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PATIENTS', MEDICAL STUDENTS', AND PHYSICIANS' PERCEPTIONS OF MALE AND FEMALE PHYSICIANS[1]

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Summary.—Using data from the Bem Sex-role Inventory, this study examined the hypothesis that male and female physicians are perceived differently both by their patients and by other physicians and medical students. This hypothesis was confirmed. Not only were significant differences in profiles of male and female physicians noted, but differences were also found among the three groups surveyed. Further, some of the differences in perception of male and female physicians were related to the sex rather than the group identity of respondents. Female patients, and to some extent female medical students, tended to view women physicians most often as androgynous and feminine. Male medical students tended to view women physicians in reverse pattern, i.e., most often feminine and then androgynous. Male physicians viewed the woman physician most often as feminine, like medical students, and then as undifferentiated. Both male and female patients and medical students tended to view the male physician most often as undifferentiated and masculine. Male physicians viewed their male colleagues most often as clearly masculine. Implications of these differences for residents' training and quality of patients' care are discussed.

Recently there has been considerable public and private concern over physicians' ability to relate optimally, or even appropriately, to their patients (Bertakis, 1977). Concern about the physician-patient relationship and its implications for patients' care has emerged as a sensitive consumer issue, and increasingly, demands for major alterations are being made of the medical profession (Pellegrino, 1974).

Numerous analyses of the physician-patient relationship have been attempted, based on various personality and psychological theories (Balint, 1964; DiMatteo, 1979; Anthony & Carkhuff, 1976). Often these have focused on communication deficits. An additional, and as yet relatively unexplored, way to think about the physician-patient relationship is to examine both the biological sex and the sex-typed behavior of the individuals involved.

One may assume that physician-patient interactions involve the necessity on the part of the physician to manifest what have been termed expressive and

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instrumental (Parsons & Bales, 1955) or agentive and communal (Bakan, 1966) traits. It has been pointed out that instrumental behaviors have traditionally been perceived to be more characteristic of men, while expressive attitudes and behaviors have been perceived to be more characteristic of women (Spence, *et al.*, 1979). In interacting with their patients, physicians need to exhibit such typically masculine or instrumental qualities as assertiveness, initiative, willingness to take risks, and ability to make decisions. They also need to demonstrate more expressive, or stereotypically feminine, qualities of tenderness, gentleness, nurturance, softness, warmth, and understanding. Physicians who demonstrate exclusively one mode or the other with their patients might well be doing these patients a disservice, either in terms of the science or the art of the medicine delivered. Similarly, physicians who are not skillful in either of these dimensions might also run a risk of inadequately serving their patients.

The present study was undertaken with the above ideas in mind. Specifically, one way to examine this issue in a preliminary fashion was to determine, by use of a standardized personality inventory, how physicians were viewed along the above dimensions by different groups of people in terms of how they typically behaved with their patients. For the purposes of this study, three groups were identified: patients, medical students, and physicians themselves. In view of the impressive body of literature documenting that men and women are perceived as differing in personality characteristics (Rosenkrantz, *et al.*, 1968; Spence, *et al.*, 1975) perceptions of male and female physicians were solicited independently. It was hypothesized that, in terms of their typical interactions with patients, subjects might perceive significant differences between the ways in which male and female physicians behaved.

METHOD

Subjects

Subjects were 120 males and 166 females. By group, there were 161 patients (including both clinic and private sources), 86 medical students, and 39 physicians surveyed. A disproportionately high number of patient-subjects were women (133), while the skew was reversed for medical students and physicians (59 and 33, respectively).

