

Pregnancy as a source of bias in performance appraisals¹

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Summary

Notwithstanding recent gains, women have still not achieved parity with men in the workplace. This is further complicated by common negative images of pregnant women (Taylor and Langer, 1977). The present study investigated (1) stereotypes about pregnant working women, and (2) the effect of an employee's pregnancy on performance evaluation. In the first study, subjects' attitudes about pregnant employees were assessed via questionnaire. Substantial negative stereotyping was found to exist, especially among males. In Study 2, subjects viewed videotapes of either a pregnant or a non-pregnant woman doing assessment-center-type tasks and were asked to evaluate her performance. When the employee was pregnant, she was consistently rated lower compared to when she was non-pregnant. A main effect of rater sex and a rater sex by pregnancy condition interaction were found, indicating that males assigned lower ratings than females and were also more negatively affected by the pregnancy condition. Implications for organizational policy regarding employee pregnancy and performance appraisal systems are discussed.

Introduction

Western society's views of the pregnant woman have dramatically progressed from Victorian notions that she was to remain confined throughout her pregnancy, to more modern views that full-time employment is possible up to the day of delivery. While pregnancy is no longer concealed, research studies regarding attitudes towards pregnant women, especially working ones, remain nearly as invisible as pregnant women themselves used to be. A search of the psychological and business literature on the effects of pregnancy in the workplace yields virtually nothing, although it is certainly the case that a pregnant working woman encounters unique forms of discrimination as result of her physical condition.

Pregnancy aside, women continue to experience barriers to occupational success and earning potential (Crocker and Wilson, 1984). The median annual wages of full-time female workers remain at only 72 per cent of what males earn (Bureau of Labor Statistics, 1991), and the average female college graduate can still expect to earn less than the average white high school graduate. Some of these salary differences stem from a pattern of gender occupational segregation, as men and women are differentially tracked into career paths that are not equally compensated. However, sex typing of jobs explains only part of the salary discrepancy. When other factors, such as job tenure and educational level, are taken into account, women are

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still paid less than men (Featherman and Hauser, 1976; Norwood, 1982; Suter and Miller, 1973).

Even if comparisons between working men and women are restricted to only managers and those in the professional ranks, it still appears to be the case that being female constitutes an occupational liability. A 1989 Korn/Ferry survey of Fortune 1000 companies revealed that of the top five jobs below CEO at each firm, only 3 per cent of them were currently held by women (Bolte, Griggs and McCarroll, 1990). While the 3 per cent figure is up from 1 per cent a decade ago, the presence of a few token females does little to challenge the overall pattern of male dominance at the top of the organizational hierarchy. This apparent discrimination against and underutilization of women within corporate America continues despite predictions such as those by the authors of the *Workforce 2000* study (Hudson Institute, 1987) that by the year 2000, 61 per cent of women of working age in the United States will hold jobs.

It is important to consider why such discrimination against women in the workplace persists. A study by Rosen and Jerdee (1978) found that supervisors still believe that, compared to women, men are more likely to understand the 'big picture', be capable administrators, be independent with good leadership potential, approach problems rationally, and be able to set long-range goals and work toward them. Women, on the other hand, were thought to enjoy routine tasks, cry easily, and be jealous. As Rosen and Jerdee conclude, 'Virtually every perceived difference between male and female employees was unfavorable to women aspiring to high level occupations' (p. 843).

Such stereotyping and discounting of women's abilities may well be even more exaggerated when the woman is pregnant. According to current Census Bureau figures (Hamer, 1989), a full 75 per cent of women of child-bearing age are currently in the workforce. Among these women, 51 per cent of those who have children will return to their positions following pregnancy (Hamer, 1989), and there are others who would like to return but find that to be impossible. For these working women and the companies that employ them, work and family issues are becoming increasingly salient. A survey of female MBA's (Banbury-Masland and Brass, 1985) reported that while committed to their careers, women executives are placing a growing emphasis on marriage and children. Given these trends, it is imperative that organizations take a good look at how they are dealing with the needs and situations of female employees, especially their pregnant ones.

Perceptions, not official policies, may cause the greatest difficulties for pregnant women in the workforce (Bistline, 1985). 'That's the last time I'll make the mistake of naming a woman manager', claimed one CEO. 'Now she's pregnant and going to be out of action for six weeks or more' (Pearson, 1984). Bistline (1985) cites women whose performance ratings declined once they became pregnant. As one female executive explained, 'I found that once I had my child, my boss didn't think I was working as hard. In his eyes, my rating went from "superb" when I first started, to "terrible" after the baby arrived'. Not only have performance reviews by managers plummeted after pregnancy, women also report negative attitudes and behaviors exhibited by other employees. Subordinates are often afraid to bother a pregnant manager, and supervisors are likewise hesitant to challenge her. The stories told by these women indicate that their colleagues, supervisors, and subordinates view them and their work much differently during pregnancy (Bistline, 1985).

