

INDIVIDUAL AND ORGANIZATIONAL STRATEGIES TO REDUCE HIRING
DISCRIMINATION AGAINST MOTHERS

by

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DEDICATION

This dissertation is dedicated to my husband (Jon), children (Zachary and Charlotte), my parents (Diane and John Greslick), my sister (Abbey Greslick), and the rest of my family, and friends for their continuous support and love.

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ABSTRACT

INDIVIDUAL AND ORGANIZATIONAL STRATEGIES TO REDUCE HIRING DISCRIMINATION AGAINST MOTHERS

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Mothers can experience disadvantages in employment decisions compared to women without children and men. Despite a growing body of research on the mechanisms through which hiring discrimination against mothers occurs, researchers have not yet examined the effectiveness of individual and organizational strategies to reduce these negative outcomes. To extend and apply these theoretical frameworks, this study focuses on the efficacy of three individual strategies (providing individuating information about competence, commitment, and flexibility) as well as the influence of organizational policies on hiring discrimination experienced by mothers. Experimentally manipulated resumes were submitted to online job openings varying applicants' gender, parental status, and commitment, competence, and flexibility. In addition, the family-friendly policies (support, parental leave, and flexible policies) of each organization were documented. The outcome variables assessed both formal discrimination (rate of interview invitations or rejections) and interpersonal discrimination (positivity/negativity of contact, time to respond, and length of contact). Results provide some indication that

mothers receive more negative messages and are rejected more quickly than fathers from the resume screening process. Results of analyses that may be underpowered due to a lower than expected call back rate also suggest that individual strategies and organizational policies are not related to treatment of mothers during the resume screening process. Together, these findings suggest that organizations and hiring managers should be aware that negativity toward mothers can surface in subtle ways and that the motherhood penalty in the hiring process may have boundary conditions.

INTRODUCTION

Mothers experience more formal discrimination (in pay, hiring, and promotion opportunities) and interpersonal discrimination (incivility, hostility) in the workplace when compared to fathers, men without children, and women without children (Anderson, Binder, & Krause, 2002; Budig & England 2001; Budig, Misra, & Boeckmann, 2012; Correll, Benard, & Paik, 2007; Glauber, 2007; Hebl, King, Glick, Singletary & Kazama, 2007; Heilman & Okimoto, 2008; Miner et al., 2014). The obstacles that mothers face at work are often referred to as the “maternal wall”, which is a metaphoric impediment to working women’s success once they have children (Barnett, 2004; Williams, 2001). Given that approximately 80-90% of women will become mothers during their lifetime (Johnson, 2008; Taylor et al., 2010) and a majority (69.9%) of mothers of children under 18 are employed (U.S. Bureau of Labor Statistics, 2013), there are widespread social and economic implications to the workplace discrimination that mothers face.

Despite a growing body of research on the mechanisms through which discrimination against mothers occurs, researchers have not yet specified or examined the effectiveness of individual and organizational methods to reduce discrimination against mothers. The current investigation aims to identify individual and organizational methods to reduce both formal and interpersonal discrimination against mothers during the hiring

process. To achieve this goal, first I present the theoretical and empirical explanations for formal and interpersonal discrimination against mothers. Next, I suggest that providing individuating information regarding the competence, commitment, or flexibility of the applicant will counteract stereotypes of mothers and result in lower levels of discrimination against mothers. Then, I provide an overview of the evidence for the mechanisms through which family-friendly organizational policies may impact an organization's culture of support.

Explanations for Workplace Discrimination against Mothers

The present investigation considers both formal and interpersonal discrimination against mothers as they try to gain entry into organizations. *Formal discrimination* refers to differential hiring, promotion, firing, or compensation. Formal discrimination based on parental status and sex is illegal in the United States. A variety of explanations have been suggested for formal discrimination against mothers in the workplace, including: genuine differences in performance between mothers and others, differential labor market participation (e.g., working part-time, interruptions in work, education, or on-the-job training), and negative stereotypes or performance expectations of employers. In order to rule out the explanation that unequal treatment is due to genuine differences in performance of mothers compared to “others” (fathers, men without children, and women without children), researchers have conducted studies in which levels of performance are held constant. The evidence shows that, when holding performance constant, mothers are still perceived and treated differently from non-mothers in terms of hiring, promotion,

and compensation (Benard & Correll, 2010; Correll et al., 2007; Heilman & Okimoto, 2008).

In addition, research has shown that the wage gap between mothers and others is primarily *not* due to differential labor market participation (e.g., interruptions from work, working part-time; Anderson et al., 2002; Budig & England, 2001); however, studies have not conclusively determined the extent to which differences in hiring and promotion are due to differences in labor market participation. Finally, research supports the notion that formal discrimination against mothers is driven by negative stereotypes of the competence, commitment, and flexibility of working mothers (e.g., Correll et al., 2007; Fuegen, Biernat, Haines, & Deaux, 2004; Heilman & Okimoto, 2008). Taken together, the existing research suggests that stereotypes and expectations of mothers are one of the leading causes for their disparate treatment in the hiring context.

Interpersonal discrimination “involves the nonverbal, paraverbal, and even some of the verbal behaviors that occur in social interactions” (Hebl et al., 2002, p. 816) and examples include increased negativity, shorter interactions, and less eye contact. There are no laws against interpersonal discrimination and it is often more difficult to detect than formal discrimination. Recent research indicates that mothers can experience interpersonal discrimination during the hiring process (Hebl et al., 2007) and in the workplace (Miner et al., 2014). There has been less research focused on potential explanations for negative interpersonal treatment against mothers in the workplace compared to formal discrimination. However, the existing evidence suggests that

interpersonal discrimination is based on perceptions of and expectations about mothers in line with the theories I next describe in detail.

Theoretical Explanations for Workplace Discrimination against Mothers

Two theoretical perspectives that provide explanations for the existence of discrimination against mothers in the employment context are *status characteristics theory* and *social role theory*. *Status characteristics theory* (Berger, Fisek, Norman, & Zeldtich, 1977), and its derivative the *motherhood penalty hypothesis* (Ridgeway & Correll, 2004), suggest that mothers hold a lower societal status than fathers or people without children which confers perceptions of incompetence and lower worth. *Social role theory* (Eagly, 1987), and its derivative *role congruity theory* (Eagly & Karau, 2002), suggest that mothers can experience prejudice and negative reactions in the workplace because working outside the home is incongruent with the traditional female gender role. Together, these theories suggest that negative formal and interpersonal treatment of mothers in the workplace stems from motherhood being a devalued social characteristic that is perceived as incongruent with traditional gender roles.

First, *status characteristics theory* (Berger, Fisek, Norman, & Zeldtich, 1977) provides an explanation for why mothers are evaluated more negatively in the context of work. Status characteristics theory proposes that when one's social category (e.g., gender) is more socially valued than another (e.g., male versus female; Ridgeway, 2001), the social category becomes a status characteristic. Members of the valued group are associated with greater worth and competence because they hold a higher status in society. Conversely, members of the devalued social group are associated with less worth

and competence. Expectations about individuals' behaviors and abilities are often made based on membership in a given group. Thus, individuals with more highly valued status characteristics are expected to be more competent than those who have less valued characteristics. Ridgeway and Correll (2004) proposed the *motherhood penalty hypothesis* based on the status characteristics theory, which suggests that a mother's role of being the primary caregiver is a socially devalued status. Thus, the social characteristic of motherhood negatively biases expectations about a mother's competence and performance on the job which makes mothers less desirable job candidates.

Gender stereotypes and expectations to fulfill traditional social roles may also contribute to the negative treatment of mothers in the employment context. Gender stereotypes refer to shared cultural beliefs about what men and women are like (descriptive stereotypes) and should be like (prescriptive stereotypes). *Social role theory* (Eagly, 1987) proposes that gender-based stereotypes are rooted in expectations for men and women to behave in ways that are consistent with their prescribed gender roles (i.e., men in a breadwinner role and women in a domestic/homemaker role). Due to these traditional roles, women are often expected to be more communal, warm, and nurturing while men are more often expected to be agentic, dominant, and competitive.

