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The Role of Gender in a Developmental Assessment Center

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Male (n = 119) and female (n = 90) professional employees in a large financial services organization participated in a one-day developmental assessment center, and were assessed in three dyadic role-playing exercises by male or female assessors. In each exercise, one assessor rated participants on specific behaviors which were subsequently averaged by a computer program to produce final exercise dimension ratings. Results showed no significant differences in ratings for male and female assesseees on any dimensions in any of the exercises. Women assessors rated candidates of both sexes higher on some dimensions than did male assessors in an employee counseling exercise, but there were no assessor gender differences in the sales call and problem analysis exercises. Further, there were no significant interactions between assessee and assessor gender for any of the exercises. The present findings attest to the inherent fairness of the assessment center method for human resource selection and development.

Demographic and social changes in the United States are resulting in increasing numbers of women in the workforce. If present trends continue, by the year 2000, 61 percent of American women will work outside

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the home, and they will comprise 47 percent of those employed (Johnson & Packer, 1987). In spite of their increasingly important economic role, women are still concentrated in traditionally female occupations with correspondingly lower wages than men. At the same time, women are also an increasing percentage of those graduating from professional schools and entering what have previously been predominately male occupations (Haslett, Geis, & Carter, 1992). However, those who enter professional fields such as management still face barriers—often referred to as the “glass ceiling” (Morrison, White, & Van Velsor, 1987)—that limit their movement into top ranks and earnings (Smither, 1994).

As women's labor force participation continues to increase, it is important to establish equitable methods of employee selection and development. Since assessment centers are frequently used to select and develop individuals for management positions, the existence or lack of gender bias would help to sustain or crack the glass ceiling. Given the popularity of assessment centers for human resource selection and development, there is surprisingly little empirical research on gender differences in assessment center evaluations. The limited research on gender effects in the assessment center has shown this method to be generally free of bias (Arvey & Faley, 1988; Thornton & Byham, 1982).

Nevertheless, studies of gender effects in organizations continue to find differences that are variously attributed to psychological or situational differences in women's and men's experiences at work (Daly & Ibarra, 1996). Findings of gender differences in ways of organizing, leading and communicating suggest differences in style but no differences in effectiveness (Donnell & Hall, 1980; Rosener, 1990). Other studies argue that situational differences, including opportunity (Morrison & Von Glinow, 1990), power (Kanter, 1977, 1993), social norms (Heilman, Block, Martell, & Simon, 1989), and representativeness in groups (Deaux & Major, 1987; Konrad, Winter, & Gutek, 1992) better explain gender-typed behaviors than do innate differences.

The purpose of the present study is to extend our understanding of the role gender may play in assessment centers. Specifically, this study examined both assessee and assessor gender effects in a developmental assessment center. We reviewed literature on the effects of assessee gender in assessment centers and in other performance evaluation contexts, followed by literature on assessor gender, and the interaction of assessor and assessee gender.

Assessee Gender

Assessment centers. Several studies have compared assessment center ratings for men and women participants. Moses (1973) found that men

and women received similar ratings in an assessment center designed for early identification of supervisory potential. Furthermore, when the same individuals were evaluated in a more advanced assessment program, no differences were found in the performance of men and women. In a study of a first-level supervisory assessment center, Huck and Bray (1976) reported that overall ratings of performance of men and women did not differ. Similarly, Moses and Boehm (1975) found no gender differences in final assessment ratings. Furthermore, the most significant determinants of advancement were the same for men and women. Moses and Boehm concluded that men and women perform equally well in assessment centers and that assessment centers are equally valid predictors of future performance for men and women. Ritchie and Moses (1983) reported that similar percentages of men and women possessed middle-management potential in the Bell System, and substantial similarities existed in relationships between specific assessment dimensions and the career progress of men and women. They concluded that essentially the same skills were needed for men and women to advance into management.

Contrary to other assessment center studies, Walsh, Weinberg, and Fairfield (1987) found a main effect favorable to female applicants. Finally, Shore (1992) reported that although men and women did not receive significantly different ratings of overall management potential or interpersonal skills, women obtained consistently higher ratings on performance-related skills. Overall, the studies reported here suggest that assessment center ratings of overall management potential may not differ for men and women.

