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Peer expectations about outstanding competencies of men and women medical students

Abstract Men and women enrolled in a combined premedical-medical school programme were asked as they began their clinical training to rate their anticipated competence on sixteen criteria relevant to medical practice. Competence dimensions tapped scientific/technical skills, dedication/commitment, and interpersonal skills. Students then were asked to nominate one classmate whom they expected might be 'the best' in each area. Self-ratings revealed few differences among men and women. Peer nominations, however, revealed a preponderance of male nominees in ten competence areas. Women dominated nominations only in the category of sensitivity to patients. Patterns persisted when peer nominations were controlled for students' academic standing and self-ratings on parallel dimensions. The data suggest that medical school peer groups share expectations about competencies of men and women as physicians which are consistent with generalized sex stereotypes and career patterns of men and women physicians.

Introduction

Women physicians in the United States are over-represented in speciality fields such as pediatrics, psychiatry, and public health and under-represented in internal medicine and surgical subspecialities, research, and academic medicine (Cuca, 1979; Pennell and Showel, 1975; Braslow and Heins, 1981). Sex distributions across medical specialities are similar in other Western countries (see, e.g., Frey, 1980; Gordon, 1980; Gray, 1980; Kelly et al., 1979; Swerdlow et al., 1980). Some writers (see Bowers, 1968) view sex distributions within the profession as reflective of differences in orientations among men and women. Women presumably choose areas which maximize qualities of compassion and sensitivity, stereotyped as 'natural' attributes of all women. Other writers (Ewan and Bennett, 1981; Ginzberg, 1968; Nortman and Nadelson, 1973; Swerdlow et al., 1980) contend that women physicians choose speciality areas which minimize conflicts between personal-family

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and professional life. Others (e.g. Davidson, 1979; Leserman, 1981; Lorber, 1981; Lowenstein, 1979; Quadagno, 1976; Rinke, 1981a, 1981b; Walsh, 1977) believe that women are channelled, in direct and subtle ways, toward positions which are lowest in pay and prestige in the profession.

This study examines a potentially very powerful, but little-studied, source of influence on career choice – the medical student peer group. It analyses patterns of shared expectations within student peer groups about competencies of men and women students to excel in certain aspects of medical practice. Shared assumptions among peers about men's and women's competencies, it is argued, can influence self-assessments of competence and perhaps also affect career choices. Unlike most studies of professional/collegial groups (see, e.g. Kanter, 1977; Epstein, 1971), this research focuses on groups in which women constitute greater-than-token proportions of members of professional trainees. It examines whether or not sex of a student has a systematic effect on the way peers evaluate his or her competencies.

As Coombs (1978) and Bosk (1979) have documented in ethnographic studies, many factors in the medical education process affect a student's conception of her or his skills. Faculty, administrators, hospital staff, clinical professors, and peers all contribute to these self-assessments. Experimental work (Rosenthal and Rosnow, 1978) shows that expectations have strong effects on one's performances, even when these expectations are not transmitted explicitly. Although these experimenters were not concerned with issues of professional socialization, their work suggests that even non-conscious expectations can affect self-assessments and performances.

For most medical students peer groups are critical support mechanisms and important arenas for professional socialization. Not only do students spend a great deal of time with peers, but they also use them as 'social mirrors' to forge images of themselves as professionals (Coombs, 1978). In their study of physicians in postgraduate training, Bucher and Stelling (1977) found that when structural arrangements permitted the formation of cohesive peer groups, these associations became important comparative reference groups for assessing one's competence in the role of physician.

Peer appraisals might be even more important for women medical students than for their male classmates, who report finding more role models among faculty and house staff at teaching hospitals.[1] Although enrolments of women in American medical schools have increased dramatically in the last decade, the majority of these women are still in training. American medical school staff, especially clinical teaching staff, includes few women. Braslow and Heins (1981) found only 13.3

per cent women on medical school faculties in the United States in 1980, and more than half of these were PhDs who taught basic or social sciences rather than the MD clinical teachers whom medical students esteem the most (Coombs, 1978). Lacking faculty and practitioner role models, women students might be especially dependent in comparison to men on peers' assessments for development of professional identities. Social comparison theory (Festinger, 1954) suggests that in ambiguous situations, where models for emulation are not apparent, one typically turns to persons of similar characteristic and equal status in a social system and engages in a process of social comparison to develop self-assessments. Although works of Coombs (1978) and Bucher and Stelling (1977) suggest that social comparison processes are important in the development of physicians' professional identities, their research does not explore the possibility that these processes might operate differently for men and for women.

