A Field Experiment: Reducing Interpersonal Discrimination Toward Pregnant Job Applicants

Whitney Botsford Morgan
and Sarah Singletary Walker
University of Houston—Downtown

Michelle (Mikki) R. Hebl
Rice University

Eden B. King
George Mason University

The current research targets 4 potential stereotypes driving hostile attitudes and discriminatory behaviors toward pregnant women: incompetence, lack of commitment, inflexibility, and need for accommodation. We tested the relative efficacy of reducing concerns related to each of the stereotypes in a field experiment in which female confederates who sometimes wore pregnancy prostheses applied for jobs in a retail setting. As expected, ratings from 3 perspectives (applicants, observers, and independent coders) converged to show that pregnant applicants received more interpersonal hostility than did nonpregnant applicants. However, when hiring managers received (vs. did not receive) counterstereotypic information about certain pregnancy-related stereotypes (particularly lack of commitment and inflexibility), managers displayed significantly less interpersonal discrimination. Explicit comparisons of counterstereotypic information shed light on the fact that certain information may be more effective in reducing discrimination than others. We conclude by discussing how the current research makes novel theoretical contributions and describe some practical organizational implications for understanding and improving the experiences of pregnant workers.

Keywords: pregnant, mothers, interpersonal discrimination, counterstereotypic information

Empirical research consistently demonstrates that pregnant women and mothers experience disadvantage when trying to gain entry into the workplace (see Correll, Benard, & Paik, 2007). For example, research indicates that claims of pregnancy discrimination have increased by 40% in the recent decade (Shellenbarger, 2008). Empirical research reveals that pregnant job applicants experience greater interpersonal hostility when applying for jobs (Hebl, King, Glick, Singletary, & Kazama, 2007), are rated less likely to be hired (Bragger, Kutcher, Morgan, & Firth, 2002) and promoted (Halpert, Wilson, & Hickman, 1993; Heilman & Okimoto, 2008), and receive lower starting salary recommendations (Correll et al., 2007) than nonpregnant women. The stigma of pregnancy is unique in that it is temporal in nature (i.e., lasts a finite amount of time) and can, at times, be concealed. Given that approximately 80–90% of all women will undergo the transition to motherhood (Johnson, 2008) it is imperative to study why such bias exists and what can be done to reduce interpersonal negativity toward pregnant women and mothers.

A relatively recent field study found that pregnant job applicants reported experiencing more interpersonal negativity (i.e., rudeness, hostility, interpersonal distance) than their nonpregnant counterparts (Hebl et al., 2007). Although Hebl et al. (2007) was seminal in that it demonstrated that pregnant women experience interpersonal discrimination in the hiring process, this study failed to address mechanisms for remediating such discrimination. Thus, the purpose of the current research is to extend the Hebl et al. (2007) study by both identifying the stereotypes that may drive interpersonal discrimination and also testing whether the provision of counterstereotypic information may combat interpersonal hostility. By testing the relative efficacy of competing theoretically justified information conditions in a field experiment, we provide novel practical guidance regarding effective ways to avoid employment discrimination.

Differential Displays of Discrimination

Previous research distinguishes between two forms of differential treatment (see Hebl, Foster, Mannix, & Dovidio, 2002). First, individuals belonging to marginalized groups may experience formal discrimination, which consists of differential hiring, firing, transferring, promotion, and pay. This type of discrimination is typically illegal as mandated by federal legislation. Second, interpersonal discrimination refers to a pattern of negativity that consists of verbal, para-verbal, and nonverbal displays. Such behaviors have also been labeled everyday discrimination (Deitch, et al.,
of interpersonal hostility. Pregnant job applicants will experience discrimination in the form of traditionally masculine work role; Hebl et al., 2007), we anticipate that pregnancy is a feminine role (and therefore incongruent with a traditionally male institutions (Glick & Fiske, 1996, 2001). Taken together the previous findings and an understanding that pregnancy is a feminine role (and therefore incongruent with a traditionally masculine work role; Hebl et al., 2007), we anticipate that pregnant job applicants reported experiencing interactions that contained greater amounts of interpersonal discrimination than nonpregnant applicants. These findings were interpreted according to ambivalent sexism theory, which specifies that one of the major forms of sexism is hostile in nature (Glick & Fiske, 1996). Hostile sexism involves questioning women’s competence in effectively performing masculine tasks and their ability to maintain power in traditionally male institutions (Glick & Fiske, 1996, 2001). Taken together these findings and an understanding that pregnancy is a feminine role (and therefore incongruent with a traditionally masculine work role; Hebl et al., 2007), we anticipate that pregnant job applicants will experience discrimination in the form of interpersonal hostility.