Patients.—One hundred thirty-three females and 28 males were surveyed. The mean age of the male patients was 42.3 yr. and of female patients 34.9 yr. The largest percentage of male patient respondents (26.9%) had received a college education, although there was a wide range of educational attainment from elementary school to Master's degree. Twenty-five percent of male patient-respondents were professional people, while 21.4% worked in clerical and sales, 14.3% were in machine trades, and the rest fell into miscellaneous categories. Of female respondents 26.3% were housewives, 21.1% in clerical and sales positions, and 15.0% professional. The remainder were either not ascertained or miscellaneous. Eighty-six percent of the males and 82.0% of the females were Caucasian. Of male respondents (13), only 30.8% had ever seen a female physician, while of the female respondents (45), 57.8% had seen a woman physician at least once.

Medical students.—Fifty-nine male and 24 female medical students were subjects in this study. The mean age of the males was 24.1 yr. while the mean age of females was 24.5 yr. Sixty medical students came from the first year, 9 from the second year, and 15 from the third year in medical school. Seventy percent of the males and 62.5% of the females were Caucasian. Of male respondents (29), only 44.8% reported having ever had contact with a female physician, while among female respondents (14), 78.6% had had contact with a woman physician at least once.

Physicians.—Thirty-three male and 6 female physicians were included in the sample of physicians. Of these 33.3% were in Obstetrics/Gynecology, 28.2% in Pediatrics, 17.9% in Family Medicine, and 20.6% from miscellaneous specialties. The mean age of male physicians was 40.7 yr. and for female MDs 36.3 yr. The vast majority of both male and female physician respondents were Caucasian (84.8% and 83.3%, respectively). Of the male respondents (13), 46.2% had had contact with a female physician. Only two female physicians responded to this item, with one never having seen a female physician, and the other having seen a female physician 3 or 4 times.

Instrument

Assessment in this study was with the Bem Sex-role Inventory. The inventory, a 60-item adjective checklist whose construction and use have been fully reported elsewhere (Bem, 1974; Gaudreau, 1977), has a masculine scale, a feminine scale, and a neutral scale, which controls for social desirability. Masculine items were those considered by judges to be desirable for males in our culture, while feminine items were those considered by judges to be desirable for females in our culture. Typical masculine items (20 total) are aggressive, assertive, ambitious, competitive, dominant, forceful. Typical feminine items (20 total) are compassionate, tender, understanding, sensitive to needs of others, and yielding. The original purpose of the scale was to assess self-perception in terms of traditionally masculine and feminine attributes. Unlike earlier measurements of sex-role identity which assumed masculinity and femininity to be bipolar constructs, the relationship between the masculinity and femininity measures in Bem's inventory is an orthogonal one, and the two scales are essentially independent. The inventory is designed so that each item can be rated on a 7-point scale; it yields four scores: masculinity, femininity, androgyny, and undifferentiation. Androgyny and undifferentiated scores are operationally derived from the masculine and feminine scales so individuals scoring high (relative to a median value determined by the particular population under

study) on both masculine and feminine items are labelled androgynous, while individuals scoring low on both masculine and feminine items are labelled undifferentiated. It should be noted that ratings exist independently of biological sex, so theoretically an individual male subject can score high on femininity, while an individual female subject can score high on masculinity.

The meaning of the terms masculinity, femininity, androgyny, and undifferentiation, as they are central to the interpretation of the present study, requires some explication. Bem has attempted to provide predictive values to these labels by linking them to gender-related behavior in experimental settings (Bem, 1975). Her studies showed (Bem & Lenney, 1975; Bem, *et al.*, 1976) that the self-perceived androgynous person was behaviorally flexible and could behave in a situationally appropriate way as compared to individuals in other categories, e.g., instrumental and active when necessary, and nurturant and expressive when necessary. Individuals who rated themselves as masculine tended to be high on instrumental behaviors but low on nurturance, whereas individuals who rated themselves as feminine tended to be high on nurturance behaviors but low on independent behaviors. It should be kept in mind that these scores were obtained from subjects' self-report. Other studies suggest that in both sexes androgynous individuals and, secondarily, masculine individuals are higher in self-esteem and lower in anxiety, depression, and other indices of emotional distress than feminine individuals or undifferentiated individuals (Spence & Helmreich, 1980). Other studies have linked the undifferentiated scorers to lower self-esteem, more introversion, and higher neuroticism (Hoffman & Fidell, 1979). It has also been pointed out that the masculine profile is valued both from an absolute and a cultural point of view more than is the feminine profile (Broverman, *et al.*, 1972).