As organizers of support networks for women medical students have recognized (see, e.g. Hilberman et al., 1975), peer groups sustain important alternative visions for individuals attempting to defy traditional standards. But peer groups also can serve as enforcers of norms and values about women's 'place' within professions.

Research on women in token statuses in professional peer groups has shown that they are pressured towards assuming limited roles consistent with social stereotypes about attributes of women (Epstein, 1971; Kanter, 1977; Ridgeway, 1978; Wolman and Frank, 1975). Internal dynamics of these groups make it difficult for women to break out of stereotyped roles and gain recognition for competencies not stereotyped as 'feminine'. Deaux (1976) theorizes that on tasks commonly thought to be in the masculine domain (such as the physician's role) peers hold expectancies based on sex which ascribe greater competence to men and lesser competence to women. Even when women demonstrate 'unexpected' competence, such performances are attributed to luck or other transitory factors, rather than to ability. Expectations for performances of women are not fundamentally altered.

In work focused explicitly on medical student peer groups Gross and Crovitz (1975) and Frank and Katcher (1975) found consistencies in male medical students' characterizations of their female classmates. In their study of medical student dissection teams for an anatomy laboratory, Frank and Katcher found that men students rated female team-mates as low in dominance and low in task-orientation when women constituted single tokens in six-person teams. When women constituted half the membership of teams, however, they were seen by the males as high in task-orientation but low in dominance. Thus,

women's commitment to the task was perceived as greater when they were not tokens.

Kanter (1977) suggested that as women come to constitute greater-than-token proportions within various strata of professions, the pressures which confine them to stereotypical 'women's' roles would be reduced. She suggests 25 to 30 per cent as the point at which such pressures might be expected to diminish. This study examines patterns of shared peer expectations in groups which are above this 'critical mass' point.

Methods

Students enrolled in the Integrated Premedical-Medical programme (Inteflex) at the University of Michigan, Ann Arbor, USA, were interviewed near the end of their fourth year in the programme. Inteflex is an accelerated programme which admits students directly from high school and trains them as physicians in six years. Unlike most US medical training programmes, the Inteflex programme does not require reapplication and selection between the premedical and medical phases. Evaluation studies have shown it to be substantially more effective than comparable premedical-medical tracks in retaining women through successful completion of the MD. Equal proportions of men and women, about 85 per cent, successfully complete the programme. In standard premedical track at the university, however, the dropout rate for women students is twice that for males. Only 27 per cent of women who began a premedical major went on to medical school, in comparison to about 54 per cent of the men, although dropout rates in the medical school phase were low for both men and women, in each case less than 4 per cent.

Among the Inteflex programme's goals are an early introduction to patient care and the production of humanistically oriented doctors who are knowledgeable about psycho-social aspects of illness. The curriculum includes more coursework in humanities and social and behavioural sciences than most premedical and medical programmes in American universities. At the end of their fourth year, students are completing their last semester of classroom-based coursework before beginning two years of clinical rotations. They have had brief clinical exposure, mostly as observers, in two required courses.

Since the programme began, each Inteflex class has enrolled 50 students. Women have comprised from 25 to 45 per cent of the enrolment of each class, about double the proportion of women enrolled in all US medical schools for comparable cohort years. On

programme-evaluation questionnaires students have characterized the classes as closeknit, and most report spending substantial free time with classmates.

Inteflex students who entered the programme in the autumns of 1972, 1974, 1975, and 1976 were interviewed in the springs of 1976, 1978, 1979, and 1980, respectively.[2] Of the 200 students who entered in these years, 163 were still in the programme and had finished four years of class-work at these points and thus were eligible to be interviewed. Of these 159 (or about 97 per cent) participated in personal interviews as part of an evaluation project. Interviews lasted an average of 90 minutes and covered a broad range of topics about student's experiences at the university and in the programme. Respondents included 99 men (60 per cent) and 66 women (40 per cent) and constituted a population, rather than a sample, of students in the programme.