According to *role congruity theory* (Eagly & Karau, 2002), women who work outside the home violate traditional gender role expectations. Role congruity theory also suggests that prejudice arises when an individual from a given social group behaves in ways that are not aligned with expectations for that social group (role incongruity). Thus, role incongruity can lead to discrimination. Extending this theory to mothers, women

who have children are perceived as exemplars of the female social category (they are expected to be especially feminine, warm, and nurturing) and as a result, are viewed as particularly incongruent with job requirements when they apply to work outside the home (Cuddy, Fiske, & Glick, 2004; Fuegen et al., 2004; Heilman & Okimoto, 2008). Thus, mothers who apply to work outside the home are more at risk for discrimination than females without children because they are seen as more feminine than non-mothers, so the incongruity is even more salient when they do not fulfill their expected social role.

In sum, social role theory and status characteristics theory suggest that being a mother is a devalued social characteristic in the work context that confers incompetence and mothers who work outside of the home defy traditional gender expectations which results in negative reactions. Taken together, these theories suggest that people will expect working mothers to be less competent and treat mothers more negatively. A growing body of evidence, described below, supports this rationale.

Empirical Findings on the Unequal Treatment of Mothers in the Workplace

Formal discrimination. Indeed, the notion that stereotypes and expectations drive unequal treatment of mothers has been supported by multiple empirical studies. For example, Firth (1982) conducted a study in which information about applicants' gender and parental status was manipulated on otherwise equivalent fictitious resumes that were submitted to job openings for accounting positions. Results of the study show that women were less likely to be called back than men, and mothers were significantly less likely to be called back than women without children. In another study, undergraduate students were asked to evaluate resumes for an entry-level attorney position. While both mothers

and fathers were perceived as less committed and less agentic than non-parents, participants were less likely to recommend hiring and promoting mothers but not fathers (Fuegen et al., 2004). Correll, Benard, and Paik (2007) conducted a study with a similar methodology and found that undergraduate participants evaluated mothers as less competent, committed, and punctual than men and women without children and were less likely to recommend mothers for hire. A second study by Correll, Benard, and Paik (2007) showed that mothers were less likely to receive call-backs for job applications submitted to real companies compared to non-mothers (but not significantly different from fathers and non-fathers). Furthermore, an experiment in which MBA students evaluated resumes revealed that mothers were less likely to be recommended for hire than non-mothers and that perceptions of competence mediated the relationship between motherhood and hiring recommendations (Heilman & Okimoto, 2008). In sum, the theoretical explanations and empirical findings demonstrate that negative stereotypes of mothers are a driving force behind the formal discrimination that mothers experience. I expect that:

Hypothesis 1: Mothers will experience formal discrimination during the hiring process such that they will receive less call backs when compared to women without children, fathers, and men without children.

Interpersonal discrimination. In addition to formal discrimination, there is some evidence that mothers experience interpersonal discrimination in hiring situations and at work (Hebl et al., 2007; Miner et al., 2014; Morgan et al., 2013). As discussed previously, women with children who engage in gender-incongruent behaviors are

viewed negatively and this negativity may be expressed in either formal and/or interpersonal ways. Given that formal discrimination on the basis of sex or parental status is illegal, hiring managers may try to avoid formal discrimination. When individuals suppress negative stereotypes, negative behaviors can emerge as more subtle form of discrimination (Macrae, Bodenhausen, Milne, & Jetten, 1994). Thus, if the individuals do not enact formal discrimination, there is the possibility that their negativity toward the applicant who is a mother could surface in the form of interpersonal discrimination during interactions with the applicant.

In support of this notion, Hebl and colleagues (2007) and Morgan and colleagues (2013) found that women wearing a pregnancy prosthesis experienced more rudeness and hostility than when the same women were not wearing the pregnancy prosthesis when applying for customer service jobs. Although pregnant women are technically not mothers yet, pregnant women are associated with the many of the same stereotypes as mothers and are expected to fulfill traditional roles associated with mothers (i.e., staying at home). In another study, Miner (2014) found that mothers experienced increasing amounts of incivility (e.g., receiving insulting remarks) at work as the number children they had increased. Based on the idea and findings that negativity towards mothers can emerge in more subtle ways in addition to formal discrimination, I expect that:

Hypothesis 2: Mothers will experience more interpersonal discrimination during the hiring process compared to women without children, fathers, and men without children.

Individual Strategies for Reducing Discrimination

Targets of discrimination may attempt to reduce experiences of discrimination by using various methods such as persistence, increased positivity, and disconfirming stereotypes with counter-stereotypic information (Kaiser & Miller, 2001; Ruggs, Martinez, & Hebl, 2011). Research suggests that disconfirming stereotypes with individuating information is an effective strategy for reducing interpersonal discrimination among a variety of groups such as Muslim, obese, and pregnant job applicants (King et al., 2006; King & Ahmad, 2010; Morgan et al., 2013).

Providing individuating information to disconfirm stereotypes is expected to be effective in reducing hiring discrimination because it removes the justification one's prejudice. Specifically, the *justification-suppression model* (JSM; Crandall & Eshleman, 2003) suggests that justification or suppression factors will determine whether an individual expresses (or does not express) an initial prejudiced reaction (a spontaneous, uncontrolled reaction). Examples of forms of prejudice suppression include social norms, empathy, and individuals' values. Conversely, justifications for prejudice can include belief in social hierarchies, stereotypes, and threat. According to the JSM, justifications allow for the expression of prejudice that might otherwise be suppressed. Thus, if the justification for expressing one's prejudice is removed, there is a lower likelihood that the perceiver will enact prejudice. In this case, if the target disconfirms a commonly held stereotype, then the perceiver will have a reduced chance of discriminating against the target. Next, I describe three harmful stereotypes about mothers: incompetence, lack of commitment, and inflexibility.

Competence. The first potentially harmful stereotype about mothers is that they are less competent than their male or non-mother counterparts. Competence is conceptualized as one's "expected performance capacity" (Ridgeway & Correll, 2004, p. 690). The *stereotype content model* (SCM) proposes that stereotypes in general vary along two dimensions: warmth and competence (Fiske, Cuddy, Glick, & Xu, 2002) and these two dimensions are key drivers in the amount of prejudice that one expresses toward a stereotyped target. Cuddy and colleagues (2004) established that mothers are perceived as higher in warmth but lower in competence than employees with no children. In contrast, fathers are viewed as high in competence and warmth. Thus, stereotypes of fathers overlap with the "ideal" worker concept of being highly competent (although this notion can be challenged among men who have working spouses; see Reid, 2015). Indeed, several studies have supported this notion and shown that when compared to non-mothers and men with equivalent qualifications and performance, mothers are perceived to have lower levels of competence which has negative implications for hiring, pay, and advancement (Correll et al., 2007; Heilman & Okimoto, 2008). Given this theoretical and empirical evidence, I expect that providing individuating information about a mother's competence will reduce the negative consequences of motherhood on treatment during the hiring process.

Flexibility. The second stereotype that may influence treatment of mothers is that mothers are less flexible compared to others. Flexibility refers to the extent to which one is able or willing to change their work schedule and indicates the degree to which one is available (both practically and psychologically) to meet unpredictable work demands.

Ideal employees are those who “devote enormous hours each week to “face time” at work, to work late nights or on weekends, and to drop everything at a moment’s notice for a new work demand” (Ridgeway & Correll, 2004, p. 690). In contrast, ideal mothers are always available for their children (Epstein et al., 1999; Kobrynowicz & Biernat, 1997; Williams, 2001). The perceptions that mothers should (and do) invest immense amounts of time in raising their children (Hays, 1996) lead to the perception that mothers have less flexibility in schedules to meet work demands and that they are not available to work unconstrained hours. Despite the increasing trends of flexible workplace policies (e.g., telework), perceptions persist that a full commitment to both work and mothering is not possible (Benard & Correll, 2010; Greenhaus & Beutell, 1985; Greenhaus & Powell, 2006). Empirical studies have shown that supervisors perceive mothers as less flexible for advancement compared to fathers (King, 2008) and that supervisors perceive that women have more work interference from family regardless of the woman’s actual family obligations (Hoobler et al., 2009). Given the empirical findings, I expect that counter-stereotypic information regarding a mother’s level of flexibility will reduce negative stereotypes about flexibility and result in more positive treatment of mothers during the hiring process.