Negative perceptions of pregnant workers are explained by some researchers in terms of the social stigma associated with the 'disease' of pregnancy (Taylor and Langer, 1977). They found that subjects, particularly males, engaged in avoidant behaviors with pregnant as opposed to non-pregnant women, and were more accepting of a pregnant woman when her behavior conformed to traditional social norms of passivity and empathy than when she behaved assertively.

vely. Taking a different tack, Horgan (1983) argues that much can be learned about the role of the pregnant woman in society from where maternity clothes are situated in large department stores. Instead, for example, of being placed adjacent to women's suits and stylish work clothes, maternity departments are typically located near either lingerie, uniforms, or half-size departments. Such positioning subtly conveys the message that the pregnant woman's image is either one of being feminine and sexy, or fat and unattractive. While indicative of general stereotypes, neither of these studies on the social effects of pregnancy tells us anything about work-related attitudes towards pregnant women. Recent research, however, would suggest that these stereotypes could result in less accurate and less favorable evaluations of performance (Cardy and Dobbins, 1986; Dobbins, Cardy and Truxillo, 1988).

In one of the few studies on pregnancy in the workplace, Corse (1990) found that a pregnant manager was expected to be more understanding, fair, and empathetic than her non-pregnant counterpart. However, when the pregnant manager behaved firmly in a conflict situation, she was rated as more authoritarian and controlling than a non-pregnant manager, again suggesting the importance of compliance with traditional social norms.

The research cited suggests that negative attitudes and behaviors about pregnant working women may exist. It is therefore helpful to determine the degree to which these negative stereotypes influence treatment in the workplace. This is most commonly done by looking at two aspects of the human resource system: Entrance of new employees into the organization, and progress of current employees through the hierarchy. Civil rights and EEO-related legislation, while not removing all bias from recruitment and selection, have noticeably limited the space within which subjective bias can operate in restricting organizational entry. Thus, members of groups that have historically been under-represented in the workforce, such as women, are finding it easier than in the past to move into entry-level jobs.

Unfortunately, the same cannot be said of upward movement within the organizational structure. Most companies base administrative decisions about current employees in large part upon supervisory performance appraisals. Appraisals are used to provide critical feedback about performance, foster career development, identify candidates for promotion, target training needs, and many other administrative functions. Should systematic bias in this process exist, one effect would be the 'glass ceiling', through which employees can see the top of the corporate ladder, but beyond which they have virtually no hope of progressing (Morrison, White, Van Velsor and CCL, 1987). Subjective techniques of evaluating employee performance are subject to the strictures of Title VII (1964 Civil Rights Act) and similar legislation. With few exceptions, however, charges of adverse impact stemming from performance appraisals have not been tested in the courts. (A notable exception to this trend is *Watson v. Fort Worth Bank & Trust*, 1988, U.S. Supreme Court No. 86-6139.)

It has been well documented (Landy and Farr, 1980) that, although crucial to organizational functioning, performance appraisals are subject to a variety of cognitive biases. Ratings of employee performance may be partly a function of the employee's sex, the rater's sex (Mobley, 1982), and even sex-stereotypes associated with the employee's job or occupation (Rosen and Jerdee, 1973), although there is some debate regarding the size of these gender effects (Pulakos, White, Oppler and Borman, 1989). Feldman (1981) and others have proposed an underlying cognitive categorization process to explain this. Supervisors, it is theorized, mentally assign their employees to categories based on the employee's most salient characteristics, such as age, race, or sex. Once an employee has been categorized, he or she is assumed to possess characteristics and exhibit behaviors that are consistent with the category prototype. For example, a rater who believes that 'pregnant women' (category) are not serious about their jobs may rate a pregnant subordinate as less capable than is warranted by her actual performance.

Since pregnancy has been shown to be a visual cue which can elicit negative stereotypical reactions in social functioning (Taylor and Langer, 1977), it is highly likely that it can also serve as a cue for cognitive categorization. If so, then female employees who are already at a disadvantage when competing for promotion may find their careers even more at risk should they become pregnant.

Two studies were conducted to examine this issue. The first one explores the prevalence of negative attitudes and stereotypes about pregnant working women, and looks at differences between men and women with respect to these attitudes. In the second study, evaluations of the videotaped performance of a female employee were compared across conditions where she either was or was not pregnant.

Study 1

Subjects

Subjects in Study 1 were 209 undergraduate students (93 male, 116 female; mean age = 19.25) who were participating in order to partially fulfil a course research requirement. Over 96 per cent of the subjects either were currently employed or had been employed in the past.

Procedure

This study used a 63-item questionnaire designed to tap various attitudes about the place of women, pregnant women, and mothers in business. All responses were made on a 6-point Likert-type scale with 'strongly agree' and 'strongly disagree' as endpoint anchors. The items were created to assess attitudes along six *a priori* dimensions, which were then replicated by principal axis factoring with varimax rotation and internal consistency reliability checks. The six dimensions, their items, and coefficient alphas are given in the Appendix.

Results

Every item on the survey elicited responses ranging over the full six points of the scale. That is, while a few questions produced substantial agreement (e.g. 'It's OK for women in the last three months of pregnancy to work at jobs that involve physical skills such as lifting or moving heavy objects', standard deviation = 0.83), for the most part subjects varied widely on their attitudes about pregnant women.