Procedure

The Bem Sex-role Inventory was administered to the three groups of subjects, patients, medical students, and physician-teachers, all associated with a major university medical center.

For the purposes of the present study, the instructions for use of Bem's inventory were altered somewhat. Instead of describing oneself, the subject was instructed according to the following phrases: "We would like you to describe the typical female physician in American society today according to the characteristics listed below. There are no right or wrong answers. Please rate female physicians the way they might typically behave toward patients." Instructions substituted the word male for female in the appropriate places in half of the questionnaires. Subjects described either the typical male or female physician (not both). In total, 136 hypothetical male physicians and 150 hypothetical female physicians were rated.

One hundred patient questionnaires were administered each to both clinic

and private patients. Criteria for selection of patients were English-speaking, over 21 yr. of age, and a patient returning to the clinic. The response rate for clinic patients was 88.0% and for private patients was 78.0%.

Difficulties in obtaining samples of physicians and medical students yielded a lower response rate. The investigators distributed questionnaires at faculty meetings in three departments, family medicine, obstetrics-gynecology, and pediatrics. Thirty-two of the 44 physicians in these departments responded, representing a response rate of 72.2%. Seven additional physicians representing a variety of other specialties (internal medicine, neurology, orthopedics, plastic surgery, and surgery) were solicited informally, by the personal request of one of the investigators. Although these seven did not represent a random sample, because the sample of physicians was small, they have been included in the physician group.

Although initially a random sampling of medical students was intended, this did not prove to be completely possible. First-year medical students were surveyed all at once, during a mandatory class: 100 questionnaires were distributed, with a response rate of 60.0%. However, it proved impossible to gain access to second and third year students as a group. A research assistant haunted various classes and gatherings to administer sufficient questionnaires. Approximately 50 questionnaires were administered in this fashion, with 24 returned, for a response rate of 48.0%.

RESULTS[3]

Although initial data analyses were performed considering each group as a whole, it became apparent that sex of the respondent influenced the results. All findings are reported both by group and by sex of respondent.

Patients

When female patient-subjects (133) were considered as a group, a significant difference was discovered between their perceptions of male (63) and female (70) physicians. Sub-cell analysis indicated that women physicians were seen as significantly more androgynous than male physicians ($\chi_1^2 = 5.3$, $p < .02$). Further, female physicians were rated significantly more androgynous (31) than undifferentiated (14) ($\chi_1^2 = 6.4$, $p < .01$). When considering male patients alone, no significant differences between perceptions of male and female physicians emerged. These findings are summarized in Table 1.

Clinic vs private patients.—When female patients from clinic (31) and private (32) settings were compared for ratings of male physicians, significant differences emerged between the two groups, with the variance being based primarily on differential masculine and feminine ratings (Fisher's exact test $p <$

[3]Additional data are on file in Document NAPS-04032. Remit $4.00 for fiche or $10.75 for photocopy to Microfiche Publications, P.O. Box 3513, Grand Central Station, New York, NY 10017.