**Hypothesis 1:** Managers will display more interpersonal hostility toward pregnant (vs. nonpregnant) job applicants.

**Providing Counterstereotypic Information to Reduce Discrimination**

Previous research suggests that when perceivers have access to information about stigmatized targets, they are less likely to display biases toward such individuals (Fiske & Neuberg, 1990; Kunda & Sherman Williams, 1993; Miller & Kaiser, 2001; Singleterry & Hebl, 2009). In addition, there is evidence that certain types of information may be more beneficial than others. Specifically, information that directly contradicts relevant stereotypes may be the most effective approach (Blair & Banaji, 1996; Rudman, Glick, & Phelan, 2008). For example, several research studies found that participants exposed to counterstereotypic exemplars during a training session were less likely to express prejudice and discriminatory behaviors toward targets compared to participants in a control condition (Dasgupta & Greenwald, 2001; Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000; Richeson & Ambady, 2001). Recent research in organizational contexts reveals that managers and store personnel, who receive counterstereotypic (vs. control) information about job applicants and shoppers, behave more positively toward such shoppers (King et al., 2006). For instance, King and Ahmad (2010) examined mechanisms for combatting common stereotypes held about Muslims (e.g., being cold or unfriendly), specifically managers who received (vs. did not receive) information that ostensible Muslim job applicants spent time volunteering behaved more positively toward such applicants. Similarly, King et al. (2006) revealed that store personnel interacted much more favorably with heavyweight shoppers who acknowledged in a conversation that they were dieting and exercising (vs. those who did not make such acknowledgment). In both of these studies, providing counterstereotypic information suppressed the expression of prejudice and resulted in more positive interpersonal interactions. Furthermore, a laboratory study revealed that extensive counterstereotypic association training (i.e., showing women in leadership roles) later reduced gender bias in selecting individuals for supervisory positions (Kawakami, Dovidio, & Van Kamp, 2007). Together, these studies demonstrate that the provision of counterstereotypic information is effective, perhaps because perceivers receive alternative and supplemental information on which to evaluate targets. Thus, these results may serve as a basis for developing individual and organizational interventions for reducing bias.

**Stereotypes of Motherhood**

The current research extends the research of Hebl et al. (2007) by focusing on how counterstereotypic information might reduce the interpersonal discrimination that pregnant women experience when applying for jobs. The question then becomes what stereotypes do pregnant women encounter? We consider four potentially problematic stereotypes about pregnant employees: incompetence, lack of commitment, inflexibility, and need for accommodating expectant mothers in the workplace.

**Incompetence**

Incompetence can be defined as a person’s ability to perform or one’s “expected performance capacity” (Ridgeway & Correll, 2004, p. 690). We discuss three theories suggesting that motherhood is associated with the stereotype of incompetence. First, the stereotype content model argues there are two cognitive dimensions (warmth and competence) that work together to produce emotion-based prejudice (Fiske, Cuddy, Glick, & Xu, 2002; Fiske, Xu, Cuddy, & Glick, 1999). For example, Cuddy, Fiske, and Glick (2004) showed that participants rate consultants with (vs. without) children as less competent. Second, Ridgeway and Correll (2004) established that motherhood is considered a status characteristic. Expectation states theory (Berger, Fiske, Norman, & Zelditch, 1977; Wagner & Berger, 2002) suggests that when there is a categorical distinction between people it becomes a status characteristic when one group is held in higher esteem (e.g., worthiness, competence) than another group. Empirical research demonstrates that mothers are believed to be less competent than nonmothers, which ultimately affects negatively the competence-based evaluations of mothers’ performance (Ridgeway & Correll, 2004) and promotion (Heilman & Okimoto, 2008). Finally, the lack of fit model (Heilman, 1983, 1995, 2001) proposes there is a perceived incompatibility between stereotypically feminine (e.g., warmth, kindness, helping) and masculine (e.g., competitive, agentic, instrumental) attributes. Given that pregnancy and motherhood represent the epitome of femininity (see Hebl et al., 2007), we anticipate that...

**Hypothesis 2:** Managers who receive counterstereotypic (vs. no) information about the competence of pregnant job applicants will display less interpersonal hostility toward them.

**Lack of Commitment**

Commitment can be defined by a person’s intensive effort and/or dedication to performance. Social psychological research
clarifies why motherhood is associated with the stereotype of lack of commitment. First, social role theory suggests that the distribution of men and women into breadwinner and homemaker roles creates stereotypes that support the maintenance of these roles (Eagly, 1987). Empirical research suggests that mothers are perceived to be less committed than fathers (Correll et al., 2007; King, 2008). Such beliefs about mothers may foster interpersonal negativity and help to explain disparities in advancement. Ridgeway and Correll (2004) pointed out that “the role of committed worker exists at the level of normative cultural assumptions rather than necessarily at the level of mothers’ own commitment to their work roles” (p. 691). In effect, people may question mothers’ ability to be “appropriately” dedicated to both work and familial roles. Hays (1996) describes this notion as “intensive mothering” in which a mother is expected to be available to her children at all times and therefore is incapable of being fully dedicated to her professional role. Similarly, Williams (2001) suggested there is an “ideal worker” norm that calls for employees to put in long-hours, take little or time off, and be ready for work last-minute work assignments. Blair-Loy’s (2004) qualitative research illustrated that there is indeed a perception that a mother cannot be fully committed to work because she must tend to her children’s needs. In sum, there is a belief that the ideal worker is unrestricted by family and can dedicate their full self to being a worker. Such norms foster negativity toward pregnant women and mothers, as there is an inherent belief that they cannot be fully committed to the role of worker. Thus . . .

Hypothesis 3: Managers who receive counterstereotypic (vs. no) information about the commitment of pregnant job applicants will display less interpersonal hostility toward them.

Inflexibility

Inflexibility can be defined as unwillingness to compromise or alter work schedules to meet work demands. As previously discussed, social role theory (Eagly, 1987) and the idea of intensive mothering (Hays, 1996) help to explain why women still perform the majority of household and childcare tasks even when performing paid work (Bond, Thompson, Galinsky, & Prottas, 2002). Despite a shift to more “family-friendly” workplaces (Bianchi & Milkie, 2010; Kossek & Michel, 2010), the traditional model that work and family roles are incompatible persists (Greenhaus & Beutell, 1985; Greenhaus & Powell, 2006). Thus, in order to completely fulfill the role of worker, one must be unconstrained from familial responsibilities that may limit one’s ability to conduct paid work. In cases in which there are perceived constraints, the stereotype might emerge that the person with such constraints is inflexible and difficult. Given the strong norms and perception that women are the primary caregivers, there are assumptions that mothers will be difficult to work with or inflexible in their time and/or approach to work. Hoobler, Wayne, and Lemmon (2009) even argued that all women, whether mothers or not, experience “family–work conflict bias,” because of their responsibilities in the home. But the perceptions of these conflicts may be heightened by the visual cue of pregnancy which serves as a reminder that the pregnant employee will soon have a baby and hence, a perceived home inflexibility. As such, it is not hard to imagine how employees might perceive that a woman (vs. a man) will have more interruptions or constraints during the work day and that women and mothers are inflexible workers who cannot fully dedicate themselves to the job, as the “ideal worker” should. It follows that . . .