Measures

Self-ratings

Students were asked the following question:

> How would you rate yourself on each of these dimensions relative to your classmates in the programme?

Interviewers then read each of the following, asking students to rank themselves on a six-point, Likert-type scale, ranging from 1 (low) to 6 (high): knowledge of medical science; clinical competence; regard by medical faculty; competence as a practitioner; instructor in academic medicine; researcher in medical science; competence as a family practitioner; sensitivity to patients; social consciousness; dedication as a practitioner; respect by professional peers; leadership in community; likely to practise in a poverty area; happy in your work; contributor to medicine; successful in eyes of society.

Three male and three female students refused to make self-assessments on all or some dimensions. Self-ratings were obtained for men and women in each cohort. Examination of the class-by-class patterns in ratings revealed no meaningful differences by cohort. In all instances means for men and women in separate cohorts differed on each dimension by less than 0.3. Therefore, data from all cohorts were combined for analysis.

Peer nominations

After each student had completed self-ratings, she or he was asked to reconsider each dimension and nominate one classmate who excelled on each. This item was phrased as follows:

> We would like for you to nominate students in the Inteflex programme whom you think are most likely to achieve certain goals. Here is a roster of names of students in the programme; would you give me the name of the student you would nominate as most accurately described by the following phrases?

The student was then asked to nominate one class member (excluding the respondent) for the following: has the most thorough knowledge of medical science; demonstrates the greatest clinical competence; is thought of most highly by the medical faculty; will become the most competent practitioner; will become the best instructor in academic medicine; will become the best researcher in medical science; will become the best family practitioner; will be the most sensitive to patients; will be the most socially conscious physician; will be the most dedicated practitioner; will be the most respected by professional peers; will be the most active community leader; will be most likely to practise in a poverty area; will be the happiest in his/her work; will make the greatest contribution to medicine; will be the most successful physician in the eyes of society.

Twenty students declined to make nominations on some or all dimensions. This represented 16.7 per cent of the women and 9.1 per cent of the men who were interviewed. Because of these refusals, each competence area yielded from 144 to 148 valid nominations.

Although students were asked to nominate only persons from their own class, nominees from all four classes were pooled to determine whether or not a particular dimension was sex-dominated. This step was taken only after analysis of class-by-class data indicated no differences in patterns by cohort. The one exception to this was on the dimension of 'most likely to practise in a poverty area'. This dimension drew mostly male nominees in one class, mostly female nominees in another, and a near-equal proportion of male and female nominees in the other two classes.

Definition of sex-dominated competence dimensions

A decision rule was established *a priori* to designate a competence area as sex-dominated if the proportion of peer nominations going to male nominees exceeded by 15 per cent or more the proportion of male respondents. Since there were 60 per cent male respondents, an area was regarded as male-dominated if 75 per cent or more of the nominations as 'the best' went to men. Similarly, since there were 40 per cent female respondents, a competence area was designated as female-dominated if 55 per cent or more nominations as 'the best' in that category went to women. Other dimensions were considered not to be

dominated by either sex. (Because these are population, rather than sample, data tests of significance of differences in proportions of nominations are not appropriate.)

Academic standing

The academic standing of each student was measured by the overall grade-point average attained in all courses at the end of year four. In the first four years the Inteflex programme provides grades for students in all required and most elective courses, using a 0 to 4.0 scale. Mean grade-point averages for male and female respondents were quite similar, 3.31 for the men and 3.14 for the women (in the mid to high B range).

Results

On the peer nominations measures the criteria noted previously identified ten dimensions as male-dominated, one as female-dominated, and five as not dominated by either sex (Table 1). The male-dominated dimensions were: best knowledge of medical science; best researcher in medical science; most respected by professional peers; most successful in eyes of society; best instructor in academic medicine; most highly regarded by the faculty; most successful in the eyes of society; greatest contributor to medicine; and most competent clinician. Men were overnominated, relative to their proportions in the class, on these items.