TABLE 1

PERCENT OF SUBJECTS' RATINGS OF MALE AND FEMALE PHYSICIANS ACCORDING TO SEX-ROLE CATEGORY

Bem Category	Sex of Physician Rated		χ_3^2
	Male	Female	
Male Patients, 28			
n	10	18	
Androgynous	30.0	38.9	
Undifferentiated	50.0	27.8	
Masculine	10.0	16.7	
Feminine	10.0	16.7	1.43
Female Patients, 133			
n	63	70	
Androgynous	23.8	44.3	
Undifferentiated	34.9	20.0	
Masculine	25.4	11.4	
Feminine	15.9	24.3	11.5†
Male Medical Students, 59			
n	29	30	
Androgynous	20.7	23.3	
Undifferentiated	37.9	13.3	
Masculine	31.3	10.1	
Feminine	10.3	53.3	15.2†
Female Medical Students, 24			
n	9	15	
Androgynous	22.2	46.7	
Undifferentiated	44.5	6.7	
Masculine	33.3	33.3	
Feminine	.0	13.3	8.8*
Male Physicians, 33			
n	20	13	
Androgynous	30.0	7.7	
Undifferentiated	25.0	30.8	
Masculine	45.0	.0	
Feminine	.0	61 5	20.1†
Female Physicians, 6			
n	3	3	
Androgynous	.0	33.3	
Undifferentiated	33.3	33.3	
Masculine	66.7	.0	
Feminine	.0	33.3	4.0

*$p < .05$. †$p < .01$.

.01). A pattern of private female patients rating male physicians most often as masculine (40.6%) and clinic female patients rating them least often as masculine (9.6%) was noted, as was a tendency for clinic patients to rate male physicians most often as undifferentiated (45.2%), while only 25.0% of the private patients described male physicians as undifferentiated; see Table 1. A sub-cell analysis showed private female patients rating female physicians significantly more often as androgynous (18) than undifferentiated (4) ($\chi_1^2 = 8.9$, $p < .01$) but this was not true for female clinic patients. There were no other significant differences between female private and clinic patients' views of female physicians; and there were no significant differences in perception of physicians by male patients from the two settings.

Medical Students

When male medical students (59) described male (29) and female (30) physicians, significant differences were found; see Table 1. Sub-cell analysis showed that male physicians (23) were rated as undifferentiated more often than female physicians (23), a finding which approached but did not achieve significance ($\chi_1^2 = 3.6$, $p < .06$). This finding did achieve significance when the medical student group was considered as a whole (62) ($\chi_1^2 = 7.2$, $p < .01$).

When female medical students were considered (24), again significant differences between perceptions of male (9) and female (15) physicians emerged; see Table 1. A sub-cell analysis showed that female physicians were rated significantly more often as androgynous (7) than as undifferentiated (1) ($\chi_1^2 = 4.5$, $p < .03$).

Physicians

When male physicians were considered as a group (33), significant differences in perceptions of male (20) and female (13) physicians emerged; see Table 1. A sub-cell analysis indicated the main source of variance to be the differences in masculine and feminine scores given to male (9) and female (8) physicians, with female physicians being perceived as feminine significantly more often than male physicians (Fisher's exact test, $p < .001$). Further, female physicians were considered to be feminine (8) significantly more often than they were considered to be androgynous (1) ($\chi_1^2 = 5.4$, $p < .02$).

No significant differences in perceptions of male and female physicians emerged for the female physicians.

Group Differences

When ratings of male physicians by the three groups were compared, significant differences emerged; see Table 1. The primary source of this variation statistically proved to be differences in masculine and feminine ratings of male and female physicians ($\chi_1^2 = 16.2$, $p < .001$).

When the data were further broken down, there did appear to be a significant difference between patients and medical students in the way they perceived male physicians ($\chi_3^2 = 14.2$, $p < .01$), with medical students rating male physicians as masculine more often than did the patients. Comparisons of medi-

cal students' and patients' perceptions of female physicians yielded no significant differences.

Descriptive Trends

These trends did not achieve statistical significance but were consistent enough to justify reporting. The profiles presented below (see Table 1) were derived from the percentages of male or female physicians being categorized according to one of the four attributes (undifferentiated, androgynous, masculine, or feminine). Approximately three separate profiles for the female physician were identified. The first, which was observed among female patients, and to some extent female medical students, may be characterized by the acronym AFUM. In this profile, the woman doctor was seen most often as androgynous, followed by feminine, undifferentiated, and last of all masculine.