When examined individually, 39 of the 63 items showed significant mean differences between male and female subjects. A multivariate analysis of variance (MANOVA) was done with the six factors mentioned above as dependent variables and subject sex as the independent variable. As may be seen in Table 1, the multiple *F* was significant, as were five of the six follow-up univariate tests. Examination of the means reveals that males were more likely than females to hold negative views about the emotionality, irrationality, and physical limitations of pregnant women, particularly pregnant coworkers. Males also were more likely to feel that women should choose family over career and that businesses should be under no obligation to accommodate the needs of pregnant employees.

As suspected, Study 1 provided evidence that negative stereotypes and beliefs associated with pregnant working women do exist, and that men are more likely than women to hold these beliefs. Study 2 was intended to investigate whether the problem is just negative attitudes, or whether this phenomenon carries over into actual ratings of work-related behavior.

Table 1. Means and MANOVA source table for effect of subject sex on attitude dimensions. (Sample sizes: M = 93, F = 116)

Factor	Male*		Female*	
	Mean	(S.D.)	Mean	(S.D.)
1. Pregnant women as problem employees	2.89	(0.66)	2.29	(0.55)
2. Importance of good company treatment	3.93	(0.73)	4.29	(0.61)
3. Choose career or family	2.95	(0.60)	2.44	(0.60)
4. Emotional stereotypes	3.58	(0.66)	3.15	(0.77)
5. Physical limitations	4.37	(0.76)	3.93	(0.82)
6. Contemporary feminism	3.57	(0.89)	3.75	(0.68)

Multivariate $F(df = 6, 202) = 11.56; p < 0.001$; effect size = 0.26

Univariate F -tests with (1, 207) df :

Factor	Hypoth. MS	Error MS	F -value	$p <$	Eta-square
1. Problem	18.64	0.36	51.70	0.001	0.20
2. Treatment	5.44	0.44	14.63	0.001	0.07
3. Choose	13.44	0.36	37.25	0.001	0.15
4. Emotional	9.63	0.53	18.35	0.001	0.08
5. Physical	10.10	0.63	16.04	0.001	0.07
6. Feminism	1.62	0.61	2.68	NS	—

* High scores indicate agreement with the items.

Study 2

Subjects

Subjects consisted of 239 undergraduate students between the ages of 17 and 43 attending a midwestern university. As will be discussed below, 19 subjects failed to pass a manipulation check and were not included in analyses, so the final sample size was 220. Participation in this study was counted toward fulfilling a course research requirement. These were not the same subjects who had participated in Study 1, although their demographic characteristics were similar (101 male, 119 female; mean age = 18.82).

Materials

Two videotapes of a woman participating in assessment-center-type exercises were prepared as stimulus materials. Each videotape included three 5-minute scenarios in which the target person interacted with another woman. The roles taken on by the target person varied across three scenarios: (A) Acting as a customer representative to deal with an irate customer; (B) selling a computer system to a potential customer; and (C) dealing with a problem subordinate. In each, the performance level of the target 'employee' was designed to be average or slightly above average. The target person was the same in both videotapes and the videotapes were identical except for the target's physical condition: The first was made in her ninth month of pregnancy and the other some five months later. Each tape was then produced in three versions corresponding to a Latin Square arrangement of the three scenarios (A-B-C, B-C-A, C-A-B).

The dependent variables of interest were ratings of the target's performance on the videotape. The performance appraisal instrument consisted of 5-point Likert-type graphic rating scales for ratings of 16 individual characteristics such as 'ability to do the job', 'dependability', 'physical mannerisms', etc., a summary rating, and a rating of the target person's promotability.

Each point on the scale was anchored, from 'very poor' (1) to 'excellent' (5). Adjectival anchors were used in preference to behavioral anchors, in part because of the findings of Murphy and Constans (1987) that the latter may create rater error when used with videotapes. Landy (1989) cites two advantages of behavioral anchors: Supervisory involvement in the scale construction process, and face validity for the rater. However, neither of these are relevant for the present study. Thus, the development of behavioral anchors was not deemed appropriate here.

Fourteen of the 16 dimensions on which the target was to be rated were chosen to be consistent with the job requirements as explained to the subjects. The other two, appearance and physical mannerisms, were included because of their relevance to the pregnancy manipulation.

Procedure

Male and female subjects were randomly assigned to either the pregnant (P) or non-pregnant (NP) condition and to one of the Latin Square sequences by experimental session. Subjects were informed that they were going to be participating in an assessment-center study. They were given a brief explanation of the nature and purpose of assessment centers and then told that they were going to be viewing a videotape of an employee participating in three role-play exercises. It was their assignment to rate the employee's performance. They were also told that she currently held a sales position in a mid-sized computer company and was being considered for the position of sales supervisor, and the requirements of that job were explained. Finally, subjects were told that the computer company had sent the university the tape to pre-test the usefulness of the exercises before investing large amounts of money to establish an assessment center.