Hypothesis 4: Managers who receive counterstereotypic (vs. no) information about the flexible work availability of pregnant job applicants will display less interpersonal hostility toward them.

Need for Accommodation

Childbirth is a physical experience for women that results in most of them taking some time off from work to recover and bond with their newborns. It is sometimes difficult for employers and employees to fully embrace their coworkers’ birthing experience because of the perception that these new mothers will need prolonged assistance and/or accommodation in the workplace. Federal laws such as the Pregnancy Discrimination Act of 1978 (2006) and the Family and Medical Leave Act 1993 (2006) ensure that pregnant women receive fair treatment in the workplace and can require employers to make accommodations for them. Extant disability research suggests that individuals (i.e., employees) make judgments about the need for, and fairness of, accommodation (Colella, 2001). Any perceived inequity in roles and responsibilities may arise and create resentment among the employees (Greenberg & Cropanzano, 2001). In fact, research suggests that coworkers react negatively toward employees receiving pregnancy and childbearing-related accommodations (Gates, Akbas, & Oran-Sabia, 1998) and that challenges in relationships with coworkers about these issues are widespread (Gates, Akbas, & Kantrowitz, 1996).

Although “normal” pregnancy is currently not covered under the Americans with Disabilities Act some legal experts argue that it should be covered (Cox, 2012). The intent of these legal efforts is arguably to adequately protect pregnant women, however, increasing accommodation in the workplace may, in fact, create situations in which employers are resentful or fearful of hiring pregnant women. Such accommodations (e.g., limited exposure to chemicals, limited overtime hours) can be perceived as burdensome to employers and therefore individuals’ possibly requiring accommodation may encounter negative interpersonal treatment. Specifically, we propose that pregnant women are stereotyped as needing accommodation and therefore will be subject to interpersonal discrimination. Thus . . .

Hypothesis 5: Managers who receive counterstereotypic (vs. no) information about existing benefits and vacation time of pregnant job applicants will display less interpersonal hostility toward them.

Method

Design

The current research contains six conditions: nonpregnant, pregnant control, pregnant displaying competence, pregnant displaying commitment, pregnant displaying flexibility, and pregnant not needing an accommodation.
Participating Stores

In line with previous research of Hebl et al. (2002), we identified and selected stores that confirmed they were actively hiring for inclusion in the current study. A total of 161 stores in three malls located in a major Metropolitan area were selected for inclusion in the current study.

Confederate Applicants, Observers, and Independent Coders

Five undergraduate women participated as confederate applicants in the study. Five undergraduates (three females, two males) served as observers for each of the interactions. In addition, three undergraduate women who were unaware of the study’s purpose and conditions served as independent coders. All confederates remained blind to study hypotheses.

Materials

Confederate applicants wore standardized attire that consisted of black shirts, dark blue jeans, low-heeled shoes, and wedding rings. In addition, confederate applicants carried a small black purse that contained a digital audio-recorder used to record each interaction.

Training. Prior to collecting data, all confederate applicants, observers, and independent coders were trained. Specifically, confederate applicants were given specific information about the procedure (described below), familiarized themselves with the script, tried on and became used to the pregnancy prostheses, and were given an opportunity to ask any questions. Similarly, confederate observers also were instructed on the procedure and given information about their specific duties as an observer. Last, independent coders, who remained blind to the study’s purpose, conditions, and anything having to do with pregnancy as the point of the study, were trained to listen to and make ratings based on audio-recorded interactions.

Procedure

Applicants and observers utilized a standardized procedure that mirrored previous research (see Hebl et al., 2002, for a review). Specifically, confederate observers entered stores before confederate applicants. Once inside, observers began looking at merchandise and politely declined any offers for help. Observers identified a central location in the store in an effort to maximize the likelihood that they could hear, see, and evaluate the conversation between the confederate applicant and store personnel. Approximately 1 min after the observer arrived in the store, the confederate applicant then entered and asked to speak to the manager or person responsible for making hiring decisions. When the manager emerged, the confederate applicants began to enact a standardized script.

Manipulations

1. Stigma. The applicant’s stigma was manipulated mirroring the methodology described by Hebl et al. (2007) in which applicants wore a pregnancy prosthesis, or a foam pregnancy “belly” that was strapped around their waists. This prosthesis enabled confederate applicants to be perceived as being approximately 5–6 months pregnant.

2. Counterstereotypic information conditions. We developed a number of remediation mechanisms based on previous research and pretest data. A total of 20 graduate students with significant work experience rated each statement using a 5-point Likert-type scale (1 = Not at all, 5 = Completely). Statements that were rated as (a) “most reflective,” (b) “least awkward,” and (c) “most realistic” of each of the four stereotypical beliefs we described about pregnancy were selected for inclusion in the study.

A. Control. In this condition, applicants followed a memorized script that mirrored former field studies (Hebl et al., 2002; Hebl et al., 2007; Singletary & Hebl, 2009). Specifically, applicants asked three standard questions: (a) “Do you have any jobs?” (b) “Can I complete a job application?” and (c) “What sorts of things would I do if I worked here?”