Similarly, some research indicates that fathers are viewed more negatively when they utilize flexible workplace policies (Butler & Skattebo, 2010; Wayne & Cordeiro, 2003). However, mothers are stereotyped as inflexible regardless of their actual use of policies or family obligations (Hoobler et al., 2009). Therefore, when applicants are trying to gain entry into the workforce and their level of policy use is not yet known, I

expect that providing individuating information about flexibility will be more beneficial for mothers than fathers.

Commitment. The final harmful stereotype of mothers is that they are less committed to their job compared to men or women without children. Commitment can be conceptualized as one's dedication or devotion to a job. It has been proposed that motherhood influences perceptions of commitment because of the perceptions that mothers cannot be devoted to both family and work (Blair-Loy, 2003). The idea of "intensive mothering" proposes that people expect that a mother should be available to her children at all times and consequently mothers cannot be fully committed to a job because her family demands require her commitment and depletes her resources (Becker, 1985; Goode, 1960; Greenhaus & Beutell, 1985) and mothers who work are considered less effective parents than mothers who do not work (Okimoto & Heilman, 2012). Empirical evidence supports these ideas; Correll and colleagues (2007) laboratory study showed that mothers were rated as less committed compared to non-mothers and men. In addition, King (2008) found that supervisors perceived mothers as less involved in their jobs despite mothers' own reports of high levels of work involvement. Given these findings that mothers are viewed as less committed to work, I expect that providing individuating information about one's commitment to the job will be an effective strategy for mothers to use in the hiring process.

While the aforementioned studies show that mothers are perceived to be less committed than fathers, other research suggests that both mothers and fathers are perceived as less committed than employees without children (Heilman & Okimoto,

2008; Fuegen et al., 2004). However, similar to flexibility, the evidence suggests perceptions of fathers as uncommitted primarily tend to occur when fathers use family-related benefits such as parental leave (Allen & Russell, 1999) whereas perceptions of mothers as uncommitted occur without any additional information (Correll et al., 2007). Thus, I expect that providing individuating information about commitment will have a stronger effect for mothers compared to fathers when parents are trying to gain entry into a company (before any information about policy use is known).

Based on the theoretical and empirical evidence for the stereotypes of mothers regarding competence, flexibility, and commitment, I expect that:

Hypothesis 3: Mothers who provide individuating information about competence, flexibility, or commitment will be treated more positively in the hiring process (receive less formal and interpersonal discrimination during the hiring process) than mothers who do not provide this information and fathers.

The Role of Organizational Policies in Reducing Discrimination

Next, I describe how organizational policies may influence rates of formal and interpersonal discrimination against mothers. Beyond basic principles of equality, organizations should be motivated to reduce discrimination to avoid profit loss and the loss of valuable employees (Bloom, Kretschmer, & Van Reenen, 2011; Ruggs et al., 2011). Further, work and non-work boundaries are becoming increasingly blurred (Ramarajan & Reid, 2013) and organizations must support employees' with non-work commitments in order to maximize employee retention and encourage role enhancement (see Ladge, Humbred, Harrington, & Watkins, 2014). However, there has been little

research addressing the role of organizational policies in reducing hiring and wage gaps between mothers and non-mothers (Glass & Fodor, 2011).

Family friendly policies (FFP) are those that aim to help employees to manage their work and family lives (Allen, 2012). FFPs can be categorized into three main groups: flexible, support, and leave policies (Bailyn, 1993; Hochschild, 1997). *Flexible policies* are those that allow workers flexibility in terms of when, where, and how much they work (Glass & Estes, 1997; Kelly & Moen, 2007) and include compressed workweeks, varied start and end times, teleworking, staggered hours, part-time, and reduced hours (Kossek & Distelberg, 2009). *Support policies* include assistance or resources for dependent care such as on-site or off-site daycare, subsidized care and counseling, and flexible spending accounts for dependent care. *Leave arrangements* include arrangements such as maternity, paternity, parental bereavement, and compassionate leave. I expect that all three types of FFPs will both contribute to and be a reflection of an organization's culture of concern and support for employees with children (Grover & Crooker, 1995).

Two theories lend themselves to explaining how FFPs could impact attitudes and behaviors of decision makers within organizations. First, *signaling theory* (Spence, 1973) proposes that an organization's observable actions (e.g., policies, decisions, initiatives) are what people use to form impressions about the organization's intentions and expectations (Goldberg & Allen, 2008). The availability of FFP can be interpreted as a signal of the organization's concern for employees with families (Grover & Crooker, 1995; Kossek, Dass, & DeMarr, 1994). In support of this idea, Casper and Harris (2008)

found that family friendly policies influence employee attitudes through signals of organizational support. Thus, signaling theory and empirical evidence demonstrate that an organization's FFPs signal to employees that the organization has concern for and the desire to accommodate employees with families.

Second, *social information processing (SIP)* theory (Salancik & Pfeffer, 1978) provides a theoretical explanation for how an organization's signals may influence the attitudes and behaviors of decision makers within the organization. SIP theory describes how individuals' attitudes and behaviors are influenced by their environment and proposes that people "adapt attitudes, behaviors, and beliefs to their social context" (Salancik & Pfeffer, 1978, p. 226). Salancik and Pfeffer (1978) contend that conformity of attitudes and behaviors is due in part to the experience of being part of an organizational culture. O'Reilly and Chatman (1996) propose that organizational culture is based on shared norms and values and acts as a social control system which "can influence members' focus of attention, shape interpretations of events, and guide attitudes and behavior" (p. 157). Thus, social environment and organizational culture provide information to employees about attitudinal and behavioral norms. These social norms and expectations in turn influence the development of individuals' interpretation of situations and their attitudes and behaviors (Salancik & Pfeffer, 1978; O'Reilly & Chatman, 1996). In sum, *signaling theory* suggests that the organization's FFPs will serve as signals to hiring managers regarding the organizations' culture of concern for employees who are parents, and *social information processing theory* indicates that these signals will positively influence hiring managers' attitudes toward employees who are parents.

I expect that the total number of family friendly policies will impact the behaviors of hiring managers. Signaling theory posits that the number of observable signals increases the effectiveness of the signal (Connelly et al., 2011). Further supporting this idea, *systems theory* (Corning, 1998) proposes that multiple related human resources policies can reinforce one another and create synergies which lead to additional benefits. Empirical research supports these theories and shows that the number of supportive policies available is related to increasingly positive outcomes (Arthur, 2003; Casper & Buffardi, 2004). Thus, I expect that the total number of FFPs (supportive, flexible, and leave policies) will strengthen the signal of concern for parents to hiring managers which will improve their treatment of mothers. Formally, I expect:

Hypothesis 4: The total number of family friendly policies will moderate the relationship between motherhood and hiring decisions, such that as number of family friendly policies increases, formal and interpersonal discrimination against mothers will decrease.

METHOD

Materials

Experimental manipulations. Two real resumes with equivalent qualifications (master's degree, six years of experience in an analyst position, and equivalent leadership experience, awards, skills and abilities) were used for the male and female applications. The female and male names used on the applications are common names (Jane and Edward Anderson). Following previous work in this area (Correll et al., 2007; Fuegen et al., 2004), the parental status of the applicant will be manipulated by indicating that the applicant was a member of a local parents group (among a series of activities listed) and mentioning the applicant's family in the summary section at the beginning of the resume ("I am willing to relocate with my family"). In the non-parent condition, the applicant is described as being a member of a local neighborhood association and does not mention family in the summary section ("I am willing to relocate"). The wording of the individuating information was adapted from similar work on this topic (Benard & Correll, 2010; Morgan et al., 2013).

