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**ABSTRACT**

A male epileptic, male nonepileptic, female epileptic, or female nonepileptic job candidate was evaluated for either an auto sales or receptionist job by 112 university students in personnel or behavioral science courses. The female epileptic and the male nonepileptic candidates had significantly higher probabilities of being hired than the other two candidates. Successful job performance by the epileptics was attributed more to effort; epileptic female applicants for either job and epileptic applicants of either sex for the auto sales job were perceived to be more competitive, persistent, and determined than other candidates. (Author)

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Attribution and Stereotype Explanations  
of Non-Visible Handicap Discrimination

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### Abstract

A male epileptic, male non-epileptic, female epileptic, or female non-epileptic job candidate was evaluated for either an autosales or receptionist job by 112 subjects. The female epileptic and the male non-epileptic candidates had significantly higher probabilities of being hired than the other two candidates. Successful job performance by the epileptics was attributed more to effort; epileptic female applicants for either job and epileptic applicants of either sex for the autosales job were perceived to be more competitive, persistent, and determined than other candidates.

Unfair discrimination against the handicapped is an issue which we may expect to receive increased attention. The Vocational Rehabilitation Act of 1973 requires organizations receiving more than \$2500 annually in federal funds to take affirmative action with regard to employment and advancement of the handicapped. Of the 40 states which now have various anti-discrimination statutes, 21 of these have laws specifically barring employment bias against the mentally ill and disabled (American Bar Association, 1978).

However, very little is known about handicapped discrimination and the processes by which it occurs. Krefting and Brief (1976) had senior level management students rate disabled (paraplegic) versus non-disabled candidates for a typist's job. All material indicated the applicant was qualified for the position. Even though the overall ratings for the disabled and non-disabled applicants were the same, the disabled applicant was rated as being less healthy, having less potential for promotion, but having higher work motivation and more likely to be a long term employee. Rose and Brief (1979) found that handicapped applicants were in general evaluated no differently than non-handicapped applicants; however, epileptic applicants were expected to establish better relationships with customers and clients as well as with other employees than were non-handicapped applicants.

The purpose of this study was to further investigate handicapped discrimination in employment situations. A preliminary study had indicated a possible reverse discrimination effect (Farrow, Barnette, Rozos, Genin, & Beard, 1980). Schein (1972) has argued that a purpose of investigations of discrimination should be the understanding of the processes involved as well as their ultimate effects; i.e., the underlying psychological factors of discrimination must be understood before we may make recommendations to mitigate their effects. Terborg and

Ilgen (1975) suggested three theoretical explanations for occupational sex discrimination--stereotypes, attribution theory, and equity theory. This study investigates stereotypes and attribution theory with regard to possible handicap discrimination. The particular handicap chosen was intended to be non-job related (epilepsy, controlled by medication). Based on the abundant literature of unfair sex discrimination, and in particular how sex of the applicant may interact with other characteristics such as attractiveness (Berschied & Walster, 1974) and type of job applied for (e.g., male dominated or female dominated job--see Cash, Gillen, & Burns, 1977), handicap effects were expected to interact with sex of the applicant and type of job. Consequently, 112 mature (mean age =27.0 years) students in personnel and behavioral science classes with considerable work experience (mean = 9.1 years) evaluated epileptic or non-epileptic, male or female applicants for an autosales or receptionist position in a factorial design. To provide insight into resulting psychological processes subjects rated each applicant on 24 semantic differential scales (e.g., 'not persistent --persistent), and attributed anticipated success or failure of the candidate, if hired, to ability, effort, luck, and/or task difficulty.

## METHOD

### Subjects

Fifty-eight male and 54 female upper division students in personnel and behavioral science courses at a large southeastern public university participated in the study. Subjects were mature and had considerable work experience. Biodata questions revealed (means, standard deviations in parentheses) age (27.0, 7.0), years worked (9.1, 6.3). In addition, 57 had been a supervisor or manager for more than one year, and 43 had more than one year's experience in interviewing or hiring others

for employment.

### Resume Materials, Instruments, and Procedure

Resume folders were distributed randomly to subjects. Unknown to subjects, there were eight different folders: an (a) epileptic or "normal" (b) John or Janet Thompson, applies for an (c) auto sales or receptionist job. These two positions were chosen because previous research has shown them to be appropriate for high school graduates and to be perceived approximately equal in prestige, skill, and supervisory independence, but to vary on masculinity/femininity (Cash et al., 1977). In our job descriptions, the incumbent of each position has contact with customers. Each subject rated only one folder; 14 subjects received each experimental condition.