B. Competence. We developed a script with information to increase perceptions of the applicant’s competence; hence, the applicant indicated that she had previous retail experience, pursued a degree at a prestigious institution, and indicated a belief that she would excel in a retail position. Individuals who pretested this statement rated it as very much reflective of competence (M = 3.63, SD = 0.81), appropriate (M = 3.89, SD = 0.34), and realistic (M = 3.63, SD = 0.72).

C. Commitment. This script contained information that was designed to increase perceptions of the applicant’s commitment to a job and overall work ethic. Specifically, applicants shared information by providing the following statement, “I am an extremely dedicated person who is willing to put in the work required to get the job done. People have always said one of my greatest strengths is my commitment to my work.” Pretest data revealed that these statements were very much indicative of commitment (M = 4.23, SD = 0.73), very appropriate (M = 4.31, SD = 0.63), and very realistic (M = 4.23, SD = 0.60).

D. Flexibility. This script contained information that was designed to increase the perception that the applicant has the availability to work on demand. Specifically, applicants shared the following information: “My schedule is flexible. I have the help I need so I can work whenever you need me.” Pretests revealed that these statements were very much indicative of flexibility (M = 4.54, SD = 0.78), very appropriate (M = 3.92, SD = 0.64), and very realistic (M = 3.92, SD = 0.76).

E. Accommodation. The accommodation script contained information that was designed to decrease any perceptions that the applicant would need preferential treatment. Applicants shared information that included the following statements, “I should let you know that I already have health insurance so I won’t need benefits. I do have to tell you that I will need to take off 2 weeks in January. Other than that, I won’t be taking off more time than your other employees.” Individuals who pretested this statement rated it as somewhat reflecting that an accommodation would be necessary (M = 2.87, SD = 0.92), appropriate (M = 2.75, SD = 1.06), and realistic (M = 3.27, SD = 1.28).

Measures

Formal discrimination. Formal discrimination was measured with two dichotomous “yes” and “no” items that included whether
applicants were (a) told a job was available and (b) allowed to
complete a job application.

**Interpersonal discrimination.** Interpersonal discrimination
was measured from the perspective of the applicants (Perceived
Hostility), observers (Observed Hostility) and independent raters
(Coded Hostility).

**Perceived hostility.** Applicants made ratings on six dimen-
sions of the interaction, which were adapted Hebl et al. (2002).
Specifically, using 7-point Likert-type scales (0 = Not at All; 6 =
Very Much), applicants rated the extent to which sales personnel
(a) attempted to prematurely end the conversation, (b) pursed their
lips, (c) exhibited hostility, (d) were rude, (e) furrowed their
eyebrows, and (f) were awkward. These items comprise the com-
posite of Perceived Hostility (alpha = .86).

**Observed hostility.** Observers also rated dimensions of the
interaction. Using the same Likert-type scales, they made ratings
on six items, including the extent to which the sales personnel (a)
tried to prematurely end the conversation, (b) pursed their
lips, (c) exhibited hostility, (d) were rude, (e) furrowed their
eyebrows, and (f) were awkward. These items comprise the com-
posite of Observed Hostility (alpha = .82).

**Coded hostility.** Independent coders rated three items to assess
interpersonal discrimination. Specifically, coders rated the extent
to which each interaction depicted personnel who were (a) at-
tempting to prematurely end the conversation, (b) exhibited hos-
tility, and (c) were rude. The ratings by each of the coders were
internally consistent (alpha = .81 for Coder 1; alpha = .84 for
Coder 2; alpha = .81 for Coder 3). Because there was high internal
consistency across coders we created a composite of the ratings,
which we refer to as Coded Hostility (alpha = .88, intraclass
correlation = .77).

**Results**

Preliminary results revealed a significant correlation between
Perceived Hostility and Observed Hostility ($r = .59, p < .01$),
Perceived Hostility and Coded Hostility ($r = .30, p < .01$), as well
as between Observed Hostility and Coded Hostility ($r = .35, p < .01$; see Table 1).

**Analysis of Formal Discrimination**

To examine the presence of formal discrimination, we con-
ducted chi-square tests of the dichotomous items. Specifically,
results revealed that when in the control condition pregnant and
nonpregnant women were told that jobs were available at similar
rates, $\chi^2(1) = 1.05, p = .31$ (see Table 1 for complete results).
Contrary to expectations, there was evidence of bias for one of our
measures of formal discrimination. Specifically, store personnel
were less likely to allow pregnant applicants to complete an
application, $\chi^2(1) = 5.01, p < .05$, than nonpregnant applicants.

To determine if counterstereotypic information reduced formal
discrimination (i.e., ability to complete an application) for preg-
nant applicants, we conducted a series of chi-square analyses.
Results revealed that the provision of counterstereotypic informa-
tion involving commitment, $\chi^2(1) = 7.51, p = .01$; flexibility,
$\chi^2(1) = 6.20, p = .01$; or accommodation, $\chi^2(1) = 6.20, p = .01$,
increased the extent to which applicants were allowed to complete
an application. The provision of counterstereotypic information
regarding competence did not significantly increase an individu-
al’s ability to complete an application, $\chi^2(1) = 3.08, p = .07$. In
sum, results suggest that when managers receive counterste-
reotypic information about a pregnant job applicant’s commitment,
flexibility, and accommodation, formal discrimination is signifi-
cantly reduced.

