8-15-2023

Exploring Gender Stereotypes in Application: Is Maternal Warmth A Bonus or A Penalty for Women?

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Abstract

How does previous work experience connoting motherly warmth and nurturing impact evaluations of women as job applicants? Professional women are penalized for being mothers but benefit from following traditional gender scripts, which expect women to be warm, caring, and service-oriented. While there are overlaps in traits between being a mother and being a woman, the influence of motherly-warm traits on application results is unclear. To tackle this question, I conducted a survey experiment (N = 244) using a task in which each participant is asked to evaluate the resume of a prospective job applicant with or without job experiences conveying maternal warmth and then whether they would recommend the candidate for an interview. I found that candidates with work experiences that signal warmth/nurturing capacity/care were more likely to be recommended for an interview. Diverged from Quadlin (2018), candidates with B-level GPAs were not more likely to receive a recommendation for an interview than candidates with A- or C-level GPAs. In the mediation analysis, candidates with warm/nurturing/caring experiences received more favorable ratings in warmth, likability, caring quality, sincerity, pleasantness, competence, commitment, capability, organization, trustworthiness, and skillfulness, which mediated the relationship between having warm/nurturing/caring experiences and the likelihood of being recommended for an interview. The findings expand the knowledge of the intertwined gender expectations faced by professional women and encourage future studies to examine the combined impact of multiple gender expectations.

Keywords

professional women, job application, math-major, recent college graduate, parental warmth, gender script, résumé survey experiment

Introduction

Although female students outperform their male counterparts academically, this advantage seemingly evaporates in the labor market, where women, on average, received lower salaries than male workers (Chisholm-Burns et al. 2017; DiPrete and Buchmann 2013; Gupta et al. 2023). Women also face a motherhood penalty, a form of career discrimination based on the traditional expectation that mothers' primary role of caregiver will come into conflict with ideal worker expectations (Benard and Correll 2010; Firth 1982). On the other hand, women are also penalized for being unable to follow traditional gender scripts, which call for women to be communal, caring, and service-oriented (Campero and Fernandez 2019; Galperin 2021; Heilman 2001; Leung and Koppman 2018). Underscoring this point, in a recent audit study Quadlin (2018) found that warmth and likability were valued in female candidates.

To date, no study has examined the intertwined effects of motherhood-relevant and conventional female traits. This study addresses this oversight by investigating the impact of having job experiences that signal motherly and parental warmth on the likelihood to be recommended for an interview for women job applicants. To do so, I use the case of recent female math-major college graduates pursuing accounting positions. I conducted a survey experiment that employs a 2 (parental-warm and neutral experiences) x 3 (high, medium, low GPA) design and contains a quantitative and qualitative part. Quantitative data are used to test the causal effects of job experiences connoting maternal warmth, qualitative data to supplement the result. Results indicate recent female college graduates were more likely to be recommended for an interview if they had previous work experiences that signal warmth/nurturing and a

capacity to care. The study failed to replicate Quadlin's (2018) finding that applicants with B-level GPAs were more likely to receive a call-back than those with A or C-level GPAs. Furthermore, mediation analyses suggest a causal chain where parental-warm experiences increased perceptions of the candidate's warmth, likability, caring quality, sincerity, pleasantness, competence, commitment, capability, organization, trustworthiness, and skillfulness; in turn, making them a more viable candidate.

Findings demonstrate that having work experiences considered warm/nurturing/caring facilitate candidates' likelihood of receiving a recommendation for an interview. In line with the gender script studies, this paper broadens the literature on traditional expectations and biases professional women face and clarifies the impact of experiences that connote motherly warmth on the likelihood of receiving a call-back for an interview (Galperin 2021; Heilman 2001). Findings have practical implications for the labor market experiences of contemporary college-going women.