Folder contents were constructed to be as realistic as possible. Each contained a job description with job specifications, applicant resume (recent high school graduate, grade point average was 2.50 out of 4.00, with one year's job related experience), a physician's medical examination report (normal condition: general health-"excellent," other-"none"; epileptic condition: general health-"excellent," other-"History of epilepsy since childhood; seizures controlled by medication"), interview summary (epileptic: "Previous job performance was not affected by applicant's medical history"), and a reference summary based on a conversation with the applicant's supervisor at his/her previous job ("Medical history does not affect job performance"). Statements concerning experimental manipulations were embedded in other resume materials so as not to sensitize the subjects to the experiment's purpose; "applicants" were intended to be perceived as being only moderately qualified for the jobs to insure there being meaningful variance in the dependent variables. Instructions to subjects stated that this exercise was "intended to make you more familiar with the types of decisions

a Personnel Manager makes when evaluating a job candidate for employment," listed the contents of the folder, and asked to "assume that you are the Personnel Manager. However, do not assume you are some other person. You are the Personnel Manager. Be yourself and make your own decisions to the items asked, drawing from your own practical and academic experience." Responses were made anonymously.

Subjects rated the applicants on 20 five-point scales (e.g., "How would you rate the applicant's job-related experience and training," from very unfavorable to very favorable; "How well do you think this person would get along with customers," from very well to very poorly), two 4-point scales ("How would you rate the applicant's health," from very poor health to extremely good health; "What hiring decision would you make concerning the applicant," --would hire, probably would hire, probably would not hire, would not hire), and one 9-point scale ("How much above or below the going market rate for this job should this person's salary be if hired," from 40 percent below to 40 percent above market rate in 10 percent increments). Half of these 23 selection items had reversed scales to minimize subject response tendencies.

In addition, there were two attribution questions. One asked the respondents to assume that the applicant was hired and succeeded on the job, the other asked subjects to assume that the applicant was hired and failed on the job. Subjects were then asked to rate what they considered the causes of the successful or failing performance to be by assigning a percentage figure beside each of the possible four causes: ability, effort, task difficulty, and luck. Percentages for each question had to sum to 100. Finally, subjects were asked to describe the job applicant on 24 seven point adjective semantic differential scales (e.g., dependent, independent; irresponsible, responsible) by

"indicating your first impression" while working at "a fairly high rate of speed."

In an attempt to increase the parsimony of the results, the 23 dependent variable selection items and the 24 semantic differential items were separately factor analyzed (principle components, varimax rotation) to determine the appropriate rating dimensions. Items loading .50 or more were summed to form a scale for the appropriate dimension. Each scale possessing acceptable reliability was then subjected to a 2 x 2 x 2 factorial analysis of variance.

## RESULTS

### Rating Dimensions

Table 1 shows the factor names, items within each factor, item-factor loadings for the 23 selection items, and scale coefficient alpha reliabilities. Seven factors emerged with eigenvalues greater than one. Based on the highest item-factor loadings, these factors were labelled (1) Work Record and Organizational Interest, (2) Potential, Effort, and Ability, (3) Health and Interpersonal Relations, (4) Knowledge, Experience, and Training, (5) Qualifications and Starting Salary, (6) Motivation and Tenure, and (7) Predicted Absenteeism. These factors accounted for 64 percent of the variance among these variables. The reliabilities of the scales representing the sixth and seventh factors were so low that they were not further analyzed. The reliabilities of the other scales are acceptable for research purposes (Nunnally, 1967). The hiring decision question was added as the eighth scale since it failed to load significantly on any other factor.

Table 2 presents similar data for the five factors derived from the 24 semantic differential items. The five factors with eigenvalues greater than one were labelled (1) Competent/Efficient/Adjusted, (2) Competitive/Persistent/Determined, (3) Warm/Sensitive/Cooperative,



(4) Not Passive, and (5) ~~Intelligent~~/Courageous. These factors accounted for 68 percent of the variance among these variables. The reliabilities of the scales from the first three factors were .85 or better. The fourth factor had only one item loading on it at greater than .50, and the fifth factor scale had a reliability of .37. These two scales were not analyzed further.

Cell means for each of the remaining scales and the attribution questions are listed in Table 3.