Only one competence area, sensitivity to patients, was female-dominated. Five areas were not dominated by persons of either sex. These were: most socially conscious physician; most competent family practitioner; most dedicated practitioner; likely practitioner in a poverty area; and individual likely to be happy in his/her work. Thus, men were overnominated on dimensions suggesting technical/scientific competence and success and recognition within and outside the medical community. Women were overnominated on the sensitivity dimension. Men and women were nominated in approximately their proportions in the class on issues related to personal happiness, dedication to the profession, and success in non-medical roles (such as social consciousness).

Patterns of nominations made *by* men and *by* women were also examined. In all cases these were very similar, in no instance differing by more than 4 per cent from the pooled nominations or from the nominations made by the other sex. These patterns were the same as well for each cohort. There thus was no evidence that women were more likely than male classmates to nominate female peers (or avoid nominating them). The same was true for male nominators.

Table 1 Proportions of male and female students nominated by classmates as 'best' on sixteen dimensions of medical knowledge and practice

	% Nominees Male	% Nominees Female	N**
Male-dominated dimensions*			
Knowledge of medical science	99.2	.8	148
Researcher	98.4	1.6	147
Respect of professional peers	96.8	3.2	146
Instructor	95.5	4.5	146
Regard by medical faculty	94.4	5.6	146
Successful in the eyes of society	93.1	6.9	145
Contributor to medicine	91.8	8.2	144
Community leader	88.6	11.4	146
Clinical competence	84.2	15.8	146
Competent practitioner	76.0	24.0	145
Female-dominated dimensions**			
Sensitive to patients	25.0	75.0	147
Non-sex-dominated dimensions***			
Happy in work	66.3	33.7	146
Socially conscious	60.0	40.0	147
Dedicated practitioner	61.0	39.0	146
Family practitioner	57.4	42.6	145
Poverty-area practitioner	51.2	48.8	146

*A dimension was designated *a priori* as male-dominated if male nominees on that dimension exceeded the proportion of males in these classes by 15% or more. Thus, any dimension with 75% or more males was sex-dominated.
**A dimension was designated female-dominated if female nominees on that dimension exceeded the proportion of females in the class by 15% or more. Thus, any dimension with 55% or more female nominees was female-dominated.
***N here represents the number of nominations made in this category by all students interviewed. Each respondent nominated only one classmate (excluding himself/herself) on each dimension.

To probe the possible sources of these patterns of nominations, relationships among peer nominations, self-ratings, academic standing, and sex of student nominated were explored.

Self-ratings and peer nominations

One possible explanation for the observed patterns of peer nominations is that women had distinctively different perceptions of their own competencies than did men classmates. These self-expectations might be transmitted in direct and indirect ways to classmates, who then

formed assessments which paralleled the women's own. Horner (1972), for example, hypothesized that women experience conflicts about feminine identity if they compete with men in arenas typically defined as masculine. One response to such pressure is a reduction in aspirations and a devaluation of one's own competencies – what Horner terms 'the motive to avoid success'. Presumably, the process is reflected in women's self-presentation so that others come to devalue their competence. Peer nominations, according to this theory, might simply be reflections of internally based differences in assessments of abilities among men and women.

The self-ratings reported in Table 2 give little support to this explanation, however. Most students rated themselves above the midpoint in competence on dimensions paralleling those used in peer nominations. This placed both men and women, on the average, towards the 'competent' end of the scale. The only exception was in the competence area of research, which was downrated both by men and women students. The ratings are understandable when one recalls that the Inteflex programme seeks to train primary-care practitioners rather than researchers.

On most competence dimensions the mean self-ratings of men and women are similar and less than 0.5 apart. (Since these are population data, significance tests are, rigorously speaking, not appropriate. However, they are presented nevertheless as a heuristic device which can be used to help interpret the substantive, rather than the statistical, significance of the parameters.)