Performance evaluation in other settings. Literature comparing job performance ratings for men and women is relevant to the present study since assessment centers are one type of performance-rating situation. Laboratory studies of performance appraisal have consistently demonstrated the effects of pro-male stereotypes in evaluations. For example, Rosen and Jerdee (1974a) found that males discriminated against women in personnel decisions such as promotion, and that female applicants for managerial positions were accepted significantly less often than equally qualified males.

Field studies have also investigated the effects of sex role stereotyping on performance evaluations and perceptions of management potential. Some studies (e.g., Mobley, 1982; Peters et al., 1984) found that women received significantly higher job performance ratings than men. Wexley and Pulakos (1982) and Shore and Thornton (1986), however, found no significant differences for ratee gender. Thomas (1989) content analyzed descriptors applied to men and women naval officers in their performance appraisals and found male officers were described in more

stereotypically male (and Navy leader) terms (such as logical, dynamic, mature, aggressive) compared with descriptors of the women officers (competent, well groomed, an asset to the command), which were more stereotypically female (and Navy follower) traits. However, men and women received similar numerical performance ratings.

In summary, the results of studies of gender bias in personnel decisions reveal an interesting pattern. Laboratory studies using hypothetical scenarios have found a gender bias against women in hiring decisions and performance appraisals. By contrast, studies done in real organizations and in assessment centers have consistently failed to find evidence for pro-male bias. In fact, several field studies reported main effects which favored women (Mobley, 1982; Peters et al., 1984; Walsh et al., 1987). Perhaps the conflicting findings reflect the fact that supervisors typically have a wealth of data on which to base performance ratings. By contrast, in laboratory studies subjects are presented with relatively brief descriptions of performance. This suggests that people may resort to the use of stereotypes when making judgments based on limited data. In the typical assessment center a great deal of data is gathered about candidates, which may be why traditional gender-role stereotypes have not been found in such settings.

Assessor Gender

A major limitation of most prior assessment center studies of gender effects is a failure to consider effects of *assessor* gender. Walsh et al. (1987) found no main effect for assessor gender in their study. However, some studies of performance appraisal have found that women rate others higher than do men (Bartol & Butterfield, 1976; Hamner, Kim, Baird, & Bigoness, 1974). Shore and Thornton (1986) found no differences in ratings given by men and women supervisors. Pulakos, White, Oppler, and Borman (1989) concluded that rater sex was not an important influence on ratings. Although they found a small main effect for rater gender, the difference accounted for a minimal amount of variance in ratings. In summary, the small amount of evidence available points to no assessor gender rating effects in assessment centers.

Interaction of Assessor and Assessee Gender

It is possible that the gender of the participant and of the assessor interact to produce differences in assessment results. Using data from the National Educational Longitudinal Study, Ehrenberg, Goldhaber and Brewer (1995) found that white female instructors gave higher subjective ratings to their white female students in reading, mathematics, and science than did white male instructors. Contrary to prior laboratory (e.g., Bartol & Butterfield, 1976; Hamner et al., 1974) and field studies of

performance appraisal (Mobley, 1982; Peters et al., 1984; Shore & Thornton, 1986; Wexley & Pulakos, 1982), Walsh et al. (1987) reported a significant rater-gender interaction in an assessment center. They found that all-male assessor groups rated women candidates for a professional sales position significantly higher than male candidates. On average, male applicants evaluated by male assessors were not recommended for employment, whereas women applicants were most strongly recommended for employment when evaluated by male assessors. There was no significant difference in the mixed-sex assessor groups' ratings of female and male candidates, and all-female assessor groups were not employed in their study.