Literature Review

Female students outperform their male counterparts in academics (DiPrete and Buchmann 2013; Fischer, Schult, and Hell 2013; Gibb, Fergusson, and Horwood 2008), which benefits them throughout their education (Buchmann and DiPrete 2006; Riegle-Crumb 2010). However, these academic advantages do not translate to equally successful labor market outcomes, where their achievements yield lower payoffs compared to their male counterparts (Castagnetti and Rosti 2009; Krefting 2003). For instance, Quadlin (2018) finds that women majoring in math, a traditional male-dominated subject, are penalized for high grades in the evaluation of job applications. Gender discrimination exists across every aspect of employment (Scott 1988; Martin and Barnard 2013). Professional women contend with the gender wage gap,

marked by women's lower median salary compared to their male counterparts, and the glass ceiling, an intangible barrier that hampers their career advancement (Chisholm-Burns et al. 2017; Gupta et al. 2023).

The job market holds women and men to different standards. Under the traditional family division of labor, women assume the role of caregivers whose devotion to family is inversely related to their commitment to work, whereas men are viewed as breadwinners whose commitment to family and work are positively related (Bear and Glick 2017). Consequently, women face a motherhood penalty, the discriminatory treatment based on the expectation that a mother's primary jobs are in the household, thus rendering them less capable and committed to work (Benard and Correll 2010; Firth 1982). On the other hand, fathers receive the fatherhood bonus: being a parent benefits men's career advancement (Correll, Benard, and Paik 2007; Fuller and Cooke 2018; Killewald 2013). Nevertheless, parenthood status produces complicated results. Fuegen et. al (2004) finds that parents of both sexes are viewed as less committed to work compared to non-parents, although the job market treats fathers more leniently than mothers. Bear & Glick (2017) found that the motherhood penalty became a breadwinner bonus and benefited female employees when mothers assumed the breadwinner position.

Job applicants are further evaluated by gender with respect to job type: both women and men received lower scores when applying for positions and jobs where the opposite sex predominates (Campero and Fernandez 2019; Davison and Burke 2000). Women are disadvantaged in traditionally male-dominated occupations (Galperin 2021; Heilman 2001; Yavorsky 2019; Zikmund, Hitt, and Pickens 1978). Besides the stratified gender treatment in different gendered industries, gender also creates different scripts for women and men: During the application review process, candidates are expected to present an image that fits with the

prevailing stereotypes of their gender identity (Shaw and Edwards 1997; Tyler and McCullough 2009). The expectation for women is communal, social, and service-oriented (Heilman 2001). Recruiters penalize female applicants when they exhibit gender-atypical traits (Carli, LaFleur, and Loeber 1995; Heilman and Okimoto 2007; Leung and Koppman 2018; Rudman and Glick 2001). Employers prefer likable female candidates who are not too competent, which signals warmth (Quadlin 2018).

Women are perceived as being less committed to work when assuming the traditional female role of mothers, but paradoxically, penalized when they fall outside of conventional gender stereotypes and possess high professional achievement (Benard & Correll, 2015; Benard & Correll, 2010; Tyler and McCullough 2009; Hodges & Budig, 2010). In rearing, assisting, and protecting their children, a good mother plays a service-oriented role, expectations that apply equally to female job candidates (Elliott, Powell, and Brenton 2015; Heilman 2001; Narciso et al. 2018). Therefore, while motherhood conveys the warm and service-oriented qualities of the female cultural script employers prefer, it also triggers a motherhood penalty that sets professional women back (Benard and Correll 2010; Heilman 2001; Quadlin 2018). There is a conflict in the job market expectations of professional women: women both benefit from and are penalized by following their gender script, whereas deviating from gender stereotypes, like having a high academic achievement, negatively impacts professional women (Benard and Correll 2010; Leung and Koppman 2018; Quadlin 2018). It is unclear whether the effect of characteristics that connote motherly warmth benefits female job applicants just entering the labor force. While professional women who have already become mothers received motherhood penalties (Benard and Correll 2010; Heilman 2001), it is unclear how motherhood-related traits impact young professional women who are not yet mothers. Building on Quadlin (2018), this

study investigates the question: might job experiences that signal care, nurturing, and warmth actually benefit young women in the job market? Or conversely, might these experiences further exacerbate the challenges faced by women? To answer those questions, I conducted a résumé-based survey experiment. Based on prior research, I hypothesized that recent female college graduates with previous job experiences in occupations considered caring, nurturing, and warm would be more likely to receive recommendations for interviews for an accounting job.