Five areas did show a significant difference by sex, however. Men rated themselves nearly a full point higher than female classmates on two dimensions: instructor in academic medicine, and researcher in medical science. Men also rated themselves half a point higher than women on the 'best knowledge of medical science' dimension. Women, in contrast, rated themselves half a point higher than did men classmates on 'sensitivity to patients'. Their mean rating on the 'happy in work' dimension also was somewhat higher than that of men. Thus, men were somewhat more confident about their research, teaching, and medical science knowledge abilities, while women were somewhat more confident about their sensitivity and their expectation that they would be happy in their work. As comparisons of Tables 1 and 2 show, the patterns in the self-ratings did not always parallel those in peer nominations. On some dimensions (for example, regard by faculty) there are reversals in direction by sex in the self-ratings and the peer nominations.

Another theory which views women themselves as primarily responsible for lack of recognition of abilities of females in professions is what

Table 2 Mean self-ratings of male and female studens of their own competencies, in comparison to classmates, on sixteen dimensions of medicine.[a]

	Mean score for males (N=90)	Mean score for females (N=58)	Mean score for all students (N=148)
Knowledge of medical science	4.49**	4.03**	4.31
Researcher	3.61**	2.02**	3.00
Respect of professional peers	4.38	4.43	4.34
Instructor	3.89**	2.95**	3.89
Regard by medical faculty	3.83	3.77	3.93
Successful in eyes of society	4.25	4.14	4.21
Contributor to medicine	3.92	3.60	3.79
Community leader	3.71	3.79	3.74
Clinical competence	4.58	4.40	4.51
Competent practitioner	4.77	4.81	4.79
Sensitive to patients	4.84**	5.43**	5.07
Happy in work	4.75*	5.22*	4.94
Socially conscious	4.48	4.41	4.46
Dedicated practitioner	4.40	4.60	4.49
Family pratitioner	4.44	4.86	4.61
Poverty-area practitioner	3.29	3.56	3.40

[a] Students were asked to rate themselves in comparison to classmates on a 1–6 (very low to very high) scale in the sixteen areas.
**Significant sex difference, $p < .001$.
*Significant sex difference, $p < .05$.

has been termed the 'queen bee' syndrome (Staines et al., 1974). According to this argument, women who achieve at high levels in male-dominated professions are confident about their own skills, but think of themselves as exceptions among their sex and devalue the abilities of other women. This allows them to guard a privileged status as the only woman of high attainment. While women were not any more likely than male classmates to nominate other women as 'the best' on most dimensions, there is no evidence that they avoided nominating other women in any greater proportions than their male classmates. Thus, two types of theories which would attribute lack of recognition of women's skills primarily to the women themselves are not well supported by these data.

Peer nominations and academic standing

Another possible explanation for patterns of sex dominance in peer

nominations is that students selected a few outstanding students in each class and gave them repeated nominations in several categories. Although mean grade-point averages for men and women were less than 0.2 apart, most of the students in each class with 3.9 or 4.0 averages were male. Of nine students with averages in this range, only one was a female. If students repeatedly nominated these male academic superstars, the result might be a substantial dominance by male students, attributable primarily to the grade-point averages of a few students.

This was not the case, however. The students nominated from 24 to 59 different individuals on each dimension. The academic superstars were not the most frequently nominated students overall in any cohort, although most were nominated in moderate amounts, especially on the dimensions of: best knowledge of medical sciences; most highly regarded by faculty; or greatest contributor to medicine. Students' academic achievement affected nomination in some categories, but did not fully account for sex-dominance in all competence areas.

Peer nominations, sex, self-rating, and academic standing

To examine the combined effects of all these variables, and also sex of student, on peer nominations a set of multiple regression analyses were performed on the pooled data from the four classes. Frequency of nomination, represented by a proportion variable calculated as frequency of nomination divided by chances of nomination within one's cohort, was the dependent variable (Y). Two models were tested, a saturated model with interaction terms and an unsaturated model. The saturated model included the following predictors:

$$Y = B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + E$$

where Y indicates the proportional likelihood of nomination variable for an individual on a particular dimension.

X_1 indicates a dummy variable for student sex, coded 1 = male, 0 = female.

X_2 indicates academic standing, as measured by the fourth-year cumulative grade-point average on a 0 to 4.0 scale.

