to adjust their behavior toward candidates who have to deal with social stigma if they want to diminish the identity threat experienced by these individuals and enable their successful inclusion in the organization. Our findings suggest that if the manager and the candidate belong to different social groups, the manager should demonstrate moral behavior and enforce ethical norms to ensure impartiality and reduce uncertainty about possible unfair treatment. However, if the manager and the candidate are members of the same social group, the manager should demonstrate their true, authentic self in order to encourage relationship building and thus diminish stereotype threat. Such behavior adjustment is also likely to have similar effects when individuals dealing with negative

stereotypes are already employees. Therefore, it should be made part of existing leadership development programs, especially those that rely on an authentic leadership framework and encourage authentic expression, regardless of the situation (Baron & Parent, 2015).

Relatedly, the fact that future managers' leadership styles and candidates' judgments of organizational leaders' actions determine whether members of stereotyped groups decide to apply to organizations in which they are underrepresented puts into question the use of automated recruitment tools in recruitment (e.g., Hickman et al., 2022). Many companies use such solutions to optimize their selection process and avoid bias accusations (Giermindl et al., 2022). However, our results suggest that companies that wish to attract more diverse talent could benefit from including more interactions with managers in their recruitment strategy and tailoring them to the social categories of future managers and candidates.

Finally, our findings could help to design new stereotype threat interventions and policies based on self-expansion processes (Liu et al., 2021). Specifically, our results indicate that companies that can help stereotyped employees develop meaningful relationships with other organizational members are more likely to diminish their stereotype threat. As such, mentorship and sponsorship programs that facilitate exchanges with other in-group members seem particularly relevant to promoting the inclusion of stereotyped individuals in the workplace.

Strengths, Limitations, and Future Directions

Our studies have some important methodological strengths that should increase confidence in our findings. All of our studies were field experiments, two of which took place in real-world recruitment settings and included trained confederates and consequential outcomes, which likely increased the external validity of our results (Mitchell, 2012). In addition, we assessed stereotype threat using physiological and self-reported measures. This approach likely improved the precision of our analysis (Diebig et al., 2016), supported the robustness of our findings, and mitigated possible social desirability or demand effects associated with using self-

reported measures alone. Finally, we assessed the impact of stereotype threat beyond performance, namely the willingness to apply for a threatening position.

However, the study is not without limitations. First, although Studies 1 and 2 are field experiments that assessed the studied phenomena in circumstances more similar to real life and have practical relevance, given the urgency of stereotype threat among the studied population (Podsakoff & Podsakoff, 2019), they were conducted with small samples. This may have affected the generalizability of our results. Moreover, our findings may apply exclusively to individuals who experience the consequences of both income- and ethnicity-based prejudice (Purdie-Vaughns & Eibach, 2008) or whose stigma is intersectional in nature. Given that the managers were male in our studies, it is also possible that their gender contributed to the perception of the leader's in-group identity among female and non-binary participants. Further, while our self-reported measure of stereotype threat in Study 4 demonstrated fair reliability, in Study 3, its reliability was more modest. Future studies could test novel self-reported measures to test this psychological mechanism. Finally, since stereotype threat is a disruptive situational state that can be linked with virtually every collective identity in certain contexts, future studies should confirm the validity of our results by simultaneously manipulating leadership style and in- vs. out-group status in other social group contexts such as gender or immigration status.

Furthermore, although the results of the meta-analysis confirmed differential effects of leadership styles on stereotype threat, the different measures we used across studies (field experiments with physiological measures and vignette-based studies with self-reported variables) may have caused inconsistencies pertaining to the simple main effects of authentic and ethical leadership between studies. Specifically, while Studies 1 and 3 indicate that ethical leaders are more effective in alleviating stereotype threat when the leader is from the out-group, the results of Study 4 did not confirm that. Similarly, while Studies 2 and 4 show that an authentic leader was able to diminish stereotype threat when he was a Black *favela* resident, Study 3 did not

support this finding. These divergences may have been caused by differences in the strength of the leadership manipulations between the field experiment and the vignette study (Podsakoff & Podsakoff, 2019), which is in line with the studies showing the importance of facial expressions and gestures in the perceptions of leaders (Trichas et al., 2017). Thus, future studies could explore specific leader *behaviors* rather than their descriptions. By recording these behaviors and using them as stimuli (Jacquart & Antonakis, 2015), it will be possible to better understand the contrasting effects of ethical and authentic effects.

Moreover, while our results provide insights related to the differential effects of leadership styles that are "qualitatively different" from each other (Podsakoff & Podsakoff, 2019), one limitation of our studies is the lack of a control condition. It is likely that including a more neutral, not based on morality leadership approach, such as initiating structure (Judge & Piccolo, 2004), could help with the interpretation of our results. By comparing its effect on stereotype threat with that of moral leadership styles, it would be possible to confirm if the findings reported here indeed result from the type of moral values the future leader references.