Findings support the primary hypothesis: past work experiences that show nurturing and warm traits benefit recent female college graduate applicants. I test two different hypotheses under my overarching research question. The first extends Quadlin (2018)'s finding with respect to high GPAs' negatively affecting call-back rates of women in traditional male majors. I attempted to replicate Quadlin's (2018) finding that candidates with B-level GPAs will be more likely to be recommended for hire than those with A or C-level GPAs, and further, whether academic achievement moderates the effects of having experiences in nurturing or warm occupations with respect to one's likelihood of being recommended for hire. I hypothesized that candidates with B-level GPAs will be more likely to receive recommendations for an interview, and GPA moderates the effects of having parental warm experiences. Second, I examined whether such work experiences increase positive ratings across a variety of candidate characteristics (e.g., competence, commitment, caring) and whether these more positive evaluations are in turn associated with a greater likelihood of being recommended for an interview for an accounting position. I hypothesized that the parental warmth experiences only will facilitate positive ratings for warmth-related traits (i.e., warmth, likability, caring quality, sincerity, and pleasantness). Cumulatively, findings signal new areas for investigation, contribute

to our understanding of gender expectations in the labor force, and present a possible alternative guide for women exploring the job market and contending with enduring gender stereotypes.

Methods

I conducted a résumé-based survey experiment as my research project under the Levitt Summer Fellowship Program at Hamilton College. Fictional résumés were randomly presented to participants, who were tasked with evaluating different aspects of the candidate's profile. The survey was distributed through the online survey agent Prolific to 244 participants ($N = 244$). Only 217 results are valid ($N = 217$). Prolific was selected because of its speed in dispensing surveys and unique access to a large pool of participants. There were two experimental manipulations: 1) college GPA (3.95 (A-level) as high, 3.59 (B-level) as medium, 2.84 (C-level) as low) and 2) working experiences (having experience conveying parental warmth or more neutral past work experiences), for a total of six conditions. The fictional applicant has a race-neutral name and is a recent female college graduate from a university with a medium US News ranking. She majors in mathematics and is applying for a job in accounting. The survey recorded participants' evaluation of multiple personality traits upon reading their assigned résumés, their likelihood to recommend an interview, and their brief explanation of their hiring decision.

All 217 participants in the survey had experience making hiring decisions. 58.53% of the sample were cisgender male, 36.41% cisgender female, 5.06% others. A majority of 60.37% of the participants were White. The balance of the sample was 20.28% Hispanic or Latinx, 8.76% Black, 8.76% Asian, and 1.83% other.

Table 1. Survey Descriptive Statistics ($N = 217$)

Variable	Proportion

Respondent gender	
Cisgender male	.59
Cisgender female	.36
Other gender	.05
Respondent race/ethnicity	
White	.60
Hispanic or Latinx	.20
Black	.09
Asian	.09
Other race	.02

Procedure

Before distributing the survey, I conducted a pretest with 124 participants to ensure jobs selected to convey parental warmth sufficiently signaled this trait. Participants were randomly assigned to one of six groups, with each group tasked with evaluating personality traits on a 10-point scale, ranging from 1 (*Not at all*) to 10 (*Extremely*), after reading their respective vignettes. I chose Childcare Assistant, Local Children Shelter ($M = 8.94$, $SD = 2.24$), and Babysitter, Local Family ($M = 9.27$, $SD = 1.10$) for the parental-warm condition. The neutral experiences are Lifeguard, Local Swimming Pool ($M = 6.83$, $SD = 1.97$), and Walmart Employee, Retail Department ($M = 5.88$, $SD = 2.29$). The pretest result guided the operationalization of the parental warmth condition in the official survey.