X_3 indicates the student's self-rating on a 1 (low) to 6 (high) scale on the parallel dimension.

X_4 indicates a sex by grade-point average interaction term.

X_5 indicates a sex by self-rating interaction term.

E indicates an error term.

The unsaturated model was:

$$Y = B_1 X_1 + B_2 X_2 + B_3 X_3 + E$$

These analyses allow examination of the effects of sex of student on his or her frequency of nomination, holding constant the effects of

Table 3 Unstandardized beta coefficients and R^2s of multiple regression of student's peer nominations as 'the best' on eight sex-dominated medical dimensions on academic standing and nominee's self-ratings of competence on the parallel dimension[a]

		Constant	Academic standing[b]	Self-rating on this dimension[c]	R^2
Knowledge of medical science	Males	−28.32	.43	3.95	.199*
	Females	.82	.85	−.25	
Researcher	Males	−15.12	.32	2.97	.334**
	Females	−1.08	.61	.32	
Respect of professional peers	Males	−39.47	.98	2.35	.287**
	Females	−7.90	1.97	1.79	
Regard by medical faculty	Males	−20.63	.39	1.91	.296**
	Females	−.42	.75	−.04	.296**
Successful in eyes of society	Males	−21.52	.64	.83	.244**
	Females	−.77	1.25	.14	.244**
Contributor to medicine	Males	−27.97	.69	2.13	.292**
	Females	.86	1.38	−1.08	
Most competent practitioner	Males	−25.84	.71	1.08	.208*
	Females	.637	1.37	.046	

[a] Measured as overall GPA in all course work at the end of four years in the programme on a 0 to 4.0 scale.
[b] Rankings for each dimension on a six-scale ranging from 1 (very low) to 6 (very high) on this dimension 'in comparison to your classmates'.
[c] Dummy variable for sex coded males=1, females=0.
**Significant at $p < .01$.
* Significant at $p < .05$.

academic standing and self-rating. Tables 3 and 4 report the results. Where interaction terms were significant, Table 3 reports separate equations for men and women nominees. Interaction terms were not significant for three sex-dominated dimensions listed in Table 4, but there were significant effects of sex, self-rating, and/or academic standing.

For the eight dimensions listed in Table 3, where interaction terms were significant, men and women with equivalent self-ratings and academic standings had unequal probabilities of being nominated as 'the best' on a particular dimension, and this difference in probability of nomination was significant.

Table 4 Unstandardized beta coefficients and R^2s of multiple regression of student's peer nominations as 'the best' on three sex-dominated medical dimensions on sex, academic standing, and self-rating

	Constant	Sex[a]	Academic standing	Self-rating on this dimension	R^2
Community leader	−11.50	2.32*	.18	1.74**	.168
Clinical competence	−13.32	1.45(ns)	.33**	.821*	.125
Sensitive to patients	3.67	−2.84**	−.03(ns)	−.05(ns)	.109

[a] Dummy variable for sex coded 1 = male; 0 = female.
**Significant at $p < .01$ or better.
* Significant at $p < 0.5$ or better.

Interaction terms were significant and showed a consistent pattern on eight of the ten male-dominated peer nominations dimensions. These dimensions reflect two more general themes: competence in knowledge/scientific/research dimensions of medicine and anticipated recognition and reward from peers and society. On each dimension the self-ratings were more highly correlated with peer nomination as 'the best' on the parallel dimension for men as compared to women. For these eight dimensions the regression coefficients for male students are positive and larger than the regression coefficients for women. This means that men and women with equal levels of self-rated competence had unequal probabilities of being recognized by peers as 'the best', and that this difference is significant. Male students with moderate to high self-ratings in an area were apt to be nominated by peers as 'the best'. Women with self-ratings in this range were nominated substantially less often.

Men did have somewhat higher self-ratings than did women on some of the technical/knowledge dimensions (see Table 2), but there were no male-female differences in self-ratings on the recognition and reward dimensions. Even when these differences in self-ratings were controlled, however, male students were more likely than were women classmates to have their positive evaluations of their skills recognized and endorsed by classmates.