Further, our findings confirm that authentic leaders encourage vulnerable followers to include them in their self-concept when they are more similar to each other, thus diminishing their stereotype threat. However, the manipulation check results from Study 3 could suggest an alternative explanation, such that the social category membership of the leader could actually influence the perception of the leadership style that the leader was using. This interpretation would corroborate studies indicating that leaders are viewed as more authentic if they advance the interests of the group to which their followers belong (Steffens et al., 2016).

In addition, more evidence is needed regarding the effect of ethical leadership in the presence of an out-group leader. In Study 4, participants did not report significantly higher willingness to include an ethical leader in their self when the leader was from an out-group, which could be related to the fact that participants exposed to the ethical out-group leader

experienced a lower level of self-clarity. In particular, ethical leaders make group norms salient, thus referencing a new positive social category of organizational members to which the participants could belong (Billig & Tajfel, 1973). At the same time, participants may have been reminded of their stereotyped identity due to the threatening context of the experiment. As such, participants might have perceived their identity as less cohesive, which has been shown to limit self-expansion processes (Emery et al., 2015). Thus, we suggest that future research explore other mediators explaining why ethical leaders are more effective in diminishing stereotype threat in out-group contexts. For instance, given that ethical leaders represent a normative approach to morality, their behavior is likely to be interpreted as indicative of the company's values (Brown et al., 2005). As such, ethical leaders might prompt stereotyped followers to consider the congruence between organizational values and their own values (DeConinck, 2015) and thus diminish their stereotype threat.

Finally, our study employs measures of salivary cortisol and systolic blood pressure as markers of stereotype threat. Future research could build on our results by using more frequent measures of cortisol (Townsend et al., 2011) and other measures of cardiovascular activity, such as pulse pressure (Scheepers et al., 2009) or continuous heartbeat measures (Vick et al., 2008), to provide a more detailed overview of the experience of negatively stereotyped followers.

Conclusion

The current work assesses the outcomes of authentic and ethical leadership styles, as well as the leader's social category membership, on candidates' experience of stereotype threat and willingness to apply for a job in a threatening context. Our results indicate that ethical leadership styles are more beneficial when the prospective leader belongs to an out-group but less effective when the potential leader and the candidate are members of the same group. On the other hand, authentic leaders are more likely to attenuate stereotype threat when the prospective leader and the candidate are members of the same group than when the leader is a member of an out-group

because they positively influence the candidate's self-expansion so that the candidate includes the leader in their self.

By empirically confirming our hypotheses with objective physiological indicators and self-reported measures in different contexts of social category membership (in-group vs. out-group), we were able to show the unique predictive ability of these two moral leadership styles to reduce candidates' psychophysiological stress symptoms and attitudinal responses under stereotype threat. We encourage further study of leader behaviors and their consequences for candidates and followers to overcome identity threats, as well as investigations on what individuals from traditionally well-represented groups can do to facilitate equity and reduce discrimination against people from diverse backgrounds.

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Footnotes

[1] The age of the participants in Study 1 was not measured. Each participant, however, signed the consent form, where they stated they were at least 18 years old.

[2] The alternative analyses of Studies 1–4, in which the participants who did not correctly identify the leadership style were excluded, are presented in Online Supplement F.

Table 1

All Studies. Sample Sizes Per Condition

Pilot study	Low SES		High SES	
	Out-group	In-group	Out-group	In-group
	55	35	43	55
Study 1	Ethical leadership		Authentic leadership	
	25		22	
Study 2	Ethical leadership		Authentic leadership	
	29		26	
Study 3	Ethical leadership		Authentic leadership	
	Out-group	In-group	Out-group	In-group
	55	50	45	57
Study 4	Ethical leadership		Authentic leadership	
	Out-group	In-group	Out-group	In-group
	32	39	46	37

Table 2

Pilot Study. Descriptive Statistics and Correlations

Variables	Mean	SD	Min	Max	1	2	3	4	5	6	7
1 Gender	.51	.50	0	1	-						
2 Age	33.94	12.34	18	67	-.13*	-					
3 Household income	3.05	.68	1	4	-.14*	.03	-				
4 Number of household members	3.15	1.21	1	6	.01	.01	.06	-			
5 Stereotype threat	3.35	1.10	1	5	-.03	.00	.10	.00	-		
6 Perceived dissimilarity	3.13	1.25	1	5	.09	-.07	-.02	.05	.07	-	
7 Organizational context	.52	.50	0	1	-.00	-.07	.11	.03	.93***	.10**	-
8 Leader's social category membership	.48	.50	0	1	.06	-.08	.01	-.11	-.16**	.92***	-.17*

Note. N = 188; *p < .05 ** p < .01 ***p < .001; gender (0 = male, 1 = female); household income variable included nine categories

(from 1 = < R$ 1 to 12 = - R$ 10 K +/month; leader's social category membership (0 = in-group leader, 1 = out-group leader); and

organizational context were binary variables (0 = low SES, 1 = high SES).