Before viewing the videotape, subjects were given the rating forms and asked to look through them to familiarize themselves with the rating criteria. Subjects viewed each of the scenarios and rated the employee following each one. After the last individual rating, subjects then gave a final rating of her overall performance, answered a manipulation check question, and provided demographic information before then being debriefed.

Results

Examination of the manipulation check item ('was the employee pregnant?') revealed 10 subjects in the P condition who responded 'no' and nine subjects in the NP condition who responded 'yes'. These subjects were dropped from further analyses, leaving a sample size of 220 (108 P and 112 NP; 101 male and 119 female). Multivariate analyses of variance (MANOVAs) yielded no significant differences among the three Latin Square design conditions, and so subjects in these conditions were combined for all analyses.

A factor analysis of the 17 final ratings was done using the principal axis method with oblique rotation. An oblique rotation was used because there was no theoretical reason to postulate factor orthogonality, and because we wanted to empirically determine how correlated the factors were (Rummel, 1970). This produced a two-factor solution accounting for 62.7 per cent of the variance, with a correlation of 0.58 between the factors. The first factor included 15 of the 17 items, all of which measured some job-related construct. The other factor was made up of two items: Ratings of the employee on her appearance and her use of physical mannerisms. These two factors were labeled 'Ability' and 'Appearance', respectively.

Thus, the dependent variables were the 17 ratings, the recommendation about promotion, and scores on the two factors (20 variables), for each of the three scenarios and for the final

ratings. In addition, means of the four ability factor scores ('Meanab'), the four appearance factor scores ('Meanap'), and the four 'Overall rating' items ('Meanov') were calculated (three additional variables). These were run in two-way ANOVAs with condition (P or NP) and subject sex as the independent variables.

Three sets of results were found, corresponding to the two main effects and their interaction. For the main effect of condition, 15 of the variables showed significant results at the 0.05 or 0.01 level. Another 12 variables showed marginal significance ($p < 0.10$). In all cases, the employee received lower ratings in the P condition than in the NP condition. This was especially pronounced in the Sales and Supervisory scenarios, where the bulk of the significant findings were located. Results of these analyses are shown in Table 2 and 3.

There also was a consistent trend for sex of subjects with males assigning lower ratings than females on performance. This was most notable in the irate customer scenario, where 13 of 20 variables were significant, or marginally so, and in the final ratings where 13 of 20 were so rated (Table 4).

Also found were several condition by sex interactions. Most consistent was with the appearance factor, where the interaction emerged in two scenarios, the final rating, and the mean of the four appearance factor scores (Table 5). In all cases, the pattern (Figure 1) was for female subjects to give similar ratings in the P and NP conditions, while male subjects went from giving high ratings in the NP condition to lower ones in the P condition.

Discussion

The results of this research suggest that pregnant women may face additional workplace discrimination above and beyond any gender bias that may already exist. Despite having been exposed to otherwise identical behavior and information, our subjects assigned, with a remarkably high degree of consistency, lower performance ratings to a pregnant woman as opposed to a non-pregnant one. This is consistent with our research hypothesis, that pregnancy, particularly in its later stages, is a salient physical state and that it may trigger the kind of cognitive category prototyping identified by Feldman (1981). The content of this 'pregnant woman' category prototype can be seen from the results of the attitudinal (Study 1) investigation. Pregnant women were viewed as overly emotional, often irrational, physically limited, and less than committed to their jobs. They were not seen as valued or dependable employees.

Why pregnancy would lead to negative stereotyping and lowered performance evaluations is perhaps related to the concern that a pregnant employee is a bad risk because she will leave and not come back, or to the still-common beliefs that pregnant women are moody, undependable, preoccupied, etc. These two explanations are difficult, if not impossible, to untangle at present. Future research, however, might be directed toward clarifying this issue.

Our research also found that men seemed more susceptible to this negative 'pregnancy' influence than did women. This finding is of particular concern for women in the workplace, as most of them still report to a male supervisor. Since supervisory ratings are the gateway to advancement, any bias which exists here could make it even harder for women to have both children and careers. In fact, we can approach this situation as a type of self-fulfilling prophecy. If one believes that combining career and family is, for women, not possible and/or not appropriate, then finding such women to be less skilled would confirm that initial belief. It would also act to perpetuate the notion that pregnant women should be at home and not on the job, by discouraging career women from having children. Indeed, 90 per cent of male