The present study extends the research on gender effects in assessment centers in two important ways. First, the literature reviewed indicates that the effects of gender interactions have not been unequivocally tested because of the absence of all-female assessor groups (Walsh et al., 1987). Further, it is possible that ratings produced by the mixed-sex assessor groups may have been affected by gender-related group dynamics. In the present study ratings were made by single assessors who observed a single participant in a dyadic role-playing exercise. This provided a "purer" test of the effects of gender on assessment ratings than possible in prior studies since assessors did not have the opportunity to discuss their observations with one another. Second, rather than making global evaluations, the assessors evaluated participants on several specific dimensions. This allowed a determination of whether gender affected ratings on some types of skills and exercises differently than on others.

METHOD

Participants

Participants were 209 exempt employees (119 males, 90 females) who held mostly professional positions within a large financial services organization. Candidates were assessed by nineteen assessors (nine males, ten females) who were behavioral science and management faculty from local colleges and universities and practicing management consultants. All faculty assessors had applied consulting experience, including assessment center work, and had attended a two-day training seminar on assessment techniques in the host organization to prepare for their roles as assessors.

Assessment Center Procedure

Each assessment center took place during a single day in which the candidates participated in three role-playing exercises. The assessment center was designed to identify participant strengths and weaknesses,

with the results to be used for developmental planning, and took place during a two-week development school run by the organization. In each of the three exercises (described below) the candidates interacted with a role player while being observed by an assessor who recorded critical participant behaviors. The role players, like the assessors, took part in two days of training prior to the assessment center. After each exercise, the assessor completed an evaluation form in which specific behaviors were rated for each dimension. Each candidate was observed by a different assessor in each exercise. Data were collected from nine assessment centers over a three-year period.

Exercises

The assessment center consisted of three dyadic role-play exercises—Employee Discussion, Sales Call and Problem Analysis. In the Employee Discussion exercise the participant was required to conduct a performance counseling session with a hypothetical subordinate experiencing performance problems. In the Sales Call exercise the participant met with an irate customer disturbed about the quality of service provided by the participant's organization. In the Problem Analysis exercise the participants reviewed a complex set of facts pertaining to the declining performance of a hypothetical regional office and presented their plan for "revitalizing" the department to their superiors.

Assessment Dimensions

Candidates were assessed on eight dimensions (listed and defined in Table 1). All dimensions were assessed in each exercise with the exception of Perception and Written Communication, which were not assessed in the Sales Call, and Leadership, which was not assessed in the Problem Analysis. In each exercise, dimension-specific behaviors were rated on a 1 (*much less than acceptable*) to 4 (*much more than acceptable*) scale.

Unlike traditional assessment centers, in this assessment center program assessors did not discuss their observations and ratings with one another. Instead, their ratings of (dimension-specific) behaviors were converted by means of a computer program into final dimension ratings for each exercise using the following scale: a mean of 1.00–1.59 = 1 (*much less than acceptable*); 1.60–2.19 = 2 (*less than acceptable*); 2.20–2.79 = 3 (*acceptable*); 2.80–3.39 = 4 (*more than acceptable*); 3.40–4.00 = 5 (*much more than acceptable*).

RESULTS

For each exercise, multivariate analysis of variance (MANOVA) was employed as a significance test of the main and interaction effects of participant and assessor gender on the dimension ratings. The assessment

TABLE 1 The Assessment Dimensions

Leadership	The ability to influence the actions and thinking of others.
Interpersonal Skills	The ability to respond sensitively to the needs and feelings of others.
Organizing and Planning	The ability to systematically structure own and others' activities to achieve maximum work results.
Decisiveness	Readiness to make decisions, render judgments, and take action independent of quality.
Decision Making	The ability to use logical and sound judgement in determining an appropriate course of action based on the facts available.
Perception	Perceiving the impact and implications of decisions and actions on others and the organization.
Oral Communication	Effective and concise expression of thoughts and ideas.
Written Communication	The ability to effectively express thoughts and ideas through written means.

dimensions were treated as a set since each reflected a different but related aspect of performance on the assessment exercises.