Table 3

Pilot Study. Results of OLS Regressions. Effects of Organizational Context and Leader's Social *Category Membership on Stereotype Threat and Perceived Dissimilarity*

	Perceived dissimilarity				Stereotype threat			
	Model 1		Model 2		Model 3		Model 4	
	b	r^2	b	r^2	b	r^2	b	r^2
Main effects								
Leader's social category membership	2.33***	.85	2.26***	.85	.01	.00	.08	.00
Organizational context	.14*	.02	.08	.02	2.04***	.85	2.11***	.85
Interaction								
Leader's social category membership × Organizational context	.		.13	.00			-.13	.01
Constant	1.85***		1.89***		2.28***		2.24***	
F test	521.36***		347.35***		557.44***		372.11***	
R^2 (R^2 adjusted)	.85(.85)		.85(.85)		.86(.86)		.86(.86)	

Note: N = 188; *p* < .05; **p* < .01; ***p* < .001; social category membership (0 = in-group leader, 1 = out-group leader), and environment were binary variables (0 = low SES, 1 = high SES).

Table 4

Study 1. Descriptive Statistics and Correlations

Variables	Obs	Mean	SD	Min.	Max.	1	2	3	4	5
1 Gender	46	.67	.47	0	1	-				
2 Household income	47	2.91	1.04	1	6	-.17	-			
3 Number of household members	46	3.67	1.28	1	6	.12	.37*	-		
4 Leadership style	47	.47	.50	0	1	-.17	.07	.03	-	
5 Cortisol time 2	36	4.41	3.60	0	20.5	-.00	-.04	.07	.35*	-
6 Change in systolic blood pressure	47	-.30	10.29	-26	33	.13	-.13	-.10	.30*	.07

*Note. N = 47; *p < .05 **p < .01 ***p < .001; gender (0 = male, 1 = female); household income variable included nine categories (1 = < R$ 1 to 9 = R$ 10 K +/month); leadership style (0 = ethical leadership, 1 = authentic leadership).

Table 5

Studies 1 and 2. Results of Manipulation Checks of Leadership Style

	Study 1			Study 2		
	Ethical condition	Authentic condition	χ^2	Ethical condition	Authentic condition	χ^2
He relies a lot on his own past experiences. He seems real and expresses his thoughts and emotions openly.	6	14	7.52**	6	12	5.03*
He conducts his personal life based on rules. He seems very just in his relationships with his team."	19	8		23	12	

Note. $*p < .05$ $**p < .01$ $***p < .001$; $N_{Study\ 1} = 47$, $N_{Study\ 2} = 55$.

Table 6

Study 2. Descriptive Statistics and Correlations

Variables	Obs	Mean	*SD*	Min	Max	1	2	3	4	5	6
1 Age	44	27.84	10.49	18	55	-					
2 Gender	47	.66	.48	0	1	-.05	-				
3 Household income	49	2.96	1.58	1	9	-.13	.00	-			
4 Number of household members	49	3.59	1.43	1	6	-.39**	.09	-.05	-		
5 Change in cortisol level	55	.03	2.01	-3.99	4.43	-.04	.03	.23	-.13	-	
6 Change in systolic blood pressure	55	.36	10.88	-30	20	.15	.00	-.03	.00	.20	-
7 Leadership style	55	.47	.50	0	1	-.06	-.04	.03	-.23	-.27*	-.37**

Note. $N = 55$*; *$p < .05$; **$p < .01$; ***$p < .001$; gender (0 = male, 1 = female); household income variable included nine categories (1= < R\$ 1 to 12 = R\$ 10 K +/month); leadership style (0 = ethical, leadership 1 = authentic leadership).

Table 7

Studies 1 and 2. Results of OLS Regressions. Effects of Leadership Style on Physiological Measures of Stereotype Threat

	Study 1				Study 2			
	Systolic blood pressure change		Salivary cortisol time 2		Systolic blood pressure change		Salivary cortisol change	
	b	r^2	b	r^2	b	r^2	b	r^2
Leadership style	6.20*	.09	2.50*	.12	-7.98 ***	.14	-1.06*	.07
Constant	-3.20		3.23***		4.14*		.53	
F test	4.58*		4.79*		8.39 **		4.04*	
R^2 (R^2 adjusted)	.09(.07)		.12(.10)		.14(.12)		.07(.05)	
N	47		36		55		55	

Note. $N_{Study\ 1}$ = 47, $N_{Study\ 2}$ = 55; *p < .05; **p < .01; ***p < .001. Leadership style was a binary variable (0 = ethical leadership, 1 = authentic leadership). See Online Supplement H for the alternative analyses with the control variables.