Table 2. Means (*S.D.*) for performance ratings

Dimension		Pregnant				Non-pregnant			
		Male		Female		Male		Female	
Verbal	I*	3.17	(0.77)	3.30	(0.79)	3.25	(0.73)	3.21	(0.58)
	S	3.07	(0.91)	3.27	(0.80)	3.21	(0.88)	3.21	(0.89)
	P	3.09	(0.87)	3.20	(0.78)	3.57	(0.77)	3.32	(0.68)
	O	3.02	(0.81)	3.23	(0.79)	3.17	(0.80)	3.26	(0.61)
Competence	I	3.04	(0.80)	3.38	(0.83)	3.06	(0.87)	3.25	(0.70)
	S	3.13	(1.01)	3.17	(1.00)	3.21	(0.97)	3.31	(0.74)
	P	3.24	(0.93)	3.31	(0.75)	3.43	(0.95)	3.38	(0.75)
	O	3.26	(0.85)	3.27	(0.72)	3.32	(0.83)	3.35	(0.66)
Appearance	I	3.09	(0.85)	3.22	(0.84)	3.15	(0.77)	3.18	(0.85)
	S	3.11	(0.79)	3.16	(0.82)	3.26	(0.68)	3.19	(0.78)
	P	3.17	(0.75)	3.23	(0.85)	3.36	(0.56)	3.13	(0.77)
	O	3.04	(0.80)	3.11	(0.78)	3.21	(0.63)	3.12	(0.72)
Knows job	I	3.35	(0.87)	3.24	(0.84)	3.08	(0.83)	3.38	(0.69)
	S	3.08	(1.07)	3.16	(1.07)	3.43	(0.95)	3.46	(0.80)
	P	3.38	(0.84)	3.33	(0.82)	3.43	(0.84)	3.51	(0.78)
	O	3.33	(0.87)	3.42	(0.83)	3.25	(0.76)	3.54	(0.70)
Mannerisms	I	2.77	(1.07)	2.92	(0.98)	3.09	(0.93)	3.19	(0.76)
	S	2.63	(0.90)	3.00	(0.91)	3.25	(1.04)	3.01	(0.91)
	P	2.80	(0.92)	2.88	(0.81)	3.21	(0.99)	3.07	(0.83)
	O	2.78	(0.88)	3.08	(0.80)	3.08	(0.76)	3.13	(0.69)
Gets along	I	3.37	(0.78)	3.38	(0.87)	3.38	(0.79)	3.59	(0.70)
	S	3.07	(0.87)	3.44	(0.91)	3.40	(0.93)	3.53	(0.76)
	P	3.26	(0.89)	3.28	(0.88)	3.58	(0.77)	3.43	(0.85)
	O	3.17	(0.88)	3.36	(0.84)	3.36	(0.76)	3.60	(0.76)
Maturity	I	3.65	(0.83)	3.81	(0.83)	3.72	(0.79)	3.81	(0.72)
	S	3.44	(0.72)	3.63	(0.79)	3.66	(0.76)	3.62	(0.75)
	P	3.65	(0.78)	3.53	(0.85)	3.81	(0.73)	3.72	(0.73)
	O	3.44	(0.72)	3.73	(0.82)	3.62	(0.80)	3.74	(0.64)
Flexibility	I	3.35	(1.01)	3.67	(0.91)	3.53	(0.95)	3.74	(0.78)
	S	3.25	(0.95)	3.53	(0.84)	3.43	(0.89)	3.66	(0.89)
	P	3.33	(0.82)	3.47	(0.93)	3.49	(0.89)	3.71	(0.85)
	O	3.22	(0.86)	3.45	(0.85)	3.40	(0.79)	3.62	(0.73)
Learns quickly	I	3.17	(0.67)	3.39	(0.69)	3.13	(0.71)	3.29	(0.69)
	S	3.09	(0.84)	3.21	(0.85)	3.38	(0.81)	3.37	(0.57)
	P	3.28	(0.77)	3.37	(0.63)	3.39	(0.74)	3.38	(0.65)
	O	3.17	(0.82)	3.23	(0.66)	3.26	(0.68)	3.37	(0.67)
Works independently	I	3.26	(0.78)	3.38	(0.75)	3.31	(0.78)	3.59	(0.76)
	S	3.37	(0.83)	3.32	(0.84)	3.40	(0.86)	3.43	(0.74)
	P	3.39	(0.79)	3.44	(0.74)	3.45	(0.82)	3.49	(0.70)
	O	3.44	(0.79)	3.46	(0.86)	3.38	(0.82)	3.51	(0.72)
Works with others	I	3.11	(0.86)	3.32	(0.86)	3.46	(0.85)	3.51	(0.76)
	S	3.13	(1.03)	3.22	(0.87)	3.45	(0.93)	3.29	(0.81)
	P	3.21	(0.95)	3.29	(0.89)	3.51	(0.87)	3.49	(0.86)
	O	3.26	(0.89)	3.32	(1.00)	3.45	(0.82)	3.50	(0.78)
Discipline	I	3.39	(0.86)	3.48	(0.84)	3.65	(0.81)	3.49	(0.73)
	S	3.28	(0.89)	3.30	(0.68)	3.26	(1.06)	3.43	(0.74)
	P	3.37	(0.92)	3.50	(0.76)	3.67	(0.86)	3.56	(0.70)
	O	3.46	(0.84)	3.55	(0.80)	3.45	(0.80)	3.54	(0.72)

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Table 2. (Continued)