Pre-testing the resumes. The resumes were pre-tested using a sample of 204 working adults with hiring experience. Results show that the male and female versions of the resumes were viewed as equivalent and the manipulations of parental status and

individuating information (competence, flexibility, and commitment) were successful. Full results and details of the pre-testing procedure are provided in Appendix A.

Design and Procedure

The method involved submitting job applications to online job openings and varying information on the applicants' resumes regarding gender, parental status, and individuating information about the applicant's commitment, competence, and flexibility. In addition, the family-related policies of each hiring organization were documented. Formal discrimination was measured by whether the applicant received an invitation for an interview or a rejection after submitting the application. In addition, interpersonal treatment was measured by time elapsed from application to response, the length of the correspondence, and independent coders' ratings of the positivity and negativity of the response.

Previous studies with similar designs (applying to online career search sites) have found call back rates in the 6.8%-22% range (Bailey et al., 2013). A power analysis (using Power Analysis and Sample Size (PASS) Software) for logistic regression and ANCOVAs assuming a small effect size (.1-.2) indicated that at least 25 cases per cell are necessary. Thus, a total of 496 applications (31 applications for each of the 16 conditions) were submitted. Nine of the 496 positions were canceled due to changes in business needs so these cases were removed from analysis leaving 487 applications (29-31 applications per cell). The applications were submitted over the course of a six month period, from April 2014 - October 2014. Each applicant had a unique telephone number and e-mail address to track call backs. When an applicant received a positive call back,

we responded as quickly as possible (within 48 hours) via email or by leaving a message during non-work hours to notify the company that the applicant was no longer interested in the position.

Job search and applications. Major career search websites were used to locate job openings that match the qualifications of the applicants. Indeed.com was the most frequently used website because it contains the most comprehensive list of job openings that are obtained by continually searching thousands of other websites to collect new postings. The jobs we applied to were found on the following websites: Indeed.com (81.1%), Monster.com (9.4%), CareerBuilder.com (6.2%), JuJu.com (1.4%), LinkUp.com (1.4%), and SimplyHired.com (0.4%). The website on which the job was found (Indeed versus other site) did not relate significantly to any of the dependent variables. Resumes were submitted to jobs that fit the qualifications of the applicant (6 years of experience, master's degree, business/research/data analyst background). The search terms included "business analyst/associate", "data analyst/associate", "research analyst/associate", and "consultant". Additional requirements were that the job must be located within the United States, require at least a bachelor's degree, and the opening must be posted by the hiring company (as opposed to a contracted hiring agency) so that the hiring company could be identified to determine their family-friendly policies. Two researchers had to agree that each job was a good fit before an application was submitted. In addition, all job descriptions were saved and two independent coders rated each job description on a variety of criteria including educational requirements, number of years of experience required, match for applicant's skills, education, and experience.

Two independent coders rated the degree to which the position description matched the applicants' experience, education, and skills using a 1 (not at all) – 5 (very much) scale. The coders' ratings were consistent ($ICC(1,2) = .68$) and thus a scale was formed by averaging the two raters' ratings and then averaging across the three dimensions: experience, education, and skills. The mean for this composite measure of job posting match with applicants' experience, education, and skills was 3.53 ($SD = .70$), indicating that the applicants were moderately strong matches for the job openings. A 2 (gender) x 2 (parental status) x 4 (individuating info) ANOVA was conducted with the job descriptions composite rating as the dependent variable and results show no significant differences in match between the job descriptions and applicants' qualifications across conditions. Further, as shown in the correlation matrix in Table 1, there were no significant relationships between these ratings and the dependent variables.

Other information collected included: geographic location of the position, company's industry, company size, and gender diversity of each company's board. The geographic location of the jobs was categorized into four regions following the U.S. Census Bureau's categorization. The jobs were generally equally dispersed across the country: 27.5% were located in the Northeast, 27.5% in the Midwest, 23.4% in the South, 21.4% in the West, and 0.2% did not specify the state. The industry of the jobs included consumer goods or services (23.6%), market research/advertising (13.3%), medical/health (12.9%), business/consulting (12.9%), information technology (11.7%), finance/financial services (9.2%), oil, gas, construction and manufacturing (7%), education (5.1%), insurance (2.9%), and engineering (1.2%). Companies ranged in size

from 10 employees to 2.2 million employees ($M = 23,300.70$, $SD = 52,720.76$, $n = 487$) and gender diversity on company boards ranged from 0-100 % female ($M = 18.61\%$, $SD = 14.63\%$, $n = 313$). As seen in the Table 1, there were no significant relationships between company size, gender diversity of the board, and the dependent variables with one exception. There was a significant positive correlation between number of employees and time to response ($r = .41$, $p < .01$). The positive relationship indicates that larger companies take more time to respond to applicants, which could be due to a large number of applicants or position openings. Given this significant relationship, company size was controlled for in the analyses examining time to respond as the dependent variable.

Finally, the identity of the responder was collected by categorizing the name of the person who signed the email or left the message into: traditionally male name, traditionally female name, or general human resources department. If the gender of the respondent could not be determined by the name, then attempts were made to locate an image of the person on the company's website or other internet resources (e.g., LinkedIn). In 62.9% of cases, responses were signed from the general human resources department and 37.1% of responses were from an individual (10.7% male and 26.4% female).

Measures

Independent variables. The independent variables were the gender of the applicant (male/female), parental status (parent/non-parent), the individuating information condition (control, competence, commitment, or flexibility), and the number

of family-friendly organizational policies (a sum of support, flexibility, and parental leave policies).

Organizational policies. The number of family-friendly policies was obtained from information posted on the companies' websites. Information posted on the companies' websites indicates the extent to which the company "signals" this policy to potential applicants. Two independent coders viewed information from each company's website and entered information about whether the company signaled each of the policies. When coders disagreed about a policy, a third coder viewed the website information to resolve the disagreement. Each company received one "point" for each of the policies that they signaled and 0 points when they did not mention a policy. The support policies were: on-site childcare, off-site childcare, childcare subsidies, flexible spending accounts for dependent care, adoption assistance, new parent support programs (e.g., new parent support groups, lactation room/support, money for meals after baby is born), and other childcare resources (e.g., back-up care, free access to online nanny website/database). Flexible policies included: telework, opportunity to reduce full-time positions to part-time, flexible work hours/alternative work schedules, and job sharing. Parental leave policies were coded as one point for each of the following: maternity leave mentioned/offered, paternity leave mentioned/offered, maternity leave is paid, and paternity leave is paid. Thus, organizations received a score of 0-7 for support policies, 0-4 for flexible policies, and 0-4 for parental leave policies. A variable was created that summed all three types of policies to reflect the total number of family friendly policies of each company (ranging from 0-15). Thirty-eight percent of companies signaled at least

one support policy, 16.02% signaled at least one flexible policy, 8.41% signaled at least one parental leave policy, and 43.94% signaled at least one family friendly policy.

Dependent variables. Formal discrimination was measured by the rate of positive or negative response from the hiring company. Contact was coded as positive if the applicant received an email or call inviting the applicant for a phone or face-to-face interview, discussion of the position, or request for more information such as one's willingness to relocate. Contact was coded as negative if the applicant received an email or phone rejection stating that the applicant was no longer being considered for the position. Contact was coded as "no response" if the applicant did not receive any contact from the company within three months of the initial application submission.

In addition to call back rate, the time elapsed from application date to contact date was documented. The length of the message (measured in seconds for phone messages and number of words for e-mail messages) was also recorded. In addition, any contact (e-mail or phone message) from the hiring company was coded by two independent coders. Coders were blind to the gender and condition of each applicant; the applicants' names were removed from the correspondence before coders rated them (the applicant's name was replaced with "applicant" in email text and was removed from the audio recording of the call).