Table 8

Studies 3 and 4. Manipulation Checks

	Study 3				Study 4			
	In-group leader		Out-group leader		In-group leader		Out-group leader	
	Ethical	Authentic	Ethical	Authentic	Ethical	Authentic	Ethical	Authentic
He is authentic: he knows himself and speaks his mind.	2	53	9	35	3	34	0	46
He is ethical: he is fair, always follows moral rules, and expects others to do the same.	48	2	49	5	32	7	29	3

Note. *$p < .05$; **$p < .01$; ***$p < .001$; $N_{Study 3} = 203$, $N_{Study 4} = 154$.

Table 9

Study 3. Descriptive Statistics and Correlations

	Variables	Obs	Mean	*SD*	Min	Max	1	2	3	4	5	6	7
1	Gender	202	.47	.50	0	1	-						
2	Age	207	32.21	12.54	18	68	.14*	-					
3	Household income	207	3.24	.94	1	6	-.11	-.25**	-				
4	Number of household members	207	2.97	1.19	1	6	.10	.15*	.15*	-			
5	Stereotype threat	207	3.05	.83	1	5	.02	.14*	-.06	.02	-		
6	Willingness to apply	207	3.09	.98	1	5	.07	-.17*	-.05	-.04	-.45***	-	
7	Leadership style	207	.49	.50	0	1	-.12	-.13	-.02	.00	.04	.02	-
8	Leader social category membership	207	.48	.50	0	1	-.02	.05	.08	-.01	.43***	-.49***	-.08

Note. $N = 207$; *$p < .05$; **$p < .01$; ***$p < .001$. Obs = number of observations; gender (0 = male, 1 = female); household income (1 = < R$ 1,

12 = - > R$ 20 K +/month); leadership style (0 = ethical leadership, 1 = authentic leadership); leader social category membership (0 = in-group

leader, 1 = out-group leader).

Table 10

Study 3. Results of OLS Regressions. Effects of Leader Social Category Membership and Leadership Style on Stereotype Threat and Willingness to Apply

	Stereotype threat				Willingness to apply			
	Model 1		Model 2		Model 3		Model 4	
	b	r^2	b	r^2	b	r^2	b	r^2
Main effects								
Leader social category membership	.73***	.19	.52***	.20	-.97***	.24	-.72***	.14
Leadership style	.13	.01	-.07	.01	-.05	.00	-.003	.00
Stereotype threat							-.34***	.09
Interaction								
Leader social category membership × Leadership style			.42*	.02				
Constant	2.64***		2.75***		3.58***		4.49***	
F test	24.65***		18.08***		32.77***		30.55***	
R^2 (R^2 adjusted)	.19(.19)		.21(.20)		.24(.24)		.31(.30)	

Note. N =207; *$p < .05$; **$p < .01$; ***$p < .001$. Leadership style (0 = ethical leadership, 1 = authentic leadership) and leader social category membership were binary variables (0 = in-group leader, 1 = out-group leader). See Online Supplement H for the alternative analyses with control variables.

Table 11

Study 3. Indirect Effects of Leader's Social Category Membership and Leadership Style on Willingness to Apply via Stereotype Threat

	Coefficient	*SE*	95% CI
Indirect effect of leader social category membership	-.72	.13	[-.97, -.47]
Indirect effect of leadership style	-.04	.11	[-.23, .22]
Conditional indirect effects of leadership style			
In-group leader	.04	.08	[-.11, .19]
Out-group leader	-.19	.08	[-.36, -.03]
Index of moderated mediation	-.23	.11	[-.45, -.01]

Note. *N* = 207; Bootstrapping: 10,000 replications; *SE* = standard error; CI = confidence interval; leader social category membership (0 = in-group leader, 1 = out-group leader), and leadership style were binary variables (0 = ethical leadership, 1 = authentic leadership). See Online Supplement H for the alternative analyses with control variables.

Table 12

Study 4. Descriptive Statistics and Correlations

	Variables	Obs	Mean	*SD*	Min	Max	1	2	3	4	5	6	7
1	Gender	153	.51	.51	0	1	-						
2	Age	154	32.51	10.93	18	59	-.11	-					
3	Household income	154	3.56	.94	1	6	-.07	-.04	-				
4	Number of household members	154	2.97	1.06	1	5	.05	.07	.33***	-			
5	Stereotype threat	154	2.94	.89	1	4.67	.10	.04	-.05	.01	-		
6	Inclusion of the leader in the self	154	2.45	2.02	1	7	-.14	-.08	.20*	.05	-.54***	-	
7.	Leadership style	154	.54	.50	0	1	-.01	-.12	.16*	.07	.04	.14	-
8.	Leader social category membership	154	.50	.50	0	1	.19*	-.13	-.04	-.13	.53***	-.57***	.10

Note. $N = 154$; *$p < .05$; **$p < .01$; ***$p < .001$. Obs = number of observations; gender (0 = male, 1 = female); household income (1 = < R\$ 1,

12 = - > R\$ 20 K +/month); leadership style (0 = ethical leadership, 1 = authentic leadership); leader social category membership (0 = in-group

leader, 1 = out-group leader).