**Analysis of Interpersonal Discrimination**

Examining differences between pregnant and nonpregnant
applicants in the control condition. To test Hypothesis 1, we
conducted $t$ tests on applicants’, observers’, and independent cod-
ers’ ratings between pregnant and nonpregnant applicants in the
control conditions. Results revealed that pregnant applicants re-
ported greater amounts of Perceived Hostility than did nonpreg-
nant job applicants, $t(60) = 4.47, p < .01$, $d = 1.19$ (see Table 2
for complete results); observers viewed more Observed Hostility
in interactions involving pregnant than nonpregnant job applicants,
$t(60) = 2.81, p < .05, d = 0.72$; and independent coders rated
significantly more Coded Hostility in interactions involving preg-
nant than nonpregnant job applicants, $t(52) = 2.05, p = .05, d = 0.56$. In sum, the results from applicants, observers and indepen-
dent coders converged to show strong support for Hypothesis 1.

**Information Conditions That Reduce
Interpersonal Discrimination**

We report the results from three sets of one-factor analyses of
variance (ANOVAS) with six levels (e.g., nonpregnant, pregnant,
nonpregnant control 22/26 85% 23/34 96%
Pregnant control 22/30 73% 24/26 92%
Competence 21/25 84% 22/25 88%
Accommodation 22/23 96% 22/23 96%
Commitment 25/27 93% 26/27 96%
Flexibility 19/23 83% 22/23 96%

**Table 1**

*Formal Discrimination Indices (by Counts and Percentages)*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Job availability</th>
<th>Permission to complete an application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>%</td>
</tr>
<tr>
<td>Nonpregnant control</td>
<td>22/26</td>
<td>85%</td>
</tr>
<tr>
<td>Pregnant control</td>
<td>22/30</td>
<td>73%</td>
</tr>
<tr>
<td>Competence</td>
<td>21/25</td>
<td>84%</td>
</tr>
<tr>
<td>Accommodation</td>
<td>22/23</td>
<td>96%</td>
</tr>
<tr>
<td>Commitment</td>
<td>25/27</td>
<td>93%</td>
</tr>
<tr>
<td>Flexibility</td>
<td>19/23</td>
<td>83%</td>
</tr>
</tbody>
</table>

*Note. Denominators represent cell sizes for each condition. Any differences in denominators across “Job
availability” and “Permission to complete an application” represent incomplete information due to varied
information (e.g., online application, ambiguous information from store personnel) provided in the interaction.*
pregnant with competence, pregnant with commitment, pregnant with flexibility, and pregnant with no necessary accommodation) conducted on Perceived Hostility, Observed Hostility, and Coded Hostility. We then follow with a series of planned comparisons to examine how the provision of counterstereotypic information might reduce interpersonal hostility.

**Applicant perspective.** Results from the ANOVA on Perceived Hostility revealed a main effect of information condition, $F(5, 155) = 7.45, p < .01, \eta^2 = .19$ (see Table 3 for means and standard deviations for each item), and planned comparisons showed that, compared to the pregnant control condition, providing information regarding competence, $t(58) = 2.62, p = .01, d = 0.69$; commitment, $t(60) = 4.71, p < .01, d = 1.25$; and flexibility, $t(57) = 3.52, p < .05, d = 0.96$, reduced applicants’ perceptions of negativity. Information regarding accommodation, however, did not reduce Perceived Hostility, $t(56) = 1.02, p = .31, d = 0.28$. Hence, results from applicants provide support for Hypotheses 2, 3, and 4, but not for Hypothesis 5.

To determine whether there were significant differences between the information conditions we conducted post hoc $t$ tests. From the applicant perspective, the provision of counterstereotypic information on commitment significantly reduced Perceived Hostility compared to accommodating, $t(43) = 3.59, p < .01, d = 0.99$. Likewise, applicants reported less Perceived Hostility when there was information on flexibility compared to when there was information on accommodation, $t(45) = 2.42, p < .05, d = 0.71$. No other differences emerged between information conditions.

**Observer perspective.** Results from an ANOVA on Observed Hostility revealed a main effect of information condition, $F(5, 145) = 2.55, p < .05, \eta^2 = .08$ (see Table 4 for means and standard deviations for each item), and planned comparisons revealed that when managers received counterstereotypic information about an applicant’s commitment, $t(44) = 2.63, p = .01, d = 0.83$; flexibility, $t(50) = 3.15, p < .01, d = 0.89$; and accommodation, $t(49) = 2.29, p < .05, d = 0.65$, independent coders rated interactions with significantly reduced Coded Hostility relative to when there was no information. Contrary to our hypothesis, providing counterstereotypic information about one’s competence did not significantly reduce Coded Hostility, $t(47) = 1.39, p = .17, d = 0.41$. In sum, results from independent coders support Hypotheses 3, 4, and 5, but not Hypothesis 2. Post hoc $t$ tests revealed no significant differences in the amount of Observed Hostility across information conditions.

**Discussion**

The findings from this study support the notion of a “motherhood penalty” (see Correll et al., 2007) and plethora of research revealing that pregnant women and mothers experience disadvan-