The reverse pattern appeared for the sex and academic standing interaction term. Academic achievement was more highly correlated with peer nomination for women than for men. As Table 3 shows, the regression coefficients for academic achievement are positive and consistently higher for women as compared to men students. Among men and women with equivalent academic standing, women were

significantly more likely than men to be nominated as 'the best', with self-rating controlled. The greatest difference appeared among students with grade-point averages slightly above the mean. Among this group, women were nominated somewhat more frequently than men. Since all these eight dimensions were male-dominated, the sex and self-rating interaction exerted a more powerful influence on peer nominations than did the sex and academic standing interaction.

On three dimensions which were sex-dominated in peer nominations, there were no significant interactions among variables in the saturated model, but there were significant effects of sex and/or self-ratings (Table 4). These were: active community leader; competent clinician; and sensitive to patients. There were significant sex effects and self-rating effects (but no significant interactions) on the male-dominated 'active community leader' dimension. Being male and having a high self-rating on this dimension contributed to one's likelihood of being recognized by peers as 'the best'.

On the 'sensitivity to patients' dimension, the only significant predictor of rate of peer nomination was sex. Female students were significantly more likely than were men to be nominated on this dimension. Women did have a significantly higher mean self-rating on this dimension than did male classmates, and their self-confidence in this area was recognized and endorsed by their peers.

On the 'clinical competence' dimension, there was no significant association between sex and one's rate of nomination by peers. However, both self-rating and academic standing were significantly related to rate of nomination.

Discussion

The results indicate that a medical student's sex does have a systematic impact on the evaluations of his or her skills made by peers. Peers provided differential recognition of men's and women's competencies. Male students were apt to be more confident than were women classmates of their technical skills and medical knowledge. Their peers also recognized them as competent in these areas. Thus, males' generally favourable self-concepts about technical skills and medical knowledge were enhanced by peer appraisals. Women students were less confident about skills in these areas, but even when they were confident, they were less likely to be recognized as such by classmates. Thus, women did not have the support which men had among peers for sustaining their favourable self-assessments about these types of skills. Women students were more self-confident than men about their sensitivity in

dealing with patients and also received more recognition from peers than did men for this interpersonal skill.

Men and women students showed less stereotypical responses in their expectations about men and women's dedication to their practices and/or happiness they would experience later in life. In these respects the students were more liberal than medical school faculty and administrators, whom Bourne and Wikler (1978) found harbour pervasive expectations that women will be less dedicated than men to medical practice or will experience greater dissatisfaction as physicians because of family life/career conflicts.

Interpretation of the results should be tempered with several cautions. First, the explained variance in the regression equations (Tables 3 and 4) is relatively low. Undoubtedly, many factors not included in this study, such as friendship patterns among peers, contribute to nomination patterns. Second, women were somewhat more likely than men to refuse to make peer nominations, a factor which might have biased the results in unknown ways. Third, the Inteflex programme might be atypical, rather than typical, of most American medical schools, although one might anticipate that its social climate might be more liberal than most because of its curricular emphasis, programme goals, and enrolments of greater-than-average proportions of women students.

It is important that one does not misinterpret the under-representation of women as nominees as 'the best' in particular dimensions of medical science or medical practice as an indication that classmates viewed them as incompetent in these areas. Indeed, as Arnold et al. (1981) have shown, men and women's perceptions of one another's capabilities as practitioners can be altered in the clinical rotations phase of training. Their study of peer assessments of performance in internal medicine rotations revealed no significant sex differences in overall evaluations.

Nevertheless, this study does provide evidence of systematically different shared expectations within medical student peer groups about men's and women's capabilities. These differences appeared in four classes of a programme enrolling greater-than-token proportions of women students. One might anticipate that they would be even more intense in programmes which enrolled fewer women or in which women were relative newcomers.

The study calls into question theories which suggest that women themselves are primarily responsible for stereotypical images about them which permeate the medical student peer culture. Systematic influences external to women seem important in defining and limiting their conceptions of competence, and perhaps also their career choices.

Women in this study did not denigrate their own skills, nor did they stand out as exceptionally likely to devalue the skills of women classmates. Rather, they seemingly judge classmates of both sexes by the same ideologies reflecting sex stereotypes as do other actors in the medical school setting.