The survey took place online through Prolific. At the beginning of the survey, participants were given a consent form that described the study's chief aims of understanding the factors taken into consideration in the resume review of jobs in accounting and their tasks in evaluating the assigned résumé. Each participant received a randomly assigned résumé from a pool of six résumés varied on GPA and parental-warmth-cueing work experiences. Besides the

two experimental manipulations, all résumés shared the same content, including objective, education, campus work experience, and skills. After reading the résumé, participants were asked to evaluate different personal traits of the applicants and rate how likely they would be to recommend this candidate for an interview. There were four attention tests to ensure the participants were humans and paying attention. All items besides the qualitative question asking for a brief explanation of hiring decisions are on a 10-point scale, ranging from 1 (*Not at all*) to 10 (*Extremely*). The open-ended question asked, "In your own words, please write a few sentences explaining why you feel this way. What factors weigh most heavily into your decision?" We leveraged the qualitative data to understand the reasons behind their hiring decisions.

Data and Analysis

Among the 217 valid results, all participants correctly identified the gender of the candidate they evaluated.

Primary Analysis

Because of the small sample size, we adopted a P-value threshold of .10. As hypothesized, female candidates with previous job experiences in occupations considered caring/nurturing/warm were more likely to be recommended for an interview ($\beta = .45$, $p < .10$). Having previous job experiences in occupations considered caring or nurturing is associated with a 0.45 increase in perceived commitment for the applicant. As expected, the effect of having a job that is considered caring and nurturing is positively associated with the likelihood of being recommended for interviews for an accountant job.

Table 2. Regression of Interview Recommendation on Parental-Warmth Experiences

Likelihood of Recommending for Interview	Coefficient	Std. err.	t	P>|t|	[95% conf. interval]

Warmth	.45	.25	1.81	.07	-.04	.94
_cons	7.66	.18	43.55	.00	7.31	8.01

Extended Analysis 1

Contrary to my hypothesis and Quadlin's (2018) finding, candidates with B-level GPAs were not more likely to be recommended for an interview than those with A or C-level GPAs. The differences between the medium- and low-GPA applicants (β = -.17, p = .58), and between the medium- and high-GPA applicants, (β = .38, p = .22), are insignificant. Thus contrary to expectations, candidates with B-level GPAs are not more likely to receive recommendation for an interview than those with A or C-level GPAs.

Table 3. Regression Analysis on Parental-Warm Experiences and Likelihood of Interview Recommendation with Medium GPA as Omitted Control

Likelihood of Recommending for Interview	Coefficient	Std. err.	t	P>|t|	[95% conf. interval]	
Warmth	.46	.25	1.84	0.07	-.03	.95
GPA						
Low GPA	-.17	.30	-.56	.58	-.77	.43
High GPA	.38	.31	1.23	.22	-.23	.99
_cons	7.59	.25	30.38	.00	7.10	8.09

Note: p < 0.10

In supplemental analyses, I omitted fictional applicants with low GPA (2.84/4.00) as the comparison group. Applicants with high GPA (3.95/4.00) were more likely to be recommended for an interview for an accountant job than their counterparts with a low GPA (β = .55, p < .10). The difference between the medium- and low-GPA applicants was not statistically significant, β = .17, p = .58.

Table 4. Regression Analysis on Parental-Warm Experiences and Likelihood of Interview Recommendation with Low GPA as Omitted Control

Likelihood of Recommending for Interview	Coefficient	Std. err.	t	P>|t|	[95% conf. interval]	
Warmth	.46	.25	1.84	0.07	-.03	.95
GPA						
Medium GPA	.17	.30	.56	.58	-.43	.77
High GPA	.55	.30	1.82	.07	-.05	1.14
_cons	7.42	.25	30.22	.00	6.94	7.91

Note: *p* < 0.10

In addition, the effect of job experiences considered caring/nurturing/warm on the likelihood of being recommended for an interview was not moderated by GPA (β = -.32, *p* = .29).

