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## Sex differences in persistence and alternative occupational choice of unsuccessful applicants to medical school

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### INTRODUCTION

Accumulated research suggests that there are systematic sex differences in occupationally relevant attitudes and behaviour, (for a review see Fitzgerald and Crites, 1980). At the same time, studies comparing men and women *within* occupations, show them to be very similar in a wide range of role relevant variables. For example, when occupation was held constant, no significant sex differences were found in job satisfaction, motivation to work, job involvement, job outcome preferences, leader behaviour, communication style and perceived abilities (for a review see Donnell and Hall, 1980; also Birsdall, 1980; Kaufman and Feathers, 1980). Although the results are not always consistent, the general thrust of the research supports the theory of person-environment fit (Holland, 1973), according to which self-selection for professions has a 'homogenizing effect'.

Studies of intra-occupational sex differences to date, have focused almost exclusively on either student populations, already engaged in academic studies, or on professionals practising in the field. Unsuccessful applicants to professional schools constitute a relatively large population which has received very little attention (AAMC, 1976). This category is theoretically interesting because it permits the examination of such variables as sex differences in persistence in the face of initial rejection and in alternative occupational choices, generally overlooked in studies of students and practitioners.

The present study compares the behaviour of men and women, unsuccessful applicants to an Israeli medical school, along three dimensions: (1) persistence in reapplications; (2) ultimate career choice; and (3) long-term academic achievements. Stretching the definition somewhat all three dimensions may be treated as aspects of persistence: persistence in getting in; persistence in the health field; persistence in academic investments.

#### 1. Persistence in reapplications

The few studies of unsuccessful medical school applicants reveal that many have the necessary qualifications for entry (Becker *et al.*, 1973; Johnson, 1971) and a high

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proportion of repeaters of both sexes eventually enter medical school (Gordon, 1979). There are a number of reasons to expect, however, that women would persist less than men in attempting to gain acceptance. These include the smaller proportion of female than male role models in medicine (O'Leary, 1974), the greater support and encouragement men receive for their medical career ambitions (McLure and Piel, 1978), and the constraints of family life created for women when entry is postponed. Furthermore, girls who aspire to non-traditional occupations were found to have lower expectations of achieving their occupational goal than boys with similar aspirations (Marini and Greenberger, 1978). It is reasonable to expect that persistence will be less when expectations for success are lower.

## 2. Ultimate career choice

Becker *et al.* (1973), the only detailed study of ultimate career choice of unsuccessful medical school applicants, found that of those who did not enter medicine, a greater proportion of women than men remained in the health field. Among those who left the health field, the majority of men selected male dominated occupations (law and business), while the majority of women selected female dominated occupations (teaching). This study examines whether similar patterns occur in the Israeli sample.

## 3. Long-term academic investments

Studies show that women aspiring to non-traditional careers are more prepared to make long-term investments in training than are women planning traditional careers (Spitze and Waite, 1980). The high scholastic quality of medical school applicants, furthermore, make women, like men, attractive candidates for other faculties with a higher application to acceptance ratio than medicine.

### *Research questions*

1. Do women persist less than men in reapplications to medical school?
2. Do more women than men remain in the health *situs*? Do women not in medicine opt for female dominated occupations? Do more men than women exchange occupational *situs* for occupational status?
3. Are there sex differences in long-term academic investments?

## METHOD

### **Population and social context**

The population under study consists of unsuccessful applicants to the Tel-Aviv Sackler School of Medicine in the year 1970 ( $n=800$ ). A representative sample of 300 applicants was randomly drawn. Of these 224 were located at the time of the study (1979). Eleven refused to participate and in 25 cases data were obtained

from a spouse or parent of the respondent who was not in the country. The final sample of 213 comprised 179 males and 34 females. With only very few exceptions, first application was submitted following compulsory army service (3 years for males and 2 for females). In 1970 women comprised approximately 23 per cent of all applicants and 18 per cent of all those accepted to the Medical School.