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**Table 2**

Means (and Standard Deviations) for Perceptions of Hostility

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Control not pregnant</th>
<th>Control pregnant</th>
<th>Competence</th>
<th>Accommodation</th>
<th>Commitment</th>
<th>Flexibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant</td>
<td>$M$ 0.44 SD 0.98 $n$ 27</td>
<td>$M$ 1.52 SD 1.12 $n$ 35</td>
<td>$M$ 0.82 SD 1.05 $n$ 25</td>
<td>$M$ 1.28 SD 1.17 $n$ 23</td>
<td>$M$ 0.41 SD 0.60 $n$ 27</td>
<td>$M$ 0.63 SD 0.76 $n$ 24</td>
</tr>
<tr>
<td>Observer</td>
<td>$M$ 1.16 SD 1.11 $n$ 27</td>
<td>$M$ 1.90 SD 1.09 $n$ 35</td>
<td>$M$ 1.54 SD 1.17 $n$ 24</td>
<td>$M$ 1.27 SD 1.02 $n$ 23</td>
<td>$M$ 1.08 SD 0.77 $n$ 22</td>
<td>$M$ 1.24 SD 0.97 $n$ 20</td>
</tr>
<tr>
<td>Coder</td>
<td>$M$ 2.13 SD 0.87 $n$ 26</td>
<td>$M$ 2.64 SD 1.03 $n$ 28</td>
<td>$M$ 2.27 SD 0.77 $n$ 21</td>
<td>$M$ 1.99 SD 0.98 $n$ 23</td>
<td>$M$ 1.93 SD 0.63 $n$ 18</td>
<td>$M$ 1.86 SD 0.69 $n$ 24</td>
</tr>
</tbody>
</table>

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**Table 3**

Means and Standard Deviations of Variables Reported by Applicants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nonpregnant</th>
<th></th>
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<tr>
<td></td>
<td>$M$ SD</td>
<td>$M$ SD</td>
<td>$M$ SD</td>
<td>$M$ SD</td>
<td>$M$ SD</td>
<td>$M$ SD</td>
</tr>
<tr>
<td>Ends</td>
<td>1.15 1.68</td>
<td>2.46 1.88</td>
<td>0.84 1.25</td>
<td>0.63 1.28</td>
<td>0.83 1.37</td>
<td>1.52 1.65</td>
</tr>
<tr>
<td>Purse lips</td>
<td>0.26 0.81</td>
<td>1.31 1.78</td>
<td>0.96 1.59</td>
<td>0.30 0.86</td>
<td>0.75 1.36</td>
<td>1.22 1.57</td>
</tr>
<tr>
<td>Hostile</td>
<td>0.11 0.42</td>
<td>0.69 1.13</td>
<td>0.44 1.26</td>
<td>0.11 0.58</td>
<td>0.13 0.45</td>
<td>0.70 1.22</td>
</tr>
<tr>
<td>Rude</td>
<td>0.41 1.01</td>
<td>1.34 1.51</td>
<td>0.44 1.16</td>
<td>0.30 0.87</td>
<td>0.58 1.21</td>
<td>1.52 1.64</td>
</tr>
<tr>
<td>Furrow</td>
<td>0.26 0.76</td>
<td>1.20 1.47</td>
<td>0.60 1.44</td>
<td>0.22 0.80</td>
<td>0.21 0.51</td>
<td>1.09 1.65</td>
</tr>
<tr>
<td>Awkward</td>
<td>0.70 1.03</td>
<td>2.66 1.77</td>
<td>1.64 1.66</td>
<td>1.07 1.39</td>
<td>1.25 1.51</td>
<td>2.35 1.72</td>
</tr>
</tbody>
</table>

*Note.* Ratings were made on a 7-point Likert-type scale (0 = Not at all; 6 = Very Much).
tage when trying to gain entry into the workplace (Bragger et al., 2002; Correll et al., 2007; Hebl et al., 2007). More important, this is the first study to explore the provision of counterstereotypic information as a mechanism to remediate such disadvantage and ultimately facilitate pregnant women’s entry into the workplace. In addition, this study expands upon previous research by examining the effectiveness of several different forms of counterstereotypic information (i.e., competence, commitment, flexibility, and need for accommodation) to pinpoint theoretical drivers of pregnancy discrimination and ultimately individual and organizational approaches for its reduction.

The overall pattern of results suggests that when hiring managers receive specific types of counterstereotypic information, they display less formal and interpersonal discrimination toward pregnant job applicants. Specifically, receiving counterstereotypic information designed to combat the stereotypes of lack of commitment and/or inflexibility which may be more relevant for retail jobs. It is also plausible that because the stereotype of making accommodation is often perceived as costly to the organization, the hiring manager may have felt “legitimate” in his or her concern over the pregnant job applicant’s capabilities and needs. Therefore, the information condition of no need for accommodation may not have convinced the hiring manager who may have been acting to “protect” the organization from additional hardship. Need for accommodation seemed to be a concern of hiring managers and therefore we argue that the stereotype was likely activated, but not effectively suppressed by this study’s information manipulation. Overall, the findings from this study advance research by examining specific stereotypes associated with pregnant job applicants and suggesting that mechanisms designed to reduce interpersonal discrimination should focus on combating industry-relevant stereotypes.

Not predicted and somewhat surprisingly, the results also show that the provision of counterstereotypic information influenced formal discrimination. Unlike recent research (Hebl et al., 2007), the current study reveals the presence of formal discrimination for one of the measures; nonpregnant applicants were given permission to complete applications more often than pregnant applicants. This finding should be interpreted with caution because a second indicator of performance, job availability, did not reveal formal discrimination. One reason for this finding is that tough economic times likely exacerbate the number of women and mothers on the job market (e.g., Greenhouse, 2009). This increased competition for positions may alter selection ratios creating circumstances that may allow employers to feel justified in their biases in the selection process. Interestingly, and encouragingly, however, the provision of counterstereotypic information on one’s commitment, flexibility, or no need for accommodation effectively reduced the presence of formal discrimination. In line with previous research,