The MANOVA main effect due to assessor gender was significant for the Employee Discussion Exercise. Table 2 shows the means and standard deviations for the dimension ratings for assessor and participant gender. The univariate tests of analysis of variance reveal that women assessors rated participants significantly higher than male assessors on interpersonal skill ($F = 2.33, p < .05$), planning ($F = 3.87, p < .04$), perception ($F = 12.69, p < .001$), and oral communication ($F = 7.23, p < .001$). The MANOVA for the main effect of assessor gender was not significant for the Sales Call or Problem Analysis exercises. The MANOVA for the main effect of participant gender was not significant for any of the three exercises, nor were any of the interactions between participant and assessor gender for any dimensions in any of the exercises.

DISCUSSION

In contrast with findings from laboratory studies of performance ratings (e.g., Rosen & Jerdee, 1974a; Rosen & Jerdee, 1974b), the present findings are consistent with prior research on management assessment

TABLE 2 Assessment Ratings for Employee Discussion Exercise

	Male Participant (n = 119)				Female Participant (n = 90)			
	Male Assessor (n = 43)		Female Assessor (n = 76)		Male Assessor (n = 33)		Female Assessor (n = 57)	
	M	SD	M	SD	M	SD	M	SD
Leadership	3.51	(1.07)	3.49	(0.99)	3.42	(1.06)	3.68	(1.09)
Interpersonal	3.53	(1.09)	3.83	(1.24)	3.76	(1.12)	4.03	(1.06)*
Org/Planning	3.33	(1.02)	3.47	(1.09)	3.18	(0.98)	3.63	(1.13)*
Decisiveness	3.37	(.95)	3.25	(1.10)	3.18	(1.04)	3.38	(1.09)
Decision Making	3.33	(1.13)	3.15	(1.13)	3.06	(1.12)	3.22	(1.19)
Perception	3.23	(1.15)	3.59	(1.18)	2.84	(1.17)	3.74	(1.09)**
Oral Communication	4.00	(.72)	4.17	(.79)	4.03	(0.85)	4.41	(0.73)**
Written Communication	4.12	(.76)	4.23	(.83)	4.33	(0.69)	4.31	(0.76)

Wilk's Lambda = 0.874, $p < .001$.

* $p < .05$; ** $p < .01$.

centers (Alexander, 1979; Huck & Bray, 1976; Moses, 1973; Moses & Boehm, 1975; Walsh et al., 1987) and field studies (Mobley, 1982; Peters et al., 1984) showing a lack of gender bias. The present study extends previous research on assessment centers by examining rating patterns of both men and women participants and assessors on specific dimensions across several exercises. We found no significant differences in ratings for men and women ratees on any of the assessment dimensions in any of the three exercises. Since assessment centers are routinely used for a variety of personnel decisions, it is important to understand whether gender differentially impacts ratings on certain types of dimensions and assessment exercises.

Thus, the present results provide further evidence that the assessment center method does not produce differential results for male and female participants. Furthermore, our results show a lack of gender bias within dyadic role-playing exercises in which performance in a developmental assessment center is rated by individual assessors without group discussion. This finding increases our confidence in the fairness of the assessment center method in human resource selection and development. A strength of this method lies in its emphasis on behavioral observations as a basis for making ratings. Perhaps this behavioral focus makes the assessment center less susceptible to gender bias than performance evaluations which are based on more subjective personal attributes. Another strength of the present study is that we were able to examine the effects of

both participant and assessor gender, whereas most prior studies examined only participant gender. Walsh et al. (1987) is the only other known study to examine assessor and participant gender within an assessment center. However, a limitation of that study was the lack of any all-female assessor groups.

In prior assessment center studies, ratings were arrived at through discussion among groups of assessors. Although group discussion is clearly an asset of the assessment center method (Thornton & Byham, 1982), the potential influence of group dynamics does not permit a pure test of the effects of gender. A strength of the present study is that we were able to examine gender effects in the absence of the confounding influence of group dynamics. By contrast, in the Walsh et al. (1987) study which utilized all-male and mixed-gender assessor groups, it is unclear how gender dynamics in the assessment groups, rather than gender alone, may have affected the final assessment ratings. In fact, research has shown that all-male, all-female, and mixed-gender groups differ in terms of process, content and relationship styles (Kanter, 1977; Shaw, 1981). For example, all-male groups are more competitive and impersonal than all-female groups, and in mixed-gender groups men often play a dominant role (Shaw, 1981).