Table 13

Study 4. Results of OLS Regressions. Effects of Leader Social Category Membership and Leadership Style on Inclusion of the Leader in the Self and Stereotype Threat

| | Inclusion of the leader in the self | | | | Stereotype threat | | | | | |
| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | |
	b	r^2	b	r^2	b	r^2	b	r^2	b	r^2
Main effects										
Leader social category membership	-2.39***	.36	-1.39***	.36	.94***	.28	.58**	.27	.55***	.09
Leadership style	.82**	.06	1.74***	.07	-.03	.00	-.37*	.00	.10	.00
Inclusion of the leader in self									-.16***	.10
Interaction										
Leader social category membership × Leadership style			-1.86***	.08			.67**	.05		
Constant	3.22 ***		2.77***		2.48 ***		2.64***		2.30***	
F test	44.55***		36.75 ***		28.91***		22.68***		28.26***	
R^2 (R^2 Adjusted)	.37(.36)		.42 (.41)		.28 (.27)		.31(.30)		.36 (.35)	

Note. $N = 154$; *$p < .05$; **$p < .01$; ***$p < .001$; leadership style (0 = ethical leadership, 1 = authentic leadership) and leader social category membership were binary variables (0 = in-group leader, 1 = out-group leader). See Online Supplement H for the alternative analyses with control variables.

**Table 14**

Study 4 Indirect Effects of Leader's Social Category Membership and Leadership Style on Stereotype Threat via Inclusion of the Other in the

Self

	Coefficient	*SE*	95% CI
Indirect effect of leader social category membership	.39	.10	[.26, .84]
Indirect effect of leadership style	-.13	.06	[-.27, -.03]
Conditional indirect effects of leadership style			
In-group leader	-.43	.15	[-.73, -.17]
Out-group leader	.03	.04	[-.05, .12]
Index of moderated mediation	.46	.15	[.18, .77]

Note. $N = 154$; bootstrapping: 10,000 replications; SE = standard error; CI = confidence interval; leader social category membership (0 = in-group leader, 1 = out-group leader); and leadership style were binary variables (0 = ethical leadership, 1 = authentic leadership). See Online Supplement H for the alternative analyses with control variables.