Each message was coded on a series of 10 items measuring interpersonal treatment (positive: enthusiastic, friendly, warm, polite, comfortable, interested; negative: hostile, annoyed, nervous, awkward). The items were rated on a 1 (not at all) to 5 (a great deal) scale. The items were adapted from previous field studies measuring interpersonal

treatment (e.g., Hebl et al., 2002, 2007; King et al., 2006; King & Ahmad, 2010). There was no variance on ratings of hostility (all messages were all rated as 1), so this variable was excluded from analysis. An exploratory factor analysis (using principle axis factoring and promax rotation) was conducted using all of the positive and negative items. Results indicate that two factors had eigenvalues greater than one (4.18 and 1.61) and together accounted for 64.30% of the variance. All of the positive items loaded onto the first factor while the negative items loaded onto the second factor. The results from the EFA support the use of separate variables for positive and negative treatment. Since the hostility variable was excluded, the negative treatment variable was a composite of three items: annoyed, awkward, and nervous. The positive treatment variable was a composite of all six positive items (enthusiastic, friendly, warm, polite, comfortable, interested). There was consistency across the coders for positive treatment ($ICC(2,2) = .89$), and negative treatment ($ICC(2,2) = .93$). Therefore the averages of the ratings were utilized for analyses ($\alpha = .89$ for positive treatment and $\alpha = .52$ for negative treatment).

RESULTS

A correlation matrix of all relevant variables is presented in Table 1 and a table of means of the dependent variables by condition is provided in Table 2. As shown in Table 2, the overall positive call back rate was 8% which is about half of the rate that was expected when conducting the power analysis. Given this lower response rate and reduced power, and the directional nature of my hypotheses, I have relaxed the criteria for significance to .10 when interpreting results.

Formal and Interpersonal Discrimination

Hypotheses 1 proposed that mothers would experience higher levels of formal discrimination compared to non-mothers, fathers, and men without children. In order to test this hypothesis, the positive call backs and rejection rates of mothers (across all four conditions) were compared to fathers, non-mothers, and non-fathers (across all conditions) using Z-tests for the difference in proportions. None of the comparisons to mothers were significant (positive call back rate: mothers versus non-mothers, $Z = -.24$, $p = .81$, mothers versus non-fathers, $Z = .17$, $p = .87$, mothers versus fathers, $Z = .67$, $p = .50$; rejection rate: mothers versus non-mothers, $Z = .67$, $p = .50$, mothers versus non-fathers, $Z = -1.33$, $p = .18$, mothers versus fathers, $Z = -1.10$, $p = .27$). Thus, hypothesis 1 was not supported.

Hypothesis 2 proposed that mothers would receive higher levels of interpersonal discrimination during the hiring process compared to non-mothers, non-fathers, and fathers. The four main outcomes tested in this hypothesis were: 1) positivity of response as coded by two independent coders, 2) negativity of response as coded by two independent coders, 3) response speed in days, and 4) length of response (length in words for emails and seconds for phone messages were combined into one score by creating standardized scores within each variable and then combining them into one variable). Hypothesis 2 was tested by conducting 2 (male, female) x 2 (parent, non-parent) ANOVAs to predict each of the four outcomes. The hypothesis would be supported if there was a significant interaction between gender and parental status in predicting the interpersonal treatment variables. There were no significant interactions between gender and parental status when predicting positivity of response ($F(1, 153) = .29, p = .59$), negativity of response ($F(1, 153) = 2.48, p = .12$), or length of response ($F(1, 155) = .25, p = .62$).

In order to examine time elapsed until call back, separate analyses were conducted for positive call backs and negative call backs given that a quicker invitation for interview would mean something different from a quicker rejection. In addition, company size was entered as a control variable since it was significantly related to time elapsed. When examining time elapsed for positive responses, the ANCOVA results indicated no significant interaction between parental status and gender, $F(1, 36) = .29, p = .59$. When examining time elapsed for negative responses, the ANCOVA reveals an interaction between gender and parental status ($F(1, 108) = 3.00, p = .09$) such that

mothers receive the quickest rejections ($M = 18.25$, $SD = 23.69$) from the hiring process (significantly faster rejections than fathers, $M = 39.97$, $SD = 44.21$, $t(48) = -2.25$, $p < .05$).

Responder identity. In an analysis to determine whether the identity of the responder (male individual, female individual, or general human resources department) had any effect on outcomes, I conducted a 3 (identity of responder: male, female, or general human resources department) x 2 (parental status of applicant) x 2 (gender of applicant) ANOVA predicting the interpersonal treatment outcomes and logistic regression for outcomes for the binary outcomes of receiving a positive call back or a rejection. Results show no significant three way interactions for positivity of message ($F(2, 145) = .10$, $p = .90$), length of response ($F(2, 147) = .44$, $p = .64$), time to positive call back ($F(1, 30) = .03$, $p = .88$), or time to rejection ($F(2, 103) = .33$, $p = .72$). In addition, there were no significant interactions when predicting positive call back rate ($B = .40$, $p = .77$) or rejection rate ($B = -.12$, $p = .93$) using logistic regression.

However, results do show a significant three way interaction between applicant gender, applicant parental status, and identity of responder when predicting negativity of messages, $F(2, 145) = 3.46$, $p < .05$. The pattern of results varied by whether the response came from an individual or the HR department but did not vary by gender. Thus, I present results averaging across individuals (males and females) compared to responses from HR departments. Responders identified as individuals showed significantly more negativity in their messages to mothers ($M = 1.29$, $SD = .51$) compared to everyone else (fathers, non-fathers, and non-mothers, $M = 1.08$, $SD = .20$, $t(56) = 2.24$, $p < .05$, see

Figure 1). When the responses were from general human resource departments there were no significant main effects or interactions among applicant gender and parental status; individuals across all four groups (mothers, fathers, non-fathers, and non-mothers) received equivalent messages. In sum, it appears that messages coming from a specific individual (regardless of gender) were more negative toward mothers than everyone else while messages signed from an HR department were equivalent across groups.

Individuating Information

Hypothesis 3 proposed that mothers who provide individuating information about competence, flexibility, or commitment will experience less formal and interpersonal discrimination than mothers who provide no information and fathers. This hypothesis was tested by conducting 2 (gender) x 2 (parental status) x 4 (individuating information) ANOVAs predicting the continuous outcomes and logistic regressions predicting the dichotomous outcomes. Hypothesis 3 would be supported if a significant three way interaction was found and if the post-hoc comparisons showed that mothers who provided the individuating information received more call backs and more positive treatment compared to mothers in the control condition and fathers.

The 2 (gender) x 2 (parental status) x 4 (individuating information) ANOVAs were conducted for the four variables measuring interpersonal treatment. Results show no significant three way interactions for any of the variables: 1) positivity of response as coded by two independent coders ($F(3,141) = .54, p = .66$), 2) negativity of response as coded by two independent coders ($F(3,141) = 1.34, p = .27$), 3) response speed in days controlling for company size (negative response: $F(3, 96) = .11, p = .96$) and 4) length of

response ($F(3,143) = 1.59, p = .19$). There was a three-way interaction between gender, parental status, and individuating information when predicting time elapsed until positive contact ($F(2,26) = 2.72, p = .08$) but the cell sizes were very small ($n < 5$) so it was not appropriate to interpret this interaction. In addition, logistic regressions were conducted to test the hypotheses about formal discrimination. Gender, parental status, and individuating information (dummy coded variables) and the appropriate interaction terms were entered as the independent variables. The results show no significant three way interactions when predicting positive call back rate (p 's $> .10$) or rejection rate (p 's $> .10$). In an attempt to be comprehensive in the analyses, I also combined all three types of individuating information and created a variable that compared the control condition to applicants who provided any type of individuating information. The pattern of results was the same; there were no significant interactions between the control versus any information variable, gender, and parental status. Thus, hypothesis 3 was not supported.