A second discrete profile emerged when considering the perceptions of male medical students. This group viewed the female physician as primarily feminine, then androgynous, with approximately equal numbers being described as undifferentiated and masculine. A final profile of the female physician was identified by the male physicians. This profile may be described as most frequently feminine, like the medical students, but then undifferentiated, rather than androgynous; and least often androgynous and masculine.

For the male physician, we identified two distinct profiles. The first, which was observed among male and female medical students, female and to some extent male patients, may be characterized by the acronym UMAF. In this profile, the male physician was seen as undifferentiated, then masculine (or approximately equally often as undifferentiated and masculine), then androgynous (or approximately equally often androgynous and masculine), and least often as feminine. The other profile, identified among male physicians, was one in which the male physician was seen most often as clearly masculine, followed by approximately equal endorsements of androgyny and undifferentiation, and least often by endorsements of femininity.

Discussion

A summary of the findings of this rather involved study may be as follows: Over-all one may conclude that male and female physicians were perceived differently from one another. There were significant differences within and between all three groups (patients, medical students, and physicians) in terms of how male and female physicians were viewed. There were also significant differences in the way clinic and private female patients viewed male physicians, with private patients tending to rate them most often as masculine and clinic patients tending to rate them most often as undifferentiated.

A number of significant findings warrant discussion. Specifically, female patients saw women physicians as androgynous significantly more often than

they saw male physicians as androgynous and also saw women physicians as being significantly more often androgynous than undifferentiated. Among male medical students, male physicians were seen as undifferentiated and masculine significantly more often than were women physicians whereas women physicians were seen as feminine significantly more often. Like the female patients, female medical students also saw female physicians as androgynous significantly more often than they rated male physicians in this fashion. Further, they saw the female physician as significantly more androgynous than undifferentiated. Male physicians perceived both male and female physicians in highly sex-typed patterns, with males seen most often as masculine, and females being viewed most often as feminine.

We believe additional light is cast on this study by the descriptive trends summarized in the results section. From this we see that women, irrespective of professional grouping (patient, medical student, or physician) tended to see the woman physician's behavior toward her patients as most often androgynous. Both male medical students and male physicians tended to see the woman physician's behavior towards patients most often as feminine.

For every group except male physicians, there appeared to be remarkable consistency in the description of the male physician. In this profile (UMAF) the male physician was seen most often as undifferentiated. Male physicians, however, tended to see other male physicians most often as clearly masculine.

Several interesting directions for future research emerge from this study. One would be to correct some of the methodological deficiencies of the current study: (1) Address the problems created in this study by the failure to obtain a truly random sample. (2) Determine whether sex, disease entity or medical history of the imagined patient (issues not addressed in this design) were significant variables in terms of influencing subjects' perception of physicians' behavior. (3) Achieve a better balance between male and female respondents, particularly with respect to the patient and physician samples, where, respectively, male and female subjects were seriously underrepresented, so that a better basis for determining sex differences in respondents' views could be obtained. (4) Increase the sample size substantially. Despite an over-all sample of 286, the multiple categorizations of subjects required for analysis reduced the cell-size in many cases to a perilously small number. (5) Also of importance is the fact that the instrument of assessment, the Bem Sex-role Inventory, was used in an unorthodox manner, and thus conclusions based on the self-report data generated by traditional uses of that measure may not be applicable to this study. It must be remembered that this is a study of subjects' perceptions *only* and says nothing about how male and female physicians actually behave with their patients. There is some evidence linking self-report on Bem's inventory to actual situational behaviors (Bem, 1979), although this relationship has been chal-

lenged as being less robust than originally reported (Helmreich, *et al.*, 1979). Nevertheless an interesting variation of the present study would be to return the Bem inventory to its original purpose, choose physicians who rated themselves as either androgynous or sex-typed and then assess whether actual behavior with patients reflected their self-perceptions.