### Main Effects

Health. Non-handicapped applicants were rated higher on the Health and Interpersonal Relations factor ( $\bar{x}=16.0$ ) than epileptic candidates ( $\bar{x}=14.9$ ),  $F(1,104)=10.0$ ,  $p<.01$ , while handicapped applicants were judged to have more favorable knowledge, experience, and training (12.8 vs. 12.1),  $F(1,104)=12.2$ ,  $p<.05$ . If the applicant were hired and succeeded on the job, this was attributed to be more due to effort for the epileptic than for the non-epileptic candidate (34.5% vs. 29.4%),  $F(1,104)=5.1$ ,  $p<.05$ . If the applicant were hired and failed on the job, this was attributed more to task difficulty for the non-epileptic than for the epileptic candidate (24.4% vs. 18.1%),  $F(1,104)=5.3$ ,  $p<.05$ .

Job. If the candidate were hired and succeeded, this was attributed more to luck for the sales than for the receptionist job (13.0% vs. 9.7%),  $F(1,104)=4.6$ ,  $p<.05$ . Similarly, possible failure was also attributed more to luck for the sales position (20.2% vs. 12.4%),  $F(1,104)=7.1$ ,  $p<.01$ .

Interactions. All interactions and mean differences discussed below are significant at the .05 level or better.

Health and Sex. Female epileptics were rated higher on potential, effort, and ability (10.0) than were either non-epileptic females (9.0)

or epileptic males (9.0). The normal male (3.4) and epileptic female (3.4) had higher probabilities of being hired than either epileptic males (3.1) or normal females (3.1). Epileptic females (33.0) and normal males (32.7) were judged more competitive, persistent, and determined than were the normal female (28.5) or epileptic males (30.6).

Health and Job. The epileptic candidate for the sales job was rated more competent, efficient, and well-adjusted (44.4) and more competitive, persistent, and determined (34.0) than the epileptic candidate for the receptionist job (39.8 and 29.5).

Sex and Job. If the hired candidate were successful on the job, this was attributed more to effort for the female in the sales job (35.3%) than for the male in the sales job (26.4%).

Health and Sex and Job. There was one significant triple interaction. The success of the epileptic male in sales was attributed more to task difficulty (22.5%) than the success of either the epileptic male receptionist (13.6%) or the epileptic female salesperson (13.1%).

#### CONCLUSIONS

Although ratings of overall applicant quality and suggested starting salary were not affected by health, there appears to be a reverse rating bias whereby the handicapped applicant was rated higher in job related knowledge, experience, and training. The female epileptic shared the highest probability of being hired for either job with the non-handicapped male. Although it might be thought that her sex and handicap would tend to operate against the handicapped female applicant, examination of the semantic differential scales reveals possible reasons for this result. The female epileptic is perceived as being as competitive, persistent, and determined as the non-handicapped male, and as exhibiting more potential, effort, and ability.

The epileptic sales applicants (either male or female) are seen as being more competent, efficient, and well-adjusted, and more competitive, persistent, and determined than other applicants, although these perceived attributes do not affect their chances of being hired nor their starting salaries.

Previous research based on attribution theory indicates that if a person performs in a manner consistent with prior expectations, such as a man succeeding in an in-role masculine occupation, the outcome is attributed more to the fixed factors of ability and task difficulty and less to the variable factors of effort and luck (Kelley, 1967). Conversely, when a person's performance is above or below expected performance, such as a woman succeeding in an out-of-role masculine occupation, the outcome is attributed more to the variable factors of effort and luck and less to the fixed factors of ability and task difficulty (Jones & Davis, 1965). These predictions held true here only when the female succeeded in the masculine autosales occupation (effort mean attribution = 35% vs. 26% when the male succeeded in the masculine occupation). Applying attribution reasoning to the significant triple interaction, it appears that success of the female epileptic salesperson is also inconsistent with prior expectations (success attribution to task difficulty = 13%, vs. 23% for the male epileptic in sales). Similarly, the significant main effect attributions indicate that the success of the handicapped job incumbent is attributed more to effort than the non-handicapped incumbent (35% vs. 29%), while failure is due less to task difficulty (18% vs. 24%).

Overall, what emerges from the results is the perception of the handicapped applicant overcoming his/her handicap by exerting more effort to be successful on the job. This expected increased effort may be explained by the epileptic female applicant (for either job) and the epileptic applicant (of either sex) for the sales job being

perceived as significantly more competitive, persistent and determined than other candidates. Accordingly, it appears that a combination of stereotype and attribution explanations is required to understand the results obtained.