Table 4
Means and Standard Deviations of Variables Reported by Observers

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nonpregnant control</th>
<th>Pregnant control</th>
<th>Competence</th>
<th>Commitment</th>
<th>Flexibility</th>
<th>Accommodation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Ends</td>
<td>2.19</td>
<td>1.88</td>
<td>2.66</td>
<td>1.57</td>
<td>2.00</td>
<td>1.57</td>
</tr>
<tr>
<td>Purse lips</td>
<td>0.96</td>
<td>1.25</td>
<td>1.88</td>
<td>1.65</td>
<td>1.58</td>
<td>1.47</td>
</tr>
<tr>
<td>Hostile</td>
<td>0.59</td>
<td>1.05</td>
<td>1.03</td>
<td>0.92</td>
<td>0.88</td>
<td>1.33</td>
</tr>
<tr>
<td>Rude</td>
<td>1.48</td>
<td>1.65</td>
<td>2.14</td>
<td>1.72</td>
<td>1.46</td>
<td>1.53</td>
</tr>
<tr>
<td>Furrow</td>
<td>0.52</td>
<td>0.85</td>
<td>1.21</td>
<td>1.55</td>
<td>1.79</td>
<td>1.53</td>
</tr>
<tr>
<td>Awkward</td>
<td>1.50</td>
<td>1.33</td>
<td>2.40</td>
<td>1.29</td>
<td>2.33</td>
<td>1.49</td>
</tr>
</tbody>
</table>

Note. Ratings were made on a 7-point Likert-type scale (0 = Not at all; 6 = Very Much).

Table 5
Means and Standard Deviations of Variables Reported by Independent Coders

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nonpregnant control</th>
<th>Pregnant control</th>
<th>Competence</th>
<th>Commitment</th>
<th>Flexibility</th>
<th>Accommodation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Ends</td>
<td>2.33</td>
<td>0.89</td>
<td>3.02</td>
<td>1.54</td>
<td>2.70</td>
<td>0.93</td>
</tr>
<tr>
<td>Hostile</td>
<td>2.21</td>
<td>0.91</td>
<td>2.48</td>
<td>0.89</td>
<td>2.12</td>
<td>0.85</td>
</tr>
<tr>
<td>Rude</td>
<td>1.85</td>
<td>0.82</td>
<td>2.42</td>
<td>1.04</td>
<td>2.00</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Note. Ratings were made on a 7-point Likert-type scale (0 = Not at all; 6 = Very Much).
these results reinforce the effectiveness of providing counterstereotypic information as a means to reduce both formal and interpersonal discrimination toward pregnant job applicants.

Theoretical and Practical Implications

There are several theoretical and practical implications of the current research. A major theoretical contribution of this research is that it clarifies the nature of stereotyping toward pregnant job applicants. Specifically, study findings confirm that, in retail settings, stereotypic beliefs about pregnant women’s commitment and flexibility are the likely drivers of interpersonal discrimination. Exploratory analyses revealed that information on flexibility (i.e., work schedule) was generally most effective. This finding is consistent with the job demands in a customer service context wherein applicants’ schedule flexibility may be particularly attractive. Indeed, we reason that contextual variables may influence when certain counterstereotypic information may be most effective. For instance, in a job that requires a great deal of competence, information on relevant experience or education may be more useful than information that focuses on dispelling the notion that a woman who is pregnant is likely to be inflexible. Therefore, in a retail setting, the stereotype of expectant mothers as inflexible is likely the key driver of hostility. This finding is theoretically important, as it refines the nature of the beliefs toward pregnant women, thus creating opportunity to develop stereotype-preventive and corrective interventions.

Second, the current research demonstrates that counterstereotypic information effectively reduces managers’ expressed prejudice. Thus, this finding reinforces previous research that demonstrates that the provision of counterstereotypic information about targets can be successful in reducing their prejudice toward them (e.g., Dasgupta & Asgari, 2004; Kawakami et al., 2000). However, most of this past work has focused on attitude change and not centrally on behavioral change, the latter of which we examined successfully in the present study. The present study makes a theoretical contribution to this body of research by demonstrating that counterstereotypic information may contribute to behavioral change during interactions with marginalized individuals.

The study’s practical contribution is the identification of how to reduce discrimination toward marginalized groups. Although some targets may take it upon themselves to personally provide counterstereotypic information to employers (see Neel, Nuefeld, & Neuberg, 2013; Shih, Young, & Bucher, 2013), we do not advocate that the burden be placed on the victim to correct widespread managerial prejudice. Instead, we hope organizations take more responsibility to prevent discriminating conduct on the part of its employees, especially management, in the interest of creating a bias-free workplace. This might be done in at least two plausible ways: compliance and diversity training. First, compliance training that happens in organizations is usually focused on ensuring organizational decision-makers follow rules and regulations (Kravitz, 2008). Our research may provide some guidance as to the types of information (i.e., counterstereotypic) that should be included in such policies to protect targets of employment discrimination. Recent research has shown that attitude and behavior change is most effective when done more often rather than solely upon entrance upon an organization (Madera, King, & Hebl, in press). We believe that reminding people not only about laws and policy (see Barron & Hebl, 2012) but also counterstereotypic information will help organizations create and foster workplace environments where there is zero-tolerance for discrimination.

Second, diversity training consists of initiatives designed to facilitate positive interpersonal interactions across social identity groups and reduce discrimination toward marginalized groups (Pendry, Driscoll, & Field, 2007). Research on diversity training reveals mixed results (Kulik & Roberson, 2008), and there is real need for more empirically based initiatives that are effective, particularly given that two thirds of organizations engage in diversity training (Esen, 2005). The findings from our research provide specific foci for effective diversity training that may lead to attitudinal and behavior change. For example, organizational development or human resource departments could integrate information into existing diversity training programs that contradicts commonly held stereotypes of pregnant workers (or other marginalized groups). Organizations could ensure managers receive this information from a variety of sources such as organizational members (e.g., allies in the organization, organizational leaders) and/or mediums (e.g., handbooks, testimonials, videos). Recent evidence provides support that telling people not only what they are learning (e.g., counterstereotypic information) as well as why they are learning it (e.g., to have a more accurate understanding) is effective (King, Gulik, & Avery, 2010). Further, research has recently shown that individuals who set goals in diversity training sessions, in line with reducing such prejudice, show significantly reduced discrimination some 6 months later (Madera, King, & Hebl, in press). Hence, efforts to ensure diversity training programs involve the presentation of counterstereotypical information about targets, including addressing underlying attitudes and encouraging focused behavioral change, might be very effective in reducing prejudice and discrimination.