Table 5. Regression Analysis on Parental-Warm Experiences and Likelihood of Interview Recommendation with GPA as the Control Variable

Likelihood of Recommending for Interview	Coefficient	Std. err.	t	P>|t|	[95% conf. interval]	
Warmth						
Yes	1.09	.65	1.69	.09	-.18	2.36
GPA	.43	.21	2.03	.04	.01	.86
warmth#c.gpa						
Yes	-.32	.30	-1.06	.29	-.91	.27
_cons	6.80	.46	14.77	.00	5.89	7.70

Note: *p* < 0.10

Extended Analysis 2

The Impact of Parental Warm Experiences on Different Traits

The result confirmed that candidates with previous job experiences in occupations considered caring/nurturing/warm will be more positively evaluated on warmth-related traits (i.e., warmth, likability, caring quality, sincerity, and pleasantness). Moreover, these experiences also increased positive rating with respect to competence, commitment, capability, organization,

trustworthiness, and skillfulness, but not efficiency, self-confidence, independence, productivity, hard-working quality, the probability to get along with colleagues, willingness to work extra hours if asked, and the likelihood to prioritize work over family.

Table 6. Regression of Applicant Traits on Parental-Warm Job Experiences

	Coefficient	P>|t|
Competent	.35	.09
Committed	.56	.01
Capable	.55	.01
Organized	.60	.00
Warm	.90	.00
Likable	.36	.099
Caring	1.06	.00
Sincere	.49	.03
Pleasant	.67	.00
Self-confident	.18	.36
Independent	.28	.18
Trustworthy	.48	.03
Productive	.15	.48
Hard-working	.20	.31
Skilled	.56	.01
Likelihood to get along with colleagues	.32	.15
Likelihood to work extra hours if asked	.17	.46
Likelihood to prioritize work upon having a family	-.31	.21

Note: $p < 0.10$
Each row represents the results of a separate regression model.

Mediation Analysis

To understand the logic behind the relationship between having caring and nurturing work experiences and interview recommendations, I conducted a mediation analysis with

different traits participants rated as mediating variables. As hypothesized, among the traits that were positively evaluated due to having warm and nurturing work experiences, more positive candidate ratings were associated with a greater likelihood of being recommended for an interview. A one unit increase in perceived competence is associated with a 0.71 increase in the likelihood of being recommended for an interview, commitment with 0.74, capability with 0.82, organization with 0.78, warmth with 0.43, likability with 0.47, caring quality with 0.33, sincerity with 0.43, pleasantness with 0.46, trustworthiness with 0.51, and skillfulness with 0.78 (all $p <$ 0.10). One unit increase in perceived capability is associated with a .82 increase in the likelihood of being recommended for an interview, organization with .78, skillfulness with .78, commitment with .74, competence with .71, trustworthiness with .51, likability with .47, pleasantness with .46, warmth with .43, sincerity with .43, and caring quality with .33 (all $p < .10$)

Table 7. Regression of Likelihood of Interview Recommendation on Perceived Traits

	Coefficient	P>|t|
Competent	.71	.00
Committed	.74	.00
Capable	.82	.00
Organized	.78	.00
Warm	.43	.00
Likable	.47	.00
Caring	.33	.00
Sincere	.43	.00
Pleasant	.46	.00
Trustworthy	.51	.00
Skilled	.78	.00

Note: $p < 0.10$
Each row represents the results of a separate regression model.

The more favorable evaluations from respondents explained the greater likelihood of candidates with previous job experiences in occupations considered caring/nurturing/warm to be recommended for an interview. Capability and organization had more than a full effect in explaining the association between having warm and nurturing experiences and the likelihood of being recommended for an interview. Commitment and skillfulness similarly accounted for almost this entire relationship. Warmth, Caring quality, pleasantness, and trustworthiness respectively accounted for more than half effect.