Admissions were based on high school matriculation marks, the Raven Aptitude test and a personal interview. Women in general scored somewhat higher than men on matriculation marks and somewhat lower on the Raven test, although differences were not significant. The university was known to prefer offspring of medical doctors but was not reputed to discriminate against women. The proportion of women accepted annually since 1970 has been consistently between 5 and 10 per cent less than the proportion of female applicants. For example, in 1978 women comprised 44.4 per cent of the applicants and 35.3 per cent of those accepted.

The MD in Israel is a 7-year programme requiring no preliminary undergraduate degree. Until 1971 Israelis had the choice of only two local medical schools. Alternatively they could study abroad. Because of citizen and/or preliminary language requirements in most foreign countries, those who did go abroad, with only few exceptions, studied in Italian schools where admission is non-selective. For Israelis, studying in Italy is expensive, entails acquiring a new language, considerable social isolation and learning in a non-supportive academic structure built largely on self study. For these reasons, as well as because of the inferior job opportunities of Italian graduates, Israelis who begin studies in Italy prefer to complete their MD degree in Israel and persist in reapplying to Israeli schools. Of our sample, 38 per cent of the women and 32 per cent of the men began medical school in Italy.

### **Procedure**

Information was obtained by means of a telephone interview conducted by a small number of specifically trained interviewers using a structured questionnaire.

### **Dependent variables**

(a) Persistence in application: respondents were asked how many times they re-applied to medical school after the first rejection. In some cases the modal year (1970) was not the first application.

(b) Ultimate career choice: respondents were asked about their current occupation, whether and where they were employed and what their job role was.

(c) Academic investments: respondents were asked which academic degree(s) they had obtained or were in the process of obtaining.

## **RESULTS**

There are several indications that the unsuccessful female applicants were 'non-typical'. At the time of the follow-up, 100 per cent were employed compared to 75 per cent for Israeli women with 13+ years of schooling. Only 47 per cent were

married compared to 78 per cent of the men in the sample of comparable age. Of the marrieds, only 4 had at least one child; the only 4 who had married prior to beginning their university education.

On the average men are more persistent than women. Of the 179 males in the sample, 7.2 per cent reapplied once, 36.9 per cent twice, 30.2 per cent three times, 16.2 per cent four times and 9.5 per cent five times. Of the 34 females, 23.6 per cent reapplied once, 44.1 per cent twice, 20.6 per cent three times, 8.8 per cent four times and 2.9 per cent five times. The difference between the sexes is significant ( $X^2 = 11.5, p < 0.05$ ). This finding is consistent with that reported by Becker *et al.* (1973, p. 995).

Table 1 details the career choice of men and women as reported in 1979. Although the numbers in Table 1 are too small to permit any conclusive statement, a number of apparent trends suggest hypotheses worthy of further research. First, women

Table 1. Ultimate career choice by sex (absolute numbers)

Occupation		Men		Women	
Health	Total	120	67.0%	25	73.5%
Medicine		95		18	
Dentistry		13		1	
Veterinary		1		—	
Medical engineering		—		1	
Clinical psychology		1		1	
Research psychology		4		—	
Physiological research		3		3	
Pharmacy		1		—	
Medical biology		2		—	
Laboratory technician		—		1	
Hard sciences	Total	19	10.6%	3	8.8%
Biology		3		1	
Chemistry		2		1	
Engineering		13		1	
Agronomy		1		—	
Other	Total	40	22.4%	6	17.7%
Teaching (high school science)		2		3	
Adminst/bus/economic		15		—	
Law		5		1	
Military and Police (officers)		6		—	
Social Sciences		2		—	
Computers (systems analysis)		3		—	
Accountancy		3		—	
Tourism		2		1	
Clerical Work		—		1	
No information		2		1	

appear to make a greater commitment to the health field than men. If we discount those who entered medicine and dentistry, 40 per cent of the women compared to 16.9 per cent of the men selected alternative occupations within the health *situs*. A second finding is that only one-third of the women not in medicine selected female dominated occupations (teaching, clerical work, tourism); the remainder gravitated to what, in Israel, are male-dominated or mixed-sex occupations (Izraeli and Gaier, 1979). Even those in teaching (a female occupation) specialized in high school sciences (a mixed-sex specialization). Third, more men than women who failed to enter medicine opted for high status male dominated occupations such as engineering, business, accountancy, law and the military. It appears that men more than women exchanged occupational *situs* for high occupational status.