Dimension		Pregnant				Non-pregnant			
		Male		Female		Male		Female	
Creativity	I	2.98	(1.12)	2.94	(0.87)	2.92	(1.01)	3.09	(0.88)
	S	2.81	(1.10)	2.97	(0.85)	2.96	(1.18)	3.07	(0.82)
	P	2.87	(1.00)	3.13	(0.77)	3.15	(1.17)	3.15	(0.89)
	O	2.89	(0.95)	3.06	(0.76)	2.94	(1.03)	3.18	(0.79)
Able to supervise	I	2.96	(0.90)	3.16	(0.94)	3.04	(1.02)	3.29	(0.85)
	S	2.91	(0.97)	3.17	(0.91)	3.13	(0.86)	3.25	(0.84)
	P	3.30	(0.96)	3.49	(0.95)	3.53	(0.93)	3.47	(0.93)
	O	3.24	(0.91)	3.47	(0.87)	3.42	(0.89)	3.53	(0.82)
Reliability	I	2.96	(0.96)	3.35	(1.01)	3.41	(0.80)	3.25	(1.01)
	S	3.31	(1.02)	3.13	(0.92)	3.32	(1.00)	3.41	(0.76)
	P	3.28	(0.99)	3.28	(0.81)	3.53	(0.87)	3.47	(0.78)
	O	3.13	(0.89)	3.25	(0.84)	3.55	(0.89)	3.54	(0.78)
Handles assignment	I	3.21	(1.01)	3.54	(0.93)	3.45	(0.95)	3.39	(0.87)
	S	3.36	(0.96)	3.22	(1.03)	3.49	(0.99)	3.59	(0.76)
	P	3.36	(0.89)	3.45	(0.91)	3.58	(0.87)	3.46	(0.85)
	O	3.24	(0.89)	3.39	(0.88)	3.53	(0.87)	3.68	(0.78)
Overall	I	3.15	(0.81)	3.31	(0.73)	3.23	(0.76)	3.38	(0.69)
	S	3.17	(0.91)	3.28	(0.83)	3.25	(0.88)	3.35	(0.71)
	P	3.28	(0.96)	3.25	(0.73)	3.51	(0.78)	3.56	(0.66)
	O	3.22	(0.84)	3.28	(0.68)	3.30	(0.70)	3.49	(0.59)
Promotion	I	2.48	(1.28)	2.94	(1.22)	2.58	(1.03)	2.93	(1.08)
	S	2.54	(1.11)	2.81	(1.15)	2.72	(1.25)	3.04	(1.06)
	P	2.63	(1.31)	3.05	(1.17)	2.98	(1.12)	3.06	(1.08)
	O	2.55	(1.27)	2.84	(1.06)	2.81	(1.18)	3.15	(1.00)

* Scenarios: I = Irrate customer; S = Sales; P = Supervisors; O = Overall.

executives age 40 and under have children, while only 35 per cent of female executives in this age range do (Wallis, 1989).

Limitations

One limitation of the study may be the extreme salience of pregnancy created by the research situation. In the attitude survey, subjects were instructed to think about 'typical' women, and so pregnancy was the only distinguishing characteristic available to them. In the videotape, the pregnant target was shown only three weeks prior to delivery. The purpose was to ensure that subjects recognized that she was pregnant rather than merely overweight. However, there may well have been a secondary effect in which the pregnancy overwhelmed other available information about the target (i.e., her performance).

This leads directly to the question of external validity, or generalizability. Most laboratory performance appraisal research will be to some degree subject to the problems outlined by Ilgen and Favero (1985). Issues such as future rater/ratee interaction, rater/ratee interdependence, and the distinction of ratee behaviors versus their consequences tend to not be adequately dealt with. They point out that videotapes of ratees, especially those which present multiple samples of behavior, are superior to paper (e.g., personnel file) data, but are still inferior to 'real people'. Thus, caution is advised in attempting to generalize these findings to behaviors of actual managers and employees.

It should be made clear, however, that external validity was not the principal concern of

Table 3. *F*-values (*df* 1,203) for main effect of condition (P versus NP)

Variable	Irate	Sales	Superv.	Final
Verbal ability	—	—	8.49†	—
Competence	—	—	—	—
Appearance	—	—	—	—
Knows the job	—	5.87*	—	—
Physical mannerisms	5.97*	4.31*	4.74*	2.97
Gets along with others	—	4.46*	3.69	3.97*
Maturity	—	—	—	—
Flexibility	—	—	2.85	—
Learns quickly	—	4.96*	—	—
Works independently	—	—	—	—
Works well with others	3.89*	3.31	4.43*	—
Discipline	—	—	2.77	—
Creativity	—	—	—	—
Able to supervise	—	—	—	—
Reliability	—	—	3.83	8.26†
Handles assignments	—	4.12*	—	5.47*
Overall	—	—	7.46†	—
Recommend for promotion	—	—	—	3.49
Ability factor	—	2.95	3.97*	—
Appearance factor	—	3.31	—	—
Meanab	$F(1,208) = 3.01, p = 0.08$			
Meanap	$F(1,208) = 3.79, p = 0.05$			
Meanov	$F(1,208) = 3.17, p = 0.07$			

* $p < 0.05$; † $p < 0.01$; all others $p < 0.10$.

this research. Mook (1983) notes that there are times when a study is done to assess whether an effect *can* occur, rather than whether it typically *does* occur (p. 382). That describes the present situation. Since employee pregnancy was relatively untouched as an independent variable in the literature, our goal was to see whether it could possibly have an effect on attitudes and behaviors. Having shown that a strong possibility exists, future research can and should be done in applied settings to discover the strength of that effect within the situational constraints of the workplace.