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Table 1

Item Factor Loadings and Coefficient Alpha Scale  
Reliabilities for 23 Selection Items

Item	Factor							
	1. Work Record & Org. Interest	2. Potential Effort & Ability	3. Interpersonal Relations	4. Knowledge, Training, Experience & Rating Confidence	5. Starting Salary & Tenure	6. Motivation	7. Absenteeism	8. Hiring Decision*
1. Quality of Work Record	.72							
2. Interest in Working for Organization	.73							
3. Initiative	.63							
4. Experience & Training				.62				
5. Tenure						.54		
6. Motivation						.79		
7. Knowledge of Occupation				.67				
8. Health			.76					
9. Ability		.52						
10. Absenteeism							.74	
11. Punctuality				.55				
12. Get Along with Co-Workers				.75				
13. Get Along with Customers				.60				
14. Potential for Promotion		.79						
15. Enjoy Being With	.50							
16. Probability of Becoming Disabled							.63	
17. Would Exert High Effort		.84						
18. Salary					.74			
19. Overall Qualifications					.81			
20. Expectations of Performance								
21. Overall Rating								
22. Hiring Decision								*
23. Confidence in Ratings				.58				
Coefficient Alpha	.69	.75	.72	.57	.60	.37	.27	*

\*The Hiring Decision question was added as the eighth scale; it did not load significantly on any factor.

Table 2

Item Factor Loadings and Coefficient Alpha Scale  
Reliabilities for the 24 Semantic Differential Items

Item	Factor				
	1. Competent/ Efficient/ Adjusted	2. Competitive/ Persistent/ Determined	3. Warm/ Sensitive/ Cooperative	4. Not Passive	5. Intelligent/ Courageous
1. Well-Adjusted	.69				
2. Intelligent					.59
3. Independent					
4. Sensitive			.65		
5. Courageous					.58
6. Not Passive				.87	
7. Creative		.61			
8. Ambitious		.70			
9. Anxious		.65			
10. Responsible	.63				
11. Poised	.60				
12. Warm			.73		
13. Open-Minded			.54		
14. Kind			.73		
15. Cooperative			.65		
16. Determined		.74			
17. Efficient	.77				
18. Competent	.84				
19. Successful	.72				
20. Competitive		.84			
21. Desires Responsibility		.72			
22. Persistent		.76			
23. Self-Confident	.58				
24. Reliable	.66				
Coefficient Alpha	.91	.88	.85	---	.37



Table 3  
Scale Means by Health and Sex of Job Applicant  
and Type of Position Sought

	Non-Epileptic				Epileptic			
	Male		Female		Male		Female	
	Sales	Recep	Sales	Recep	Sales	Recep	Sales	Recep
Work Record & Org. Interest	14.3	14.4	14.3	14.2	14.4	14.6	15.5	15.2
Potential, Effort, & Ability	9.5	9.6	8.6	9.4	9.1	8.9	10.6	9.3
Health & Interpersonal Relations	15.8	16.6	15.9	15.6	14.3	14.7	15.4	15.1
Knowledge, Experience, & Training	12.2	12.1	12.6	11.5	12.4	12.6	13.1	12.9
Qualifications & Starting Salary	8.4	8.6	8.7	8.6	8.7	8.5	8.5	8.6
Hiring Decision	3.3	3.4	3.1	3.1	3.1	3.0	3.5	3.2
Competent/Efficient/Adjusted	43.2	42.7	39.8	42.1	43.3	39.1	45.5	40.5
Competitive/Persistent/Determined	32.7	32.7	27.3	29.6	32.4	28.7	35.6	30.3
Warm/Sensitive/Cooperative	27.1	28.0	25.2	27.1	28.4	27.2	29.2	26.7
Success due to:								
Ability	42.1	36.8	42.1	44.3	37.9	41.8	33.6	41.8
Effort	26.4	31.8	29.1	30.4	26.4	35.4	41.4	34.6
Task Difficulty	17.4	18.9	16.3	16.1	22.5	13.6	13.1	17.5
Luck	14.1	12.5	12.4	9.3	13.6	10.7	11.9	6.7
Failure due to:								
Ability	28.2	22.1	22.1	19.3	23.2	22.9	18.9	25.0
Effort	26.4	40.0	42.5	42.5	35.7	45.7	41.8	42.5
Task Difficulty	23.2	23.6	24.6	26.1	16.4	19.6	15.2	21.1
Luck	22.1	14.3	10.7	12.1	24.6	11.8	23.4	11.4

Attribution and Stereotype