Organizational Policies

Hypothesis 4 proposed that the total number of family friendly policies will moderate the relationship between motherhood and hiring decisions, such that as the number of family friendly policies increases, formal and interpersonal discrimination against mothers will decrease. Moderated regressions were conducted to test this hypothesis with the continuous interpersonal discrimination dependent variables. Gender, parental status, and total number of family friendly policies were entered as independent variables and the appropriate interaction terms were entered (the number of policies variable was centered). Results showed no significant three way interactions when

predicting positivity of response ($\beta = -.47, p = .60, \Delta R^2 = .00$), negativity of response ($\beta = 1.28, p = .15, \Delta R^2 = .01$), time to positive call back ($\beta = .15, p = .87, \Delta R^2 = .00$), time to rejection ($\beta = -.33, p = .75, \Delta R^2 = .00$), or length of response ($\beta = .18, p = .83, \Delta R^2 = .00$). Similarly, the independent variables (gender, parental status, number of policies, and interaction terms) were entered into logistic regression and results show no significant three way interactions when predicting positive call back rate ($B = .81, p = .49$) or rejection rate ($B = .02, p = .96$).

DISCUSSION

The purpose of this study was to determine whether individual strategies (providing information about one's competence, commitment, and flexibility) and/or family-related organizational policies could reduce rates of formal and interpersonal discrimination experienced by mothers during the resume screening process. In this section I will summarize the study's findings and discuss practical and theoretical extensions of these findings. I then note limitations of the study and suggest future directions in this area of research.

Formal and Interpersonal Discrimination

The first major topic that the study sought to address was the existence of formal and interpersonal treatment of mothers during the resume screening process. The data did not show any evidence that mothers experience different call back rates compared to other groups. There are several potential reasons why formal discrimination against mothers was not found in this study when it had been found in other studies. The other audit study examining the motherhood penalty in the hiring process (Correll et al., 2007) involved submitting applications via fax, email, and mail to job openings from a single Northeastern newspaper. Correll and colleagues' positive response rate was also low (4%) and results indicated that the call back rate for mothers (3.13%) was significantly lower than non-mothers (6.56%) but not significantly different from that of fathers (5.03%) or non-fathers (2.83%). In addition, while the job types that Correll and colleagues applied to appear to be similar to those applied to in the current study ("entry

to mid-level marketing and business jobs”), all of the jobs were located in one city whereas the present research involved applying to jobs across the country. It is possible that the motherhood penalty is stronger in some cities or regions of the United States and this could be one explanation for differences in findings across the present study and Correll and colleagues (2007) findings. The geographic dispersion of jobs applied to in the current study is a contribution given that modern careers are often not geographically bounded and individuals do uproot their families to pursue new opportunities.

In addition, the types of jobs that previous laboratory studies have used to examine the motherhood penalty are different from the types of jobs that we applied to in the current study. Laboratory studies examining differences in hiring recommendations of mothers versus others have used high paying, high status leadership positions (e.g., “head of East Coast marketing” with salary range \$135,000-\$180,000; Benard & Correll, 2010; Correll et al., 2007, “assistant vice president of financial affairs”; Heilman & Okimoto, 2008) and found that motherhood was a negative attribute to have for these types of positions. It is possible that the motherhood penalty is strongest in higher paying/higher status leadership roles and the types of jobs applied to in the present study are not impacted to the same extent. This idea is supported by the *lack of fit model* (Heilman, 1983), which propose that there is a lack of fit between the attributes stereotypically associated with women (communal) and those associated with male-typed jobs (agentic) and this lack of fit can lead to negative expectations and evaluations of women in these roles. The model also proposes that the greater the lack of fit, the more negative the expectations/evaluations will be. High status leadership positions are strongly male-typed

roles which may lead to a large discrepancy when mothers apply for these positions, since mothers are expected to be particularly communal. However, the entry to mid-level research/business analyst positions that we applied to in the current study may not be viewed as being as greatly discrepant from stereotypes of mothers compared to the high status leadership positions that have been used in previous studies. Future studies could further explore the role of job type and level on the severity of the motherhood penalty.

The present study also explored whether mothers experience interpersonal discrimination during the hiring process, and results showed some indications that subtle indicators of discrimination do occur toward mothers. Mothers received the quickest rejections of all groups and were significantly more quickly rejected than fathers. This difference in rejection speed indicates that mothers are more quickly dismissed from the hiring process while fathers receive more consideration for the position. Secondly, mothers received significantly more negative messages (as rated by two coders) than women without children and men with or without children when these messages came from a specific individual (as opposed to from the HR department more generally). This finding suggests that when individual agents review resumes, they may be more negative in their responses to mothers compared to other groups. Interestingly, it appears that when the response comes from the general human resources division there are no differences in the negativity of message. A message coming from the human resources department may indicate that some portion of the resume screening was automated and thus any human biases or stereotypes would not have played as strong of a role in decision making. Without further information it is difficult to know exactly who viewed

each resume and what types of psychological processes were driving these results. However, the results do provide some indication that negativity toward mothers may be subtly revealed through the tone and emotions conveyed (annoyance, awkwardness, and nervousness) in messages to applicants.

These subtle indicators deserve attention in future research, as receiving less consideration (quick rejections) and more negativity in messages could impact ultimate outcomes of hiring process. The findings also could indicate that hiring managers hold negative attitudes/stereotypes about mothers that they may attempt to suppress but ultimately emerge in subtle forms that can still have important implications for mothers' hiring and economic outcomes. Future studies should investigate whether the subtle indicators of negativity continue to occur or accumulate as applicants progress through the application/employee cycle (e.g., interview, salary/benefit discussions, types of assignments, promotions).

Individuating Information

Another topic that the study addressed was whether individuating information about competence, commitment, and flexibility on mothers' resumes would result in reduced levels of negative treatment for mothers compared to mothers who provided no information. The study also compared these results to fathers who used the same individuating information. Results showed no significant effects with regard to individuating information. While the response rate may not have been high enough to detect effects, another explanation could be that providing individuating information on resumes was not an effective method to overcome hiring managers' stereotypes. Other

studies have primarily looked at the efficacy of providing individuating information during interpersonal interactions (e.g., Hebl et al., 2007, Morgan et al., 2013) so perhaps it is not as effective to write this information on a resume as it is to provide it during interpersonal exchanges. In addition, perhaps providing additional support or strengthening the information about the applicant could be more effective in influencing hiring managers' perceptions. Future studies could look at the effectiveness of providing individuating information from another source (e.g., in recommendation letters) to provide additional verification of the applicant's competence, commitment, or flexibility.

Organizational Policies

The final topic that the study addressed was whether the number of family friendly policies an organization has moderates the motherhood penalty with the expectation that companies with more family friendly policies would be more likely to call back and treat mothers positively during the hiring process. The analyses did not support this proposition; the findings suggest that organizational strategies do not impact treatment of mothers during the hiring process. That is, organizational policies about family may be ineffective at creating signals that value parenthood. Or, it could be the case that the family-friendly policies do signal the organization's concern for parents but this concern is not adopted by hiring managers. Organization-level concern for parents may not be as influential on individual-level attitudes and behaviors as an individual's immediate surroundings (i.e., team or unit-level attitudes and norms may be more important).

There could be other explanations for why no effects were found with regard to the role of family-friendly policies. As mentioned earlier, the call back rate was lower than expected so this limited the amount of power to detect effects. In addition, we relied on information provided on the company's websites to determine the number of family friendly policies that were offered. Using information provided on company websites measures the extent to which these policies are signaled to applicants; however, it may have been an incomplete measure in terms of the number of policies that actually exist. It also could be that the implementation and attitudes toward family friendly policy use are a stronger reflection of the organization's culture of support than the number of policies alone (see Butts, Casper, & Yang, 2013).