Future research in this area should look at a number of issues. What are the antecedents to this 'pregnancy bias' effect? For example, the negative contents of the 'pregnant woman' cognitive category could be a function of early childhood socialization, popular culture (e.g. media portrayals of pregnant women), male discomfort around pregnant women, or a number of other causes.

Assuming that this 'pregnancy bias' effect continues to be seen in future research, an investigation should be made of the point at which the bias begins. Are negative reactions to a pregnant employee first seen when people are told that she is pregnant, when the pregnancy becomes physically evident, or at some other time?

Another topic for investigation is the perception and treatment of pregnant employees as compared to those with other types of temporary physical limitations. Organizations are legally required to provide the same benefits (leave time, scheduling flexibility, etc.) for pregnancy as they do for short-term disability conditions. However, it is unknown whether the voluntary nature of most pregnancies results in perceptions of and behaviors toward pregnant women that differ from attitudes about employees with involuntary disabilities.

Table 4. *F*-values (*df* 1,203) for main effect of subject sex (M versus F)

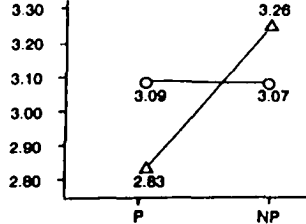
Variable	Irate	Sales	Superv.	Final
Verbal ability	—	—	—	3.33
Competence	8.21*	—	—	—
Appearance	—	—	—	—
Knows the job	—	—	—	4.55†
Physical mannerisms	3.76	—	—	4.39†
Gets along with others	2.76	5.68†	—	6.21†
Maturity	3.45	—	—	7.80*
Flexibility	9.21*	6.94*	4.78†	9.06*
Learns quickly	5.19†	—	—	—
Works independently	4.46†	—	—	2.81
Works well with others	2.96	—	—	—
Discipline	—	—	—	—
Creativity	—	—	—	5.01†
Able to supervise	4.99†	—	—	4.48†
Reliability	—	—	—	—
Handles assignments	—	—	—	4.02†
Overall	4.45†	—	—	3.43
Recommend for promotion	9.38*	5.01†	4.18†	6.59†
Ability factor	5.44†	—	—	5.91†
Appearance factor	3.62	—	—	—
Meanab	$F(1,208) = 4.46, p = 0.04$			
Meanap	$F(1,208) = 1.03, p = ns$			
Meanov	$F(1,208) = 3.76, p = 0.05$			

* $p < 0.01$; † $p < 0.05$; all others $p < 0.10$.Table 5. *F*-values (*df* 1,203) for condition by subject sex interaction

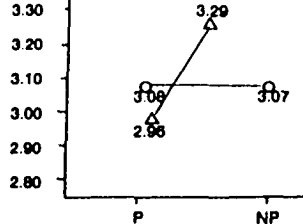
Variable	Irate	Sales	Superv.	Final
Verbal ability	—	—	3.22	—
Competence	—	—	—	—
Appearance	—	—	3.87	—
Knows the job	3.81	—	—	—
Physical mannerisms	—	8.53*	—	—
Gets along with others	—	—	—	—
Maturity	—	—	—	—
Flexibility	—	—	—	—
Learns quickly	—	—	—	—
Works independently	—	—	—	—
Works well with others	—	—	—	—
Discipline	2.76	—	—	—
Creativity	—	—	—	—
Able to supervise	—	—	—	—
Reliability	5.31†	—	—	—
Handles assignments	4.62†	—	—	—
Overall	—	—	—	—
Recommend for promotion	—	—	—	—
Ability factor	—	—	—	—
Appearance factor	—	5.71†	4.58†	3.12
Meanab	$F(1,208) = 0.66; p = ns$			
Meanap	$F(1,208) = 4.96; p = 0.03$			
Meanov	$F(1,208) = 0.00; p = ns$			

* $p < 0.01$; † $p < 0.05$; all others $p < 0.10$.

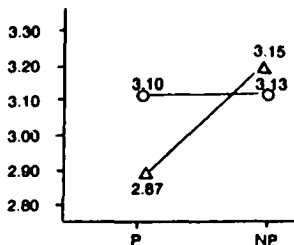
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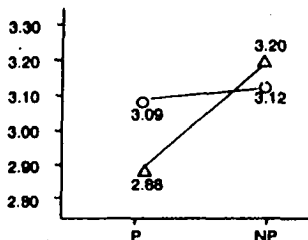
a: Sales scenario, Appearance factor



b: Supervisor scenario, Appearance factor



c: Final rating, Appearance factor



d: Mean appearance rating ('Meanap')

△—△ M
○—○ F

Figure 1. Condition by sex interactions

Conclusions

As was stated by the American Civil Liberties Union in their policy statement on Pregnancy Discrimination (1985, p. 8), 'Pregnancy, or the capacity to become pregnant, is the single most pervasive factor in the history of sex discrimination'.