An examination of the highest academic degree actually or almost completed in 1979 reveals that men and women do not differ significantly in the extent of their long term academic investments. Of the 179 men and 34 women respectively highest degree achieved was as follows: M.D. 60.9 per cent and 55.9 per cent; Ph.D. 5.6 per cent and 5.9 per cent; M.Sc./M.A. 12.8 per cent and 14.7 per cent; B.Sc./B.A. 17.9 per cent and 23.5 per cent; no degree 2.8 per cent and 0.0 per cent. It is interesting to note that none of the women had failed to complete at least the B.A. degree.

## DISCUSSION

This study addresses the general issue of sex differences *within* an occupation. It found that after initial rejection from medical school, men were more persistent in reapplications than women; a greater proportion of men than women left the occupational field in favour of higher occupational status but women did not revert to traditionally female occupations. No sex differences were found in the extent of long-term academic investments.

The sex difference in persistence cannot be explained by the deterring effect of growing family responsibilities, which typically takes place among women in their 20s. Less than half the women in our sample had married and most who had, were in medicine. It may be suggested that the relatively lower expectations that women who aspire to non-traditional fields have about achieving their goal may have a depressing effect on persistence behaviour. These expectations may be influenced, furthermore, by the weak support given to women compared to the encouragement given to men, for non-traditional occupational aspirations which in turn may have a similar depressing effect.

An interesting additional possibility relates to sex differences in perceived equity. Becker *et al.* report that 'women were significantly more likely than men to perceive their own rejection as reasonable, despite their relatively better college grade-point averages' (1973, p. 997). It may be suggested that people who view their rejection as equitable are less motivated to persevere than those who do not. On the other hand women who view the admissions procedure as inequitable, that is, as biased in favour of men, are less likely to believe that perseverance will be effective. It may be hypothesized that the belief that one's own rejection was not equitable but that the system as whole is, are conditions conducive to perseverance. Perceived equity may also be a significant factor in observed sex differences in

other types of persistence behaviour such as asserting one's demands for promotion, or a better job.

The alternative occupational choices of those not in medicine suggest that men and women may be initially attracted to the profession for different reasons. Becker *et al.* (1973), for example, found that a significantly higher proportion of males than females unsuccessful applicants rated prestige and high income as important reasons for entering medicine. Job outcome preferences, however, are also shaped by perceived opportunities in the work setting (Kanter, 1977). Occupations that rank high in prestige and income are also those with fewest female role models and least welcoming of women. Bartol and Manhardt (1979) who studied sex differences in job outcome preferences of college graduates entering business, a week after their appointment, found that over a nine-year period, the job outcome preferences of women had converged towards that of men. They explain that women in 1974 attributed greater importance to career aspects of their jobs than in 1966 because affirmative action legislation had expanded career opportunities for women. In the early 1970s in Israel, the other high status occupations such as law and engineering, were even more male dominated than was medicine (in which women then comprised approximately 25 per cent of the practitioners) (Central Bureau of Statistics, 1976). The fact that fewer women than men in our study left the health *situs* for other high prestige and income occupations may in part be reflective of sex differences in anticipated job opportunities in other male dominated occupations.

Achievement generally requires persistence especially in the face of initial failure. Sex differences in persistence behaviour among adults have not been adequately explored. Although our sample was small and the nature of the available data limited, our study suggests that future research into intra-occupational sex differences needs to examine the moderating effects of such variables as perceived equity of rejection and opportunity structure on the relationship between sex and persistence behaviour as well as between sex and alternative occupational choice, respectively.

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