Regarding assessor gender, we found that in the first role-play (Employee Discussion) on four dimensions (interpersonal skills, organization and planning, oral communication and written communication), women assessors gave significantly higher ratings to both men and women assesseees than did male assessors. In the Sales Call and Problem Analysis exercises, ratings for men and women assessors did not differ significantly. One possible explanation for this rating pattern is that women assessors were somewhat more lenient earlier in the assessment center than in the later exercises. However, an examination of the overall mean ratings for the three exercises does not support this explanation since both men and women assessors gave their lowest ratings in the first exercise (Employee Discussion). Moreover, male assessors gave particularly low ratings in the first exercise, which accounts for the significant difference due to assessor gender in that exercise. This may suggest that in evaluation settings, men are initially more harsh raters than women.

The present study suggests several areas where additional research on the assessment center is needed. One interesting question concerns the possible effect of role-player gender. It is conceivable that role-player gender may interact with participant, or assessor gender, or both. For example, for exercises requiring managerial assertiveness, assessors might employ different standards when evaluating a female participant interacting with a male versus female subordinate (role player). If a male assessor

holds a stereotypic view that management positions should be occupied by men, he might view a woman negatively who asserts herself with a male subordinate. Furthermore, we know relatively little about the possible effects of other demographic characteristics such as age and ethnicity on assessment center ratings.

Prior research suggests that the nature of the assessment exercises may have the potential to interact with gender to influence assessment ratings. Certain tasks may be gender typed. For example, Schein (1973, 1975), found that characteristics attributed to "successful managers" (e.g., leadership, self-confidence, ambition, objectivity) were more strongly associated with men than with women. A more recent study by Heilman et al. (1989) found similar results and concluded that stereotypes about men and women are deeply ingrained. On the other hand, Brenner, Tomkiewicz, and Schein (1989) reported that although men continue to describe successful middle managers using traits commonly ascribed to men, women now view successful managers as possessing characteristics associated with both men and women.

Heilman (1983) argued that gender bias increases when there is a perceived lack of fit between job requirements and individual attributes. Similarly, Landy and Farr (1980) concluded that women employees are likely to receive less favorable evaluations than men in stereotypically male jobs. It is important to note that all three exercises in the present study have the potential for being gender-typed, and could thus be susceptible to gender bias. In the Employee Discussion the participant plays the part of a supervisor counseling a disgruntled subordinate about job performance. In the Sales Call, the participant is an office manager trying to satisfy an irate customer. Finally, in the Problem Analysis the participant plays the role of a new manager taking over a poorly performing branch office. In spite of the fact that all these exercises place the participant in the role of having managerial responsibility, and thus might be susceptible to gender-typing, no differences in assessment ratings for men and women participants were found.

The present findings are consistent with most prior research failing to find rater-ratee gender interactions in performance-rating situations (e.g., Mobley, 1982; Wexley & Pulakos, 1982). Walsh et al. (1987) was the only previous study to investigate the interaction between ratee and rater gender in the assessment center. That study found that male-assessor groups rated women applicants higher than male applicants. One possible reason for the conflicting findings with Walsh et al. is that in the present study candidates were evaluated on specific dimensions rated by individual assessors. By contrast, in the Walsh et al. study candidates were evaluated on a global dimension by assessor groups. Perhaps global

ratings are more susceptible to the effects of group dynamics and are more prone toward gender bias than ratings on specific dimensions made by individual assessors.

In summary, the present study was the first known investigation of the effects of assessee and assessor gender in a developmental assessment center. Our most important finding was that assessee gender did not impact on the assessment ratings for either men or women assessors. We also found that men assessors rated participants lower than women assessors early in the assessment process but that no differences existed in later exercises. These findings attest to the inherent fairness of the assessment center method and add to the growing body of literature showing that actual human resource evaluations are less prone to gender bias than simulated decisions made in laboratory settings.

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