Figure 1

*Conceptual Research Model*
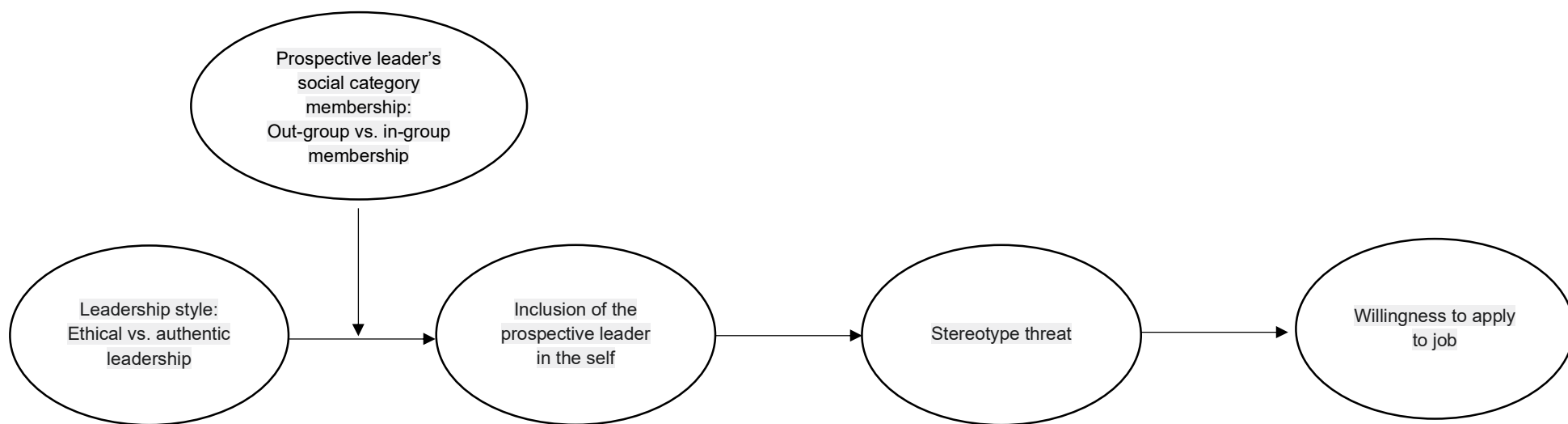
Figure 2

Study 1. Effects of Leadership Style on the Follower's Changes in Systolic Blood Pressure and Salivary Cortisol After Leadership Manipulation in the Context of the Prospective Leader's Out-Group Membership
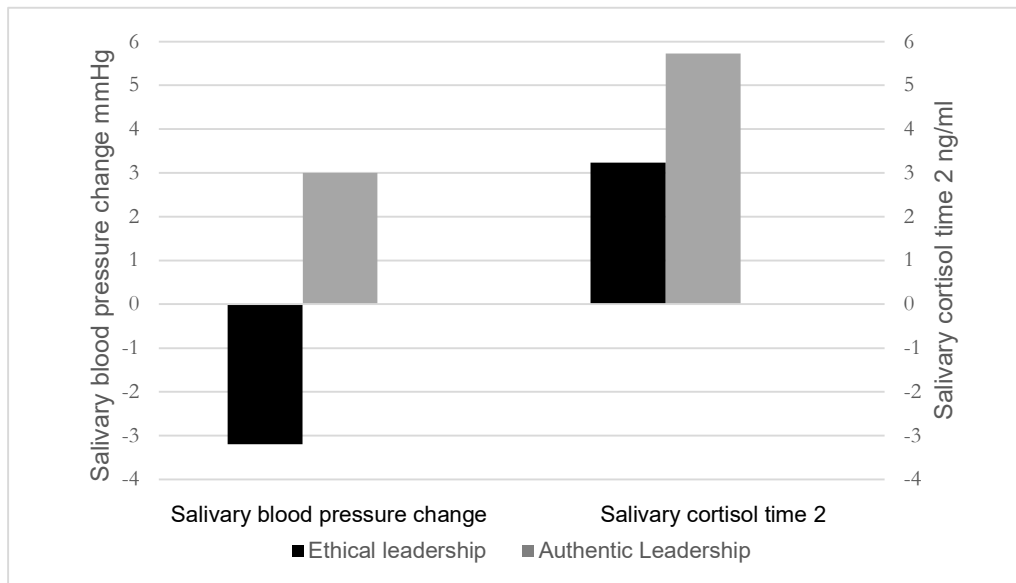
Note. $N_{\text{Systolic Blood Pressure Change}}= 47$; $N_{\text{Salivary Cortisol}} = 36$.

Figure 3

Study 2. Effects of Leadership Style on Followers' Changes in Systolic Blood Pressure and Salivary Cortisol in the Context of the Prospective Leader's In-Group Membership
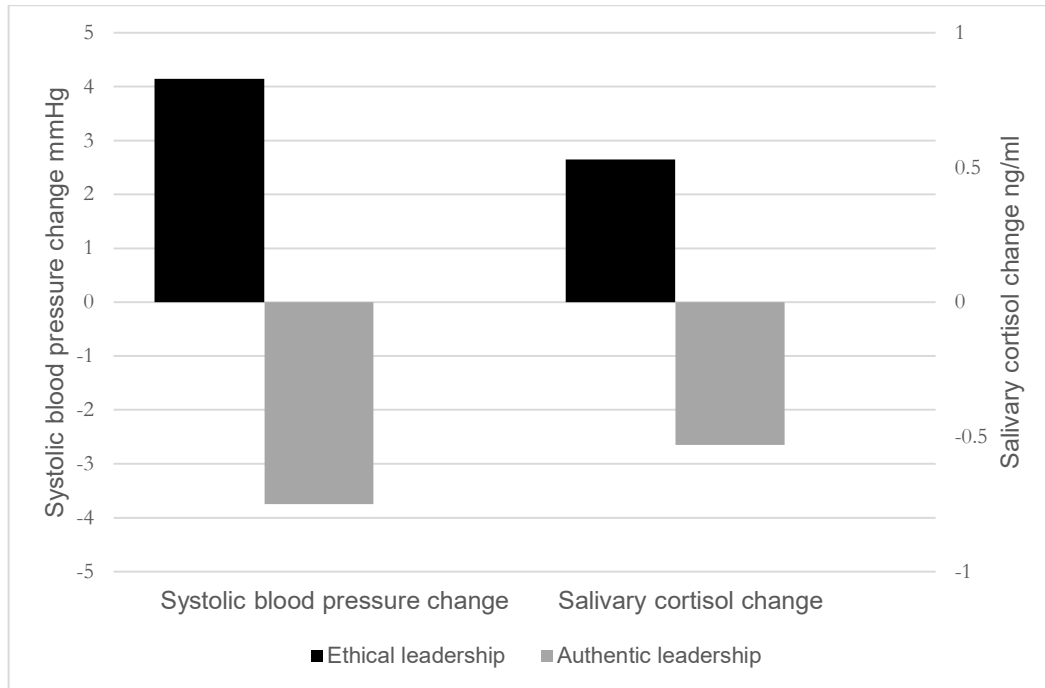
Note. N = 55.