Limitations and Future Directions

The present study had several advantages over previous studies such as the study design which maximized internal and external validity, the geographic dispersion of jobs across the country, and examining the role of individuating information and family friendly policies on rates of discrimination. However, the study also had some limitations. The most limiting factor was the low overall call back rate (8%). This rate was lower than expected based on a study that involved submitting applications via online job search sites (average call back rate ranged from 6.8% – 22%; Bailey et al., 2013). There are several potential explanations for our call back rate being lower than that found by Bailey and colleagues (2013). One potential reason is that we had a fairly specific set of criteria for the job openings that we selected. Bailey and colleagues had less specific criteria (they applied to all entry level jobs that required a four year degree,

salary range between \$30,000-\$120,000, and were within 150 miles of the applicant's current city). In addition, the proximity of applicants to the job's location could have impacted call back rates. Bailey and colleagues only submitted applications to jobs that were close to the applicant's current location. In the present study, applications were submitted to openings across the country (but all of the resumes did indicate that applicants were willing to relocate). A final potential reason for the lower call back rate is that, because we were required by the IRB to use real resumes we had to modify the resume content somewhat to ensure that they were perceived to be equivalent. This resulted in resumes that had somewhat vague descriptions of previous work and qualifications. Other studies using fictitious resumes were likely able to provide more detailed resumes which could have led to more call backs.

The present study design allowed us to maximize external and internal validity. However, many variables could not be measured such as the processes or mechanisms that drove the hiring managers' decisions and treatment of applicants. We manipulated the individuating information on the resumes but there may have been other variables or factors that impacted hiring managers' decision making. For example, previous studies have measured and found that working mothers are rated as low on warmth and likability (e.g., Cuddy et al., 2004; Okimoto & Heilman, 2012). Perhaps mothers were viewed as sufficiently competent but lacking warmth which is why they received more negativity in messages. According to the stereotype content model (Fiske et al., 2002), people viewed as competent but lacking warmth can evoke reactions of resentment and envy. It is possible that stereotypes or expectations of warmth and likability could impact

interpersonal treatment as the applicant progresses in the hiring process (i.e., as interpersonal interactions increase during interviews and negotiations).

Another potential limitation is regarding the salience of motherhood on the resumes. The “salience” proposition from status characteristics theory suggests that motherhood will lead to different evaluations if it “differentiates those in the setting (some are mothers and some are not) or if it is believed to be relevant to the task at hand” (Correll et al., 2007, p. 1304). Previous studies (Benard & Corell, 2010; Correll et al., 2007) provided employers (or undergraduate raters) with a same-sex pair of applicants in which one was a parent and one was not a parent. In the present study, only one application was submitted to each job opening. It is possible that since we did not have a companion resumes submitted to every position that the salience of parenthood was not high enough to evoke biases. However, it is likely that other resumes submitted to the same openings did not contain information about parental status (since it is uncommon to reveal this on a resume) so it seems that information about parental status would still be salient. Perhaps stereotypes of mothers evoke more biases once the salience of motherhood increases as employers learn more about the applicant (e.g., employees discussing family situations, utilizing family friendly policies). Thus, penalties for motherhood may be more apparent once applicants reveal more information about themselves through interviews or during compensation/benefits discussions. Similarly, the resume manipulations to indicate parenthood were fairly subtle. Pre-testing indicated that the manipulations were successful but perhaps stronger manipulations (more detail, images of parents with their children) would evoke stronger biases. There are several

other moderators that seem important to investigate in future studies. The age of an applicant's children and the number of children could impact perceptions of an applicant's hirability. In a lab study, Cuddy and colleagues (2004) found that females were perceived as less hireable when they it was listed that they "just had a new baby". However, the penalties may not be as negative for mothers with older or more self-sufficient children. Another potential moderator is applicants' marital status. Hiring managers may make different attributions for why single or married parents are working. If mothers are viewed as working out of financial necessity (potentially how single mothers would be viewed) then they may be viewed more positively than if they are perceived to be working for personal fulfillment (potentially how married mothers would be viewed; see Bridges & Etaugh, 1995; Okimoto & Heilman, 2012).

In addition to other moderators, there are several other considerations for future research on this topic. Hiring managers often perform internet searches and view applicants' social media profiles during the hiring process. Future studies could examine the role of information or images regarding parental status provided in internet searches and profiles to determine how influential this information is. Another consideration for future studies is that entry into many jobs occurs via informal social networks (as opposed to applying through company websites). There is the opportunity for individual biases and stereotypes regarding gender or parental status to play a greater role in these informal paths so it would be useful for researchers to consider these other avenues of entry into organizations.

Conclusions

In sum, the current study found some evidence that mothers are treated more negatively during the hiring process but did not find evidence of formal discrimination. However, it may be premature to draw any conclusions that mothers do not experience formal discrimination during the resume screening process due to the present study's limited power to detect effects. In addition, there are likely many moderators of the relationship between motherhood and hiring discrimination such as job type/level. However, this study does provide some initial indications that mothers can experience increased negativity and quicker rejections when trying to gain entry in entry- and mid-level analyst positions. These findings certainly warrant future examination and additional study of the nuances and boundary conditions of the motherhood penalty in hiring decisions.

Table 1

Means, Standard Deviations, and Correlations between Study Variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Applicant gender	1.50	.50														
2. Applicant Parental status	1.50	.50	.00													
3. Positive call back received	.08	.28	-.04	-.02												
4. Rejection received	.24	.43	.06	-.03	.17**											
5. Time elapsed until response in days	25.14	32.87	.11	.07	-.14	.15										
6. Length of response (call and emails combined, Z-score)	0	1	.16	-.06	-.05	.07	.07									
7. Percent female board members	18.61%	14.46%	-.10	-.05	.13	-.10	.07	-.05								
8. Company size	23,300.70	52,720.76	.00	.06	-.04	.09	.41**	.02	.11							
9. Positive behaviors	2.68	.60	-.00	.02	.67**	.67**	-.17*	.16	.18	-.06						
10. Negative behaviors	1.07	.21	-.08	.10	.16*	-.16	-.03	-.21*	.01	-.07	-.13					
11. Job description match	3.53	.70	-.06	.03	.02	-.03	.06	-.03	.09	.06	-.01	.09				
12. Total number of family friendly policies	1.15	2.01	.03	.01	-.11*	.03	-.02	.08	-.07	.17**	.21**	-.14	.04			
13. Number of support policies	.63	1.06	.05	-.01	-.09	-.02	-.07	0.04	-.10	.11*	-.15	-.12	.04	.83**		
14. Number of parental leave policies	.20	.74	.00	.07	-.08	.00	.04	-.02	-.05	.12**	-.08	-.05	.02	.68**	.40**	
15. Number of flexible policies	.32	.90	.00	-.01	-.07	.08	.01	0.12	-.01	.15**	-.15	-.08	.03	.70**	.33**	.22**

* $p < .05$, ** $p < .01$

Table 2

Dependent Variable Means across Sixteen Conditions

Condition	Invitations for interviews (count)	Invitation rate (invitations/ total jobs applied)	Rejections (count)	Rejection rate (rejections/ total jobs applied)	Positive behaviors	Negative behaviors	Time to positive response (negative response)	Length of message (Z-score)
Overall (n=487)	41	.08	115	.24	2.68	1.07	17.51 (28.17)	0
1 (F Control Non-parent, n=30)	2	.07	9	.30	2.51	1.03	21.50, (29.11)	-.26
2 (F Competence Non-parent, n=31)	3	.10	6	.19	2.90	1.02	13, (26.17)	.45
3 (F Commitment Non-parent, n=31)	3	.10	3	.10	2.79	1.03	27, (15.67)	-.10
4 (F Flexibility Non-parent, n=30)	4	.13	10	.33	2.52	1.07	4.25, (28.10)	-.20
5 (F Control Parent, n=31)	0	0	6	.19	2.48	1.31	N/A, (19.50)	-.44
6 (F Competence Parent, n=31)	4	.13	7	.23	2.69	1.08	13.75, (28.14)	-.46
7 (F Commitment	5	.17	2	.07	3.07	1.14	8, (4)	-.13

Parent, n=30) 8 (F Flexibility	2	.07	9	.30	2.57	1.11	88, (12.89)	-.04
Parent, n=30) 9 (M Control Non-parent, n= 30)	2	.07	10	.33	2.63	1.04	3, (41.20)	.60
10 (M Competence Non-parent, n=29)	2	.07	6	.21	2.80	1.04	62.50, (32)	-.07
11 (M Commitment Non-parent, n=30)	3	.10	7	.23	2.86	1.15	4, (17.14)	-.26
12 (M Flexibility Non-parent, n=31)	3	.10	9	.29	2.59	1.00	1, (13.56)	.27
13 (M Control Parent, n=31)	0	0	5	.16	2.61	1.03	N/A, (48.40)	-.31
14 (M Competence Parent, n=29)	2	.07	6	.21	2.63	1.08	8, (48.50)	.03
15 (M Commitment Parent, n=31)	1	.03	9	.29	2.57	1.00	2, (25.89)	.50
16 (M Flexibility Parent, n=31)	5	.16	11	.36	2.72	1.06	20.60, (40.27)	.09

Note. N/A indicates that there were no cases in the cell.