One might legitimately ask, what difference do these differences in sex-role perception make in terms of quality of patient care or physician training? Clearly, the limits of this study preclude any sweeping generalizations. However, certain speculations are in order. First, it must be remembered that subjects were asked to describe their perceptions of how male and female physicians *typically behaved* with their patients. We may conclude that female patients and medical students tended to describe the female physician's behavior with patients most often as androgynous, i.e., a balance of instrumental and expressive qualities, which according to the assumptions stated at the start of this paper would be a more desirable profile for physicians' behavior. Patients and medical students tended to rate male physicians' behavior most often as undifferentiated and masculine, i.e., either showing relatively low manifestations of either instrumental or expressive behavior or demonstrating more exclusively "instrumental" behaviors.

Several missing links exist here in establishing the relevance of this to patients' care which would have to be filled by future research. One would be to establish that in fact patients' satisfaction is related to the degree of perceived androgyny in the physician. Another would be to determine the relationship between physicians' actual competence and the perceived androgyny, femininity, masculinity, and undifferentiation in physician-patient interactions. Such a study might examine positive outcomes for patients and associate them with certain personal attributes of the physician along the lines outlined in this study.

An effort might be made to determine whether androgynous physicians were actually "better" than their undifferentiated, masculine, or feminine colleagues, i.e., more medically competent and able to generate higher satisfaction in their patients. Kaplan (1979) notes from the clinical vantage point that androgyny *per se*, while assumed by Bem to be a positive quality, clinically appears more ambiguous. She observes that an individual can be high in both masculinity and femininity, but can express these in inappropriate, inflexible, and dysfunctional ways. Clearly, there is an assumption in this study that androgyny would be perceived by the subjects as preferable, but this is an assumption only.

In terms of implications for physicians' education, a further issue which needs to be addressed in more depth is the fact that apparently male and female physicians were perceived differently, along fairly fundamental dimensions, and to some extent were also perceived differently by different groups of people.

Considering for a moment only the patient sample, two interpretations are possible. The first is that male and female physicians' behavior has, at least to some extent, actually generated these convictions in the minds of patients. If true, this may prove a fertile ground for educational intervention. Male physicians, in particular, may need training in nurturing and expressive skills and also in their communication of their more instrumental skills, as the picture which emerges for male physicians is not too flattering: an individual unable actively either to nurture or act upon his patient. Women physicians, on the other hand, while on the whole presenting a more positive picture, need to overcome a bias in their patients that they may be warm and caring but may not be as competent as a man on the technical and instrumental end of health care delivery.

Alternatively, it is possible that the differences reported in this study are purely patients' projections and have nothing to do with real physicians. Nevertheless, these findings then tell us something of importance about patients' expectations, as these also will affect the eventual interaction of physician and patient in real life. Even if male and female physicians in reality are equally adept in the instrumental and expressive realms, it may be important for them to know how to overcome certain biased expectations on the parts of their patients.

Finally, in considering the sample of physicians, it is striking how different a profile emerges from that presented by the patients. It is also striking that it is the profile which conforms most clearly to sex-typed lines. Male physicians were viewed by male physicians as highly masculine, while female physicians were viewed most often as feminine. Again, while patients viewed male physicians more often as undifferentiated, and female physicians most often as androgynous, physicians themselves had just the opposite perceptions. In terms of medical students' and residents' training, it is important for teachers and supervisors to consider that they also may manifest built-in biases, which in turn may influence their interactions with their students and colleagues. If in fact physicians perceive female physicians as feminine and undifferentiated, this may be related to what they expect from these physicians. Clearly, it is also interesting that their expectations of the male physician are completely different. Given the value-laden judgments implied in the terms feminine and undifferentiated, it is hard to avoid the conclusion that these physician-teachers had a more positive view of male than of female physicians.

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