Figure 4

Study 3. Stereotype Threat as a Function of Leader's Social Category Membership and

Leadership Style

Note. N = 207

Figure 5

Study 4. Follower's Inclusion of the Leader in the Self as a Function of the Leader's Social
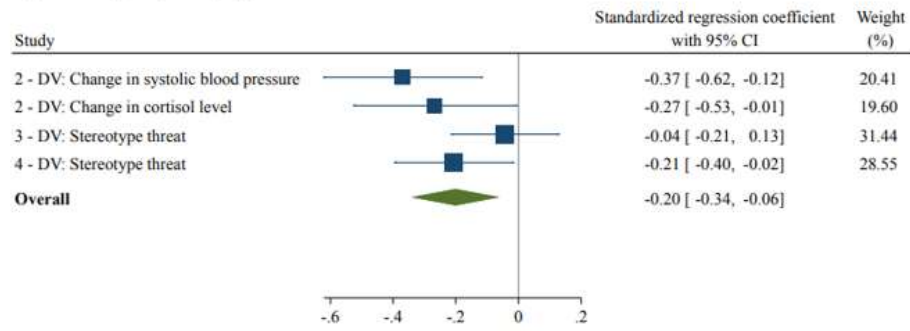
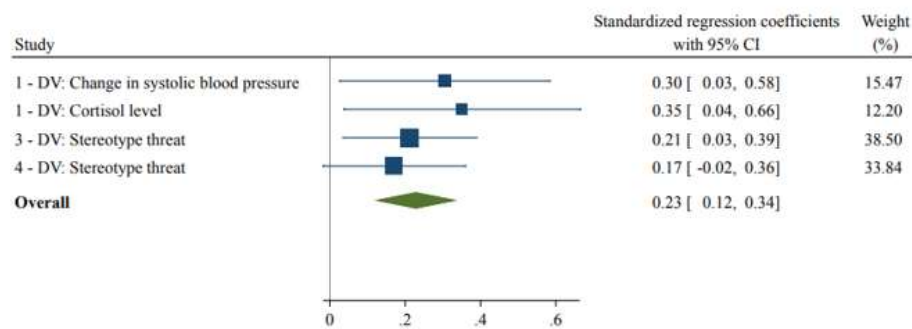*Category Membership and Leadership Style*
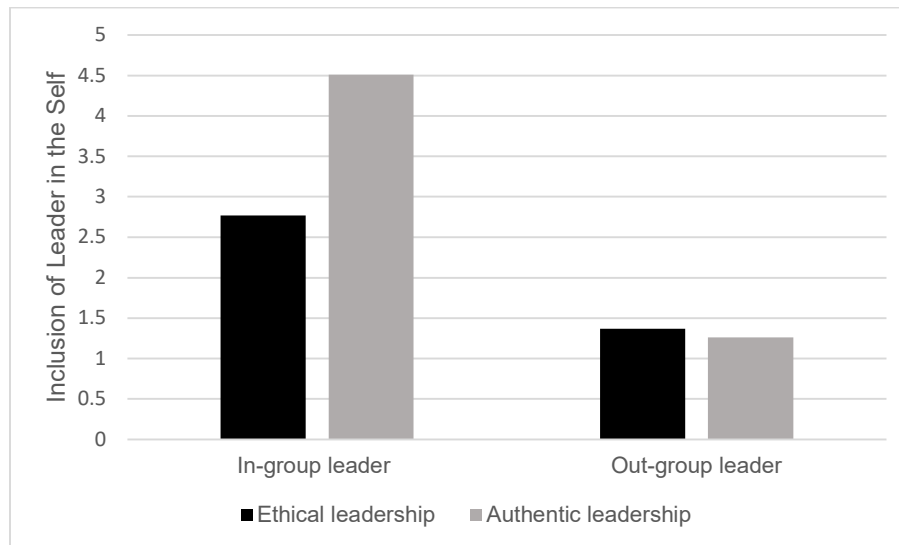
Note. N = 154.

Figure 6

Results of Internal Meta-Analysis. Meta-Analytic Effect of Leadership Styles (Authentic vs.