Table 8. Mediation Analysis on Traits

Traits	Control Variable									
	R-reduced	Reduced-full	R-reduced	Reduced-full	R-reduced	Reduced-full	R-reduced	Reduced-full	R-reduced	Reduced-full
	Gpa				Gender		Race		Education	
Competent	54.98	.20	55.17	.21	52.79	.23	55.97	.20	55.43	.19
Committed	92.24	.03	91.02	.04	86.48	.06	93.33	.03	94.12	.02
Capable	100.25	-.001	100.56	-.003	96.20	.02	101.93	-.01	101.20	-.01
Organized	103.86	-.02	102.95	-.01	97.04	.01	104.84	-.02	106.84	-.03
Trustworthy	52.54	.21	51.76	.22	49.34	.24	52.58	.21	56.48	.19
Skilled	96.34	.02	95.72	.02	90.83	.04	98.24	.01	96.74	.01
Warm	85.50	.07	84.68	.07	78.31	.10	86.14	.06	89.45	.04
Likable	37.06	.29	36.57	.29	34.61	.31	37.20	.28	38.85	.26
Caring	76.62	.11	75.85	.11	72.52	.13	78.11	.10	82.03	.08
Sincere	46.18	.24	45.03	.25	43.76	.27	47.31	.24	48.83	.22
Pleasant	66.20	.15	64.52	.16	61.02	.19	67.46	.15	68.14	.14

Note: *p* < 0.10
All numbers are in percentage.
R-reduced: what percentage of the effect of warmth condition on recommendation to hire is explained by each mediating variable.
Reduced-full: the effect size when include mediator
Each row represents the results of a separate regression model.

Qualitative Analysis

Parental-Warmth Condition

Many participants believed maintaining good relations with, and caring for, children signals social skills and willingness to take on extra responsibilities. In the condition where parental warmth paired with a high GPA, two participants who rated a nine for the likelihood to recommend Aria for an interview, both mentioned that Aria looked like a "caring person" and is "good with people as she worked in a children shelter for some time." A participant in the parental warmth and medium GPA condition rated a ten and explained, "[Aria]...has strong social skills because she[...] work[ed] with children." A participant who received the parental warmth and low GPA condition indicated that she " respects…childcare and babysitting [, because]...it requires effort."

The warmth and caring capacity compensated for the lack of accounting experience. For the few participants who noted Aria's lack of accounting experiences, one in the parental-warm and medium GPA condition and rated an eight in the likelihood of recommending Aria for an interview said, "While [Aria]...has ongoing caring work with children which means [external]/non-academic people trust her…Also, [her good academic score is] important[,] but without the other facets[,] I wouldn't rate her particularly highly if choosing between applicants." In the low GPA condition, one indicated favor in the fact that Aria "had volunteered somewhere as that might indicate that she is caring, warm and willing to give her time for others." Another respondent who questioned Aria's capability and experiences in the accounting field rated an eight for Aria's "many good caring, reliable traits." "[Aria's] ability to get along with people will

be a plus." Another participant said, "I don't know if Aria Smith would be the right candidate for the job, to be sincere." Still, he rated a six and explained the reason he gave Aria a chance was because "the fact of having dealt with many people including children might help her in her social and caring skills." Several participants rated between eight to ten mentioned "support," "empathy," "care for others," and "team player."

Neutral Condition

The dedication and good grade was mentioned by multiple participants who rated an eight or above in the neutral experience and high GPA condition. A participant who believed that Aria deserved a chance for an interview despite that she had little experience in accounting explained, "She seems reliable and has maintained job[s] on the long-term for student jobs." He ascribed his decision to "hard-working," "good grades," and Aria's determination. Another participant who rated a nine indicated that Aria's high GPA was "the main point for [her] decision."