Full exploration of possible sources of this stereotypical ideology is beyond the scope of this paper. Some components might be reality-based. Students probably realize, for example, that women physicians have greater difficulty than men in gaining public recognition for their attainments, especially within the top echelons of US medicine and medical education (see Lorber, 1981, on this point). Another possible source of sex stereotypical ideology is latent culture. Becker and Geer (1960) define latent culture as one which has its origins and social supports outside the group in which members are now participating. Latent culture, they believe, has an impact on processes within medical student peer groups to the extent that members share a common latent culture if the immediate situation does not explicitly block out the latent cultural influence. American medical students, most of whom are drawn from the white middle class or upper middle class, share a common latent culture with established norms about appropriate roles of men and women.

Whatever is its source, the pattern of shared expectations among medical school peer groups has a meaningful impact upon the professional socialization of young men and women physicians. Coombs (1978) and Bucher and Stelling (1977) document that students have only a vague conception of normative aspects of physicians' roles as they begin clinical work. Most receive little explicit instruction from faculty or practising physicians in the normative aspects of their professional roles. They thus turn to peers to discuss, compare, and rehearse professional roles. Women, finding fewer female physicians to serve as role models, may rely heavily on peer groups for guidance. The findings presented here suggest that peer groups provide systematically different 'mirrors' for men and women students and thus may perpetuate rather than diminish differentiation by sex in the socialization of men and women students.

Men who are thought by peers to be competent in research and teaching, for example, receive affirmation from peers for maintaining confidence in their skills in this area and for incorporating them into their professional identities. But over time men may lower their estimation of their sensitivity to patients, since their competence in this area is less often recognized by peers. Women, in contrast, do not receive support for maintaining self-confidence in research or teaching skills, but do have their assessment of sensitivity confirmed by peers.

The pattern of peer appraisals noted among these students may also lead them to behave differently toward men and women classmates in ways which encourage development along divergent pathways.

The link between peer appraisals and career choices is more tenuous and has not been tested directly in this study. However, the dominant themes in peer appraisals of outstanding competencies of men and women students are consistent with the career choices which they make. The men and women students in the Inteflex classes represented in this study, like most men and women physicians in comparable graduating classes of all US medical schools, made sex-typical career choices. The themes apparent in peer appraisals also are consistent with Leserman's (1981) finding that women medical students felt pressured, both by faculty and peers, to enter certain specialities such as paediatrics or psychiatry and to avoid others such as surgery or pathology. They also are consistent with what Bourne and Wikler (1978) and Ducker (1978) have described as persistent beliefs among US medical school faculty and administrators that women students are less likely than men to excel in scientific and research aspects of medicine. The perception of 'no room at the top' in certain branches of medicine might be especially discouraging for women medical students, who are the successes of intense competition to gain entry into medical school.

Finally, the patterns of peer nominations found here, if they accurately reflect overt or covert ideologies present in other medical training programmes, suggest that bringing large numbers of women into male-dominated institutions and professions at low-status levels does little to alter stereotypical expectations or to insulate women from pressure to adopt certain roles. If the higher echelons remain male-dominated, as is the case with American medical schools, women will continue to experience subtle but real pressures to conform to traditional sex stereotypes. These pressures will persist until women are well represented among top administrators and policy-makers in medical education.

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Notes

1. Epstein (1971) makes a useful distinction between a mentor and a role model. A mentor can be a person of any ascribed status characteristics who supports a woman's achievements and provides sponsorship for career entrée. A role model, however, must have the same ascribed status characteristics as the person he/she encourages. Role models, unlike mentors, can not simply offer support but also demonstrate the penetrability of the system to persons of that 'type', model appropriate behaviours, and give firsthand advice on dealing with issues unique to persons with those statuses: e.g. overcoming a patient's reluctance to treatment by a woman physician or fending off sexist remarks made by supervisory staff.
2. Unusual scheduling problems in spring 1977 resulted in more than one-third of the 1973 class not being interviewed. This class was omitted from the study. Only one of the four non-respondents (a male) refused to be interviewed. The other three were out of the country and could not be scheduled for interviews.

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