The *Workforce 2000* study points out that most existing policies were designed for a society which no longer exists, where men went out to the factory or office and their wives stayed home with the children. They state:

'What is needed is a thoroughgoing reform of the institutions and policies that govern the workplace, to ensure that women can participate fully in the economy, and that men and women have the time and resources needed to invest in their children' (p. xxv).

We suggest that one place to begin this reform is to address the perceptual biases which penalize pregnant working women.

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Appendix — Attitude dimensions, items, and coefficient alphas

Factor 1: Pregnant women as employees (alpha = 0.8416)

When a woman becomes pregnant, her attention is diverted from her job.

Many people find it hard to treat a pregnant woman the way they'd treat a non-pregnant one.

It's hard for a pregnant woman to get the respect needed to succeed in business.

I think I might have trouble working for a supervisor who was pregnant.

Pregnant women cannot be trusted to make high-level decisions.

Women have mixed-up priorities when they are pregnant.

Women cannot separate professional and personal lives when they become pregnant.

Pregnancy brings a woman's sexuality into the office.

Pregnant women upset the office environment.

I don't have confidence in women who are pregnant.

Coworkers worry about upsetting a pregnant colleague.

Forcing companies to treat pregnant women like other employees could make it hard for the company to stay in business.

A pregnant woman's appearance is not conducive to a professional relationship.

Women become depressed after a pregnancy.

Pregnant women are able to separate their personal and professional lives. (Reversed)

Factor 2: Company treatment of pregnant employees (alpha = 0.8293)

Companies should be willing to make special accommodations, such as shorter working hours or less strenuous jobs, to help employees who become pregnant.

Companies should be required by law to make special accommodations, such as shorter working hours or less strenuous jobs, to help employees who become pregnant.

Most female workers who become pregnant return to their jobs after the baby is born.

Companies should allow leaves to fathers for child care.

Companies should provide on-site day care facilities for employees' children.

Companies should pay for employees' day care needs.

Most female top executives have children.

Companies should provide alternative forms of employment, such as part-time work or working at home, for women who wish to both work and be with their children.

Women who take a leave of absence to raise their children should be guaranteed that they will have a job when they return.

Companies should increase employee salaries after each child is born.

Companies should provide paid maternity leave.

Companies should provide alternative forms of employment for men who wish to both work and be with their children.

When a woman gets pregnant, it's her own choice and she shouldn't expect her company to do anything special to help her. (Reversed)

Companies should not have to provide paid maternity leaves until the employee has worked for the company for two years. (Reversed)

Factor 3: Choose career or family (alpha = 0.7586)

It's OK for women in the early stages of pregnancy (first six months) to work at office-type jobs. (Reversed)

Getting pregnant shows that a female executive is less dedicated to her career compared to an executive that chooses not to have children.

Pregnancy should be treated by the company like a type of temporary disability.

Children of career-oriented mothers suffer some bad effects due to their mother's working.

It is important for a mother to be with her children after school lets out.

Pregnant women should not work once their pregnancy starts to show.

Women who want children should not take high-level positions.

Pregnant women should spend time worrying about pre-natal care, not their jobs.

I would find it harder to work with a pregnant coworker if she were single rather than married.

I think it is irresponsible for an unmarried woman to have a child.

Women become more conservative after a pregnancy.

Companies should be able to question job applicants about their plans to become pregnant before hiring them.

Factor 4: Emotional stereotypes (alpha = 0.7562)

Women tend to get more emotional when they are pregnant.

Pregnant women can't work as hard as non-pregnant women.

When a female worker becomes pregnant, all the women in the office gather to talk about baby things.

When a woman is pregnant, she has strange cravings and needs.

Women become irrational and have wide mood swings when they are pregnant.

Pregnant women like to discuss their pregnancy a lot.

When a woman is pregnant, it is difficult to avoid focusing on her stomach.

Pregnancy shows vulnerability.

Factor 5: Physical limitations (alpha = 0.7014)

It's OK for women in the early stages of pregnancy (first six months) to work at jobs that involve physical skills such as lifting or moving heavy objects. (Reversed)

It's OK for women in the later stages of pregnancy (last three months) to work at office-type jobs. (Reversed)

It's OK for women in the later stages of pregnancy (last three months) to work at jobs that involve physical skills such as lifting or moving heavy objects. (Reversed)

A pregnant woman can do any job that a non-pregnant woman can do. (Reversed)

Women should be required to take a leave of absence in the last three months of pregnancy.

When a woman becomes pregnant, her work responsibilities should be lessened.

Factor 6: Contemporary feminism (alpha = 0.6339)

I consider myself to be a feminist.

It should be illegal to deny women equal rights under the law just because they are women.

Companies should be held liable for any birth defects that result from a woman's working conditions.

It's OK for women to join the military.

Women in the military should not be allowed to volunteer for combat duty. (Reversed)

Pregnant women have no place in the armed forces. (Reversed)

If war breaks out, pregnant women in the military reserves should be called to active duty just like other reservists.

If war breaks out, women in the military reserves who have small children should be called to active duty just like other reservists.

Scoring

1 = Strongly disagree; 6 = strongly agree.