Despite the seemingly positive outcomes of compliance and diversity training we recognize there are strengths, weaknesses, and considerations of any approach to reducing employment discrimination (see Lindsey, King, Dunleavy, McCausland, & Jones, in press) that should be fully considered before implementation. A consideration of integrating counterstereotypic information about targets into compliance and diversity training programs is that this approach emphasizes identity group differences, rather than focusing on themes of diversity (Roberson, 2006; Thomas, Tran, & Dawson, 2010), which may, in fact, create resistance to diversity (Thomas, 2008) rather than inclusion. We are hopeful future research might specifically examine the provision of counterstereotypical information in compliance and diversity training so as to create inclusion in, and promote, diverse workplaces.

Limitations and Future Research

There are several avenues for future research that would clarify study findings and facilitate understanding of the challenges that pregnant women face at work. First, although this study provides insight on the prevalence of interpersonal discrimination more research is needed on formal discrimination. Future research can and should identify other manifestations of formal discrimination against pregnant job applicants and whether the reduction of interpersonal discrimination is “enough” to secure pregnant job applicants a job offer or whether formal discrimination will present a final barrier to entry. A second limitation of this research is that
we acknowledge it attempts to redress stereotyping by making the victim the agent that corrects the stereotype. In this study, the pregnant job applicant enacted a script that provided counterstereotypic information. Although findings demonstrate that the provision of counterstereotypic information effectively reduced discrimination, additional research should consider how organizations can target stereotype-preventive and corrective interventions to remove the burden from the victim. Future research should consider varied sources of the counterstereotypic information to determine from whom (e.g., human resource professional, senior leadership) and how (e.g., written handbooks or manuals, videos, testimonials from hiring managers) information should be received to most effectively reduce formal and interpersonal discrimination.

A final limitation of this research is that it was conducted in a retail setting, which is often characterized by a temporary workforce and cherished (Hebl et al., 2007). Inside, however, pregnant women face interpersonal obstacles that stand in the way of their successful employment. The current research goes beyond simply confirming such challenges to identify and empirically test real, successful employment. The current research goes beyond simply finding the extent, commitment. Together, these findings can drive future interventions in professional, full-time job settings as well as male and female sex-typed jobs in order to be able to generalize the findings of this research.

Conclusion

Outside the workplace, pregnant women are revered, protected, and cherished (Hebl et al., 2007). Inside, however, pregnant women face interpersonal obstacles that stand in the way of their successful employment. The current research goes beyond simply confirming such challenges to identify and empirically test real, practical mechanisms to help women overcome pregnancy discrimination. In so doing, we discover that the dominant ideologies that underlie discrimination toward pregnant women applying for customer service positions involves flexibility, and to a lesser extent, commitment. Together, these findings can drive future scholarship and organizational practice supporting gender equality.

References


Lindsey, A., King, E., Dunleavy, E., McCausland, T., & Jones, K. (in press). What we know and don’t know: Eradicating employment discrimination 50 years after the Civil Rights Act. Industrial and Organizational Psychology: Perspectives on Science and Practice.
Call for Nominations

The Publications and Communications (P&C) Board of the American Psychological Association has opened nominations for the editorships of History of Psychology; Journal of Family Psychology; Journal of Personality and Social Psychology: Personality Processes and Individual Differences; Psychological Assessment; Psychological Review; International Journal of Stress Management; and Personality Disorders: Theory, Research, and Treatment for the years 2016–2021. Wade Pickren, PhD, Nadine Kaslow, PhD, Laura King, PhD, Cecil Reynolds, PhD, John Anderson, PhD, Sharon Glazer, PhD, and Carl Lejuez, PhD, respectively, are the incumbent editors.

Candidates should be members of APA and should be available to start receiving manuscripts in early 2015 to prepare for issues published in 2016. Please note that the P&C Board encourages participation by members of underrepresented groups in the publication process and would particularly welcome such nominees. Self-nominations are also encouraged.

Search chairs have been appointed as follows:

- **History of Psychology**, David Dunning, PhD
- **Journal of Family Psychology**, Patricia Bauer, PhD, and Suzanne Corkin, PhD
- **JPSP: Personality Processes and Individual Differences**, Jennifer Crocker, PhD
- **Psychological Assessment**, Norman Abeles, PhD
- **Psychological Review**, Neal Schmitt, PhD
- **International Journal of Stress Management**, Neal Schmitt, PhD
- **Personality Disorders: Theory, Research, and Treatment**, Kate Hays, PhD, and Jennifer Crocker, PhD

Candidates should be nominated by accessing APA’s EditorQuest site on the Web. Using your Web browser, go to http://editorquest.apa.org. On the Home menu on the left, find “Guests.” Next, click on the link “Submit a Nomination,” enter your nominee’s information, and click “Submit.”

Prepared statements of one page or less in support of a nominee can also be submitted by e-mail to Sarah Wiederkehr, P&C Board Search Liaison, at swiederkehr@apa.org.

Deadline for accepting nominations is January 11, 2014, when reviews will begin.