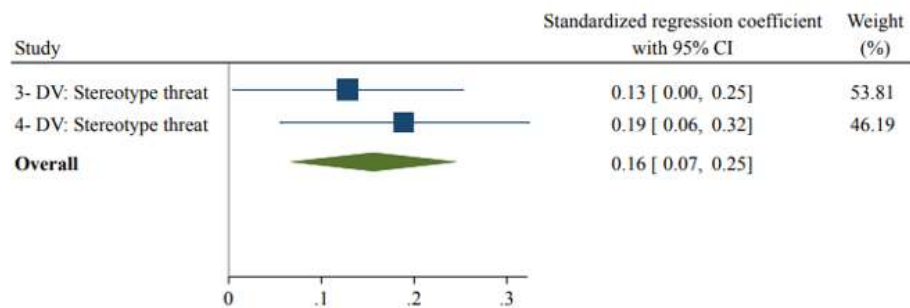*Ethical) on Stereotype Threat across Studies 1, 2, 3, and 4*

Note. CI stands for confidence interval. Diamonds represent overall effects, and rectangles represent the effects of individual studies. The upper panel depicts simple main effects for the in-group leader condition, followed by the out-group leader condition and interactions between leadership style and the leader's social category membership.

APPENDIX A

Leadership Scenarios from Studies 1 and 2

Authentic Leadership

A male confederate arrives late, excuses himself.

"Since you arrived late, you will stay until the end and you will help to clean the things up, ok? I have already arrived late multiple times in my first jobs, a lot more than you. But at some point I have realized that this made the job of others more difficult. I realized that some people were irritated because of me being late. I admit, I really exaggerated sometimes. But then, I saw that this thing just created problems and I learned how to arrive on time.

I started my professional career in a job similar to this one research assistant/bank clerk. This was a really good experience because I learned how important it is to work with people, have responsibilities, tasks, and do my part of the task. I believe that this made me a person I am today.

Moreover, this experience made me realize how some procedures and rules that come from above are not working anymore, or how they can be changed.

For instance, some time ago, the school/bank wanted me to start a new project that would the same as some project abroad but implemented here in Brazil. My experience told me that this was a bad idea, because every country, every context is different. So I openly objected.

This is why I like to work and I am looking for people who are authentic, critical towards what they do, because I am also like this. If something is now right for me, I cannot simply keep quiet and ignore it, independently from what it is.

It is a challenge, I know. But what really matters is that at the end of the day, you can go to bed with a clean conscience.

I also like people who know what their limitations are and want to attain their goals. For instance, a Y (female confederate). She wanted to do the internship abroad ("enter public service" – Study 3). She studied for months for the exam, every weekend, ("got the money" - only in case of Study 2) and she managed to pass the exam last week. You really made it, congrats!

Anyway, I believe, first and foremost that you need to stay true to yourself. You need to be consistent, and you should not pretend you are someone you are not."

Ethical Leadership

A male confederate arrives late, excuses himself.

"Well you arrived late, so the right thing is for you to be the last to leave. You know that nobody from our group arrives late. I know that this is Saturday/there is a lot of traffic, but this negatively impacts your job, the school/bank, and, most importantly, the others who made the effort and managed to arrive on time. I hope that in the future you will be more careful about the time, ok?

In my work, and also outside of the school/bank I highly value ethics and morality.

They are really important to me; that is why, I do not only follow them in all the situations, but I also expect from my subordinates to do the same. If that is not the case, they will be disciplinary punished.

I think that there is only one correct way to doing the job and that people should always be responsible for their actions and maintain certain standards.

In situations in which there is a difficult decision, I ask comments from my students/subordinates and I consider their opinions before I make final decision.

Because at the end of the day what really matters is to do the right thing.

Like Y (female confederate). She stayed until late preparing the materials for today, printing out forms, correcting all the errors she found. You really did well, congrats!

I believe the goals and results are very important, obviously.

But only if they are attained the right way: the ends never justify the means."

APPENDIX B

Leadership Profiles from Studies 3 and 4

Leadership style	Description
Authentic leadership	He knows himself. He recognizes and speaks openly about his weaknesses and strengths and how they influence his work. He is truthful. His employees know they can trust him to do what he believes is right. He even asks his employees to do the same. He likes to make it clear when he disagrees with something or sees something wrong happening. For example, when an employee is late, he asks them to make up for it. He makes it clear that he used to be late a lot too and that it has hurt his career in the past. He always asks for the opinions of the employees even when they disagree with him. Despite considering their opinions, he thinks about what he believes and makes the decision he believes is the right one. For example, when two employees have a dispute, he first listens to both sides but he makes the decision that he thinks is the right one.
Ethical leadership	He highly values ethics and fairness in and outside of the work environment. He knows the rules and makes it clear how they guide his work. He is honest and employees can trust him to do the right thing based on morality. He follows the rules in all situations. He even likes to make it clear that he wants his employees do the same. For example, when an employee is late, he asks him to make up for it. He makes it clear that if a person has harmed the group, it is only fair that they make up for it. When he does something that is not right, he acknowledges it and takes responsibility for his mistakes. In situations where there is a difficult decision to be made, he asks for the opinions of the staff and tries to do the right thing based on ethical standards. For example, when two employees have a fight between them, he first listens to both sides before making a decision that is the fairest for the team.