Some participants who believed Aria deserved to be interviewed despite her lack of relevant knowledge in the accounting field mentioned her ability to maintain multiple tasks and her grades. A participant in the medium GPA condition said, "Not only did she study, she worked while doing so and she got a high enough GPA to call it a success. Even if she didn't have the most relevant jobs before, I believe that giving her an opportunity would be the right choice." Another participant in the low GPA group rated a six explained that she might interview Aria because "one is looking for a graduate with no work experience in the accounting field." Another one rated Aria more positively with an eight, indicating that because Aria showed a good work

ethic, it would be easy for her to learn from the experiences and gain the skills while working as an accountant.

Parental-Warmth and Neutral Conditions

Although the parental-warm condition and the neutral condition shared the same numbers of likelihood to recommend Aria despite her lack of accounting experience, fewer participants in the former refused to recommend Aria for an interview because she did not have accounting experiences. Consistent with the quantitative result, participants in the parental-warm condition also mentioned Aria's social skills, care for others, empathy, skills, well-rounded characteristics, competence, and responsibility more frequently.

However, the qualitative data diverged from the quantitative data in commitment. The qualitative data of the neutral group recorded commitment more often. Given that parental-warm condition led to higher perceived commitment, the qualitative result might be explained by the fact that the participants did not think commitment was the most essential driving force of their decision. Since the qualitative survey item asked for a brief explanation, the participants only mentioned the primary traits that led to their hiring decisions. Among all traits parental-warm experiences signaled, commitment might not be the most salient trait that guided the hiring decision, so participants might choose not to include commitment in their short explanation. On the other hand, the neutral experiences might not suggest the most important traits recruiter value in female candidates, which made commitment worth mentioning in their explanation. The qualitative result further supported the hypothesis that candidates with previous experiences in caring/nurturing/warmth jobs are more likely to be recommended for an interview because

candidates are evaluated more positively in competence, capability, warmth, caring quality, trustworthiness, and skillfulness.

Participants also noted hard work and multitasking ability in the non-parental-warm condition with greater frequency. Although the quantitative data did not reveal a significant relationship between parental-warm experiences and perceived hard-working quality, the qualitative data provided insight into different traits recruiters value during the résumé step of application.

Table 9. Frequency of mentions in hiring decision explanation

	Parental warmth + high GPA	Parental warmth + medium GPA	Parental warmth + low GPA	Parental warmth	No Parental warmth + high GPA	No Parental warmth + medium GPA	No Parental warmth + low GPA	No Parental warmth
Children-related skills	3	7	7	17	0	0	0	0
Social/people/team skills	9	5	10	24	2	5	7	14
Lack social skills	0	0	0	0	1	0	0	1
Lack warmth	0	0	0	0	0	0	1	1
Care/compassion/empathy for others	4	6	7	17	1	1	0	2
Tutor-related skills	4	5	0	9	3	2	1	6
Research/ professional skills	3	1	0	4	3	0	0	3
Skills	3	3	4	10	1	3	1	5
Well-rounded/ Perform different activities/ lots of experiences	4	6	3	13	3	3	3	9
Ability for multiple jobs/ tasks/ hardworking	4	3	5	12	8	7	8	23
Competence/capability	7	3	4	14	3	4	3	10
Responsible/trustworthy	3	2	4	9	3	1	1	5

Commitment	0	1	1	2	3	1	3	7
Lack commitment	2	0	0	2	0	0	1	1
Good GPA/ score	10	7	0	17	6	2	3	11
Bad GPA/ score	0	0	4	4	0	0	3	3
Math/ education background	10	2	6	18	5	5	5	15
Lack relevant working experiences – tendency to recommend for interview	2	4	5	11	3	3	5	11
Lack relevant working experiences – tendency not to recommend for interview	1	2	1	4	2	3	3	8
Structure of CV	3	1	4	8	4	2	1	7

Note: Lack relevant working experiences – tendency to recommend for interview: explanations with emphasis on positive traits of Aria, indicating the potential of the traits to offset the lack of relevant experiences.
Lack relevant working experiences – tendency not to recommend for interview: explanations that did not include any positive traits of Aria or with emphasis on the lack of working experience.