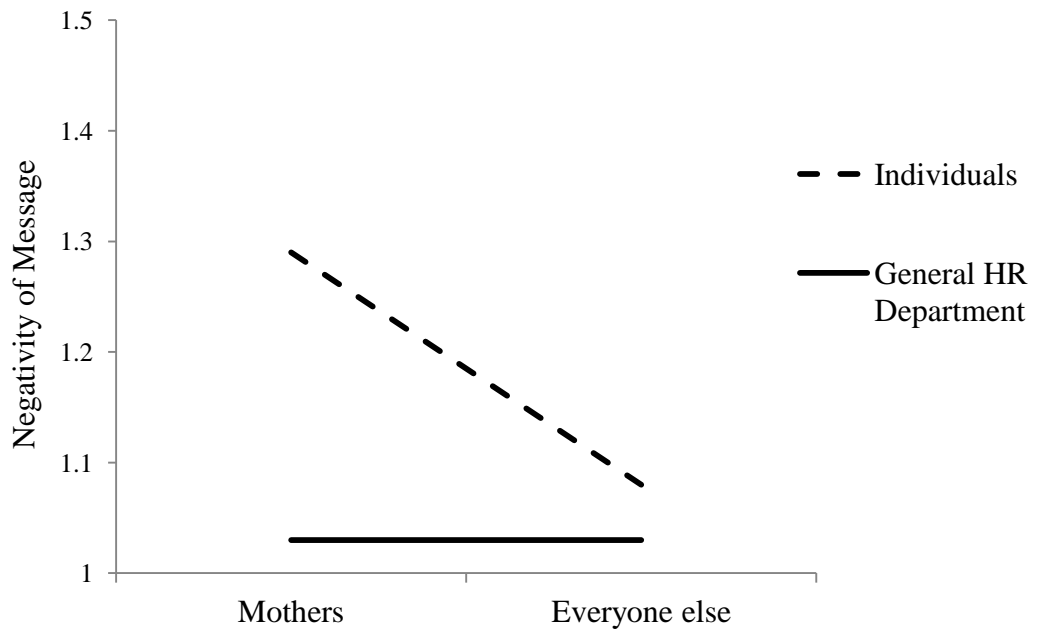


Figure 1. Interaction between responder identity and motherhood status in predicting negativity in messages

APPENDIX A: PRE-TESTING PROCEDURE AND RESULTS

A total of 179 professionals from the United States with hiring experience participated in the pre-testing study by completing a brief (10 minute) survey online in which they were randomly assigned to view one of the 16 resumes and then evaluated the resume on a series of items. The participants were 44.7% male, had an average age of 35.36, and respondents had an average of 9.54 years of work experience. Participants were recruited by contacting individuals in Masters in Business Administration (MBA) programs, using a snowball sampling method of personal contacts who had hiring experience, and by using Amazon's Mechanical Turk (Mturk). Approximately 46.4% (83) of the respondents were from Mechanical Turk. Participants who participated through Mturk were paid \$1.00 - \$1.50 for their participation. Participants who participated through the snowball sampling method were entered in a drawing to win one of two \$25 Amazon gift cards.

Participants were randomly assigned to view one of 16 resumes and asked to rate the resume on a series of items, including the applicant's competence, flexibility, commitment, parental status, hirability, warmth, likability, and the likelihood that the respondent would offer the applicant an interview. The items measuring competence, flexibility, commitment, hirability, warmth, and likeability, were measured on a 1 (strongly disagree) to 5 (strongly agree) scale. Likelihood that the respondent would offer the applicant an interview was measured on a 1 (Very unlikely) to 7 (Very likely) scale. The individuating information was presented as follows: "My performance is consistently

in the top 10% of employees and I am a highly efficient, skilled, and competent worker.” (competence), “Flexible schedule and willing to work whenever necessary.” (flexibility), and “Extremely committed worker who is willing to put in the work required to excel. Commitment to work is one of my greatest strengths.” (commitment).

First, the resumes from the male control non-parent and female control non-parent conditions were compared to determine whether the resumes were rated equivalently. The applicant’s name was not included on any of the resumes shown in pre-testing so that the gender of the applicant would not influence ratings. Results show that there were no significant differences ($p > .10$) in the ratings of the male and female control non-parent resumes on any of the key variables (likelihood to offer an interview, hirability, competence, flexibility, commitment, warmth, likability).

After establishing that the male and female versions of resumes were viewed equivalently, the two versions of the resumes were collapsed in order to test whether the manipulations were successful. Results show that the parental status manipulation was successful; parents were significantly more likely to be identified as parents ($M = 1.92$, $SD = .98$) than non-parents ($M = 2.80$, $SD = .50$; $t(177) = 7.69$, $p < .01$). In addition, applicants providing individuating information about commitment were viewed as more committed ($M = 4.12$, $SD = 1.04$) than applicants in the control condition ($M = 3.71$, $SD = .75$; $t(92) = -2.20$, $p < .05$). Applicants providing individuating information about flexibility were viewed as more flexible ($M = 4.10$, $SD = .90$) compared to the control condition ($M = 3.67$, $SD = .90$; $t(90) = -2.85$, $p < .05$). However, the competence manipulation was unsuccessful such that the resumes with individuating information

about competence ($M = 3.87$, $SD = .69$) were viewed as equally competent to the applicant in the control condition ($M = 3.87$, $SD = .79$; $t(95) = -.01$, $p = .99$).

In response to these findings, the individuating information about competence was strengthened to read “Consistently ranked among the top 10% of employees and honored with achievement awards for excellent performance. Appointed by senior management to lead project teams and manage projects worth over \$3 million.” and tested again with 25 additional participants who were recruited through a snowball sampling method of individuals with hiring experience. The demographics of the sample of 25 people were comparable to the initial sample, although they had a slightly higher mean level of work experience and there were more females in this sample (28% male, 15.36 years work experience, average age of 36.28). Participants were randomly assigned to view either the male non-parent or female non-parent resume with the new competence information and rate them on the same series of items in the initial survey (likelihood to offer an interview, hirability, competence, flexibility, commitment, warmth, likability). There were no significant differences in ratings of competence (or any of the other key variables) across the male ($M = 4.00$, $SD = .82$) and female versions ($M = 4.47$, $SD = .64$, $t(23) = 1.60$, $p = .12$) of the resumes with the new competence information so the male and female resumes were collapsed and compared to the control condition. Results show that the manipulation was successful; the applicants who provided the new competence information were viewed as significantly more competent ($M = 4.28$, $SD = .72$) compared to those in the control non-parent condition ($M = 3.83$, $SD = .72$; $t(46) = -2.16$, $p < .05$)

and also when compared to the collapsed non-parent and parents control conditions ($M = 3.83$, $SD = .72$; $t(75) = -2.42$, $p < .05$).

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