Discussion

The existing literature documents a trend in professional women benefiting from following female scripts while also being penalized by assuming a parental role (Benard and Correll 2010; Leung and Koppman 2018). Building from Quadlin (2018), the study further investigated the importance of warmth and likability in women job applicants and revealed how work experiences that connote motherly warmth impacted recent female college graduate candidates in accounting job applications. This study is consistent with prior findings that women were rated more positively in job applications and were more likely to be recommended for an interview when they followed the communal and service-oriented gender script (Carli, LaFleur, and Loeber 1995; Heilman 2001; Rudman and Glick 2001). To the best of my knowledge, this paper is the first to study the complicated relationship and interaction between motherhood traits and female scripts in the job application process.

This study answers vital questions concerning whether work experiences that display care, nurturing, and warmth benefit or penalize young women in the job market: having work experiences that indicated motherly or parental warmth did not penalize, but rather bolstered the candidacy of women job applicants. In addition, having experiences that showed motherly warmth and nurturing capability increased the likelihood for recent women college graduates to be recommended for an interview. Diverging from Quadlin (2018), this paper did not find an increased tendency for candidates with B-level GPAs to be recommended for an interview relative to those with A or C-level GPAs. Academic achievement similarly did not moderate the effects of having nurturing or warm job experiences with respect to one's likelihood of being recommended for an interview. In a addition, female applicants with work experiences in jobs considered caring/nurturing/warm were more positively rated across warmth, likability, caring quality, sincerity, pleasantness, competence, commitment, capability, organization, trustworthiness, and skillfulness—all of which help to explain the link between jobs experiences conveying maternal warmth and being recommended for hire.

With a pretest on the parental warm and neutral experiences and GPA range borrowed from Quadlin(2018), I implemented a survey experiment, allowing for control and manipulation of independent variables and establishing a cause-and-effect relationship. With the result, my paper indicated that motherly warmth traits did not trigger the motherhood penalty but led to increased positive ratings in many traits and the likelihood of an interview. Besides expanding the understanding of the complicated situation professional women contend with, the paper provided a new direction in studying the combined effects of different expectations women face in the workforce.

The major limitation of this study is its small sample size ($N = 244$). After dividing into six conditions, each condition had a small sample, which might impact the precision of results. Nevertheless, this paper can serve as a useful pilot study for future research with a larger sample size. The participants of this study were also Prolific workers, which is not an accurate representation of the entire population. In addition, since Prolific is an online survey agent, it was difficult to control the quality of the results. Participants can be well-practiced workers in taking surveys; some might cheat the survey using AI technology. The strict attention test policy preventing attention tests based on memory recall also increased the difficulties of controlling for quality. Regarding the fictitious applicant, since this study limited its focus to one recent female math-major college graduate applying for accounting positions, future research is needed to investigate women with broader ages, educational levels, majors, and applied positions. This study also did not include males, which made it impossible to investigate whether previous work experiences signaling warmth/nurturing/care can be explained by female communal gender script. Future research needs to include male fictional applicants to investigate the difference of effect on having parental-warm experiences. Although the study required all participants to have experience making hiring decisions, the experiment was built upon a fictional application situation. Future studies should imitate Quadlin (2018) and conduct a real-world experiment, sending fictional résumés to real companies.

The findings signal new areas for investigation and contribute to our understanding of gender expectations in the labor force faced by female applicants. Given the complexity of the expectations professional women face, more research should study the combined effect of multiple factors. This paper also contributes to the understanding of the joint effects of gender expectations and parental roles for female applicants in the job market. The results present a

possible alternative guide for women exploring the job market and contending with its gender stereotypes, and encourage individuals to combat gender biases actively.

Acknowledgement

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