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Research Article

**MEDICAL STUDENT ATTITUDES TOWARD THE DOCTOR–
PATIENT RELATIONSHIP**¹Dr. Nabeel Saleem, ²Dr. Mohsin Saeed, ³Dr. Dilawar Sher¹DHQ Teaching Hospital Gujranwala²DHQ Teaching Hospital Gujranwala³MO BHU Bandial Tehsil Quaidabad District Khushab**Abstract:**

Context Medical educators have emphasized the importance of teaching patient-centred care.

Objectives To describe and quantify the attitudes of medical students towards patient-centred care and to examine: (a) the differences in these attitudes between students in early and later years of medical school; and (b) factors associated with patient-centred attitudes.

Methods We surveyed 673 students in the first, third, and fourth years of medical school. Our survey utilized the Patient–Practitioner Orientation Scale (PPOS), a validated instrument designed to measure individual preferences towards various aspects of the doctor–patient relationship. Total PPOS scores can range from patient-centred (egalitarian, whole person oriented) to disease- or doctor-centred (paternalistic, less attuned to psychosocial issues). Additional demographic data including gender, age, ethnicity, undergraduate course-work, family medical background and specialty choice were collected from the fourth year class.

Results A total of 510 students (76%) completed data collection. Female gender ($P < 0.0001$) and earlier year of medical school ($P = 0.003$) were significantly associated with patient-centred attitudes. Among fourth year students ($n = 89$), characteristics associated with more patient-centred attitudes included female gender, European-American ethnicity, and primary-care career choice ($P < 0.05$ for each comparison).

Conclusion Despite emphasis on the need for curricula that foster patient-centred attitudes among medical students, our data suggest that students in later years of medical school have attitudes that are more doctor-centred or paternalistic compared to students in earlier years. Given the emphasis placed on patient satisfaction and patient-centred care in the current medical environment, our results warrant further research and dialogue to explore the dynamics in medical education that may foster or inhibit student attitudes toward patient-centred care.

Keywords: Attitude; curriculum; delivery of health care; *doctor–patient relations; education, medical, undergraduates, *methods; patient-centred care; patient-centred satisfaction.

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INTRODUCTION:

The doctor–patient relationship is central to the delivery of high quality medical care, and has been shown to affect patient satisfaction and a variety of other biological, psychological, and social outcomes.¹ Patient-centred care is one aspect of the doctor–patient relationship that takes into account patients' preferences, concerns, and emotions; it has been proposed as a mechanism through which favourable patient outcomes are achieved.^{2,3} In recent years, medical educators have recognized the importance of patient-centred care by instituting a variety of curricula to teach communication skills, professional values, and humanistic attitudes and behaviours to medical students.⁴ However, a large body of qualitative and ethnographic data exists to suggest that the culture of medical education focuses more on the biomedical mechanisms of disease than on the issues central to patients' preferences, concerns, and emotions.⁵ Such a dynamic between school curriculum and culture may act as a barrier to educators' attempts to promote patient-centred care. We conducted this study to describe and quantify student attitudes towards the doctor–patient relationship and differences in attitudes between students in early and later years of medical school.

METHODS:

Study sample

We assessed student attitudes towards the doctor–patient relationship among students in 2 consecutive first-year classes (academic years 2014–2015 and 2015–2016) and in the third- and fourth-year medical classes (academic year 2015–2016) at Allama Iqbal Medical College Lahore Pakistan (> 150 students per class). Our study institution has a 4-year curriculum divided into pre-clinical (first 18 months, mostly classroom-based) and clinical (following 30 months, mostly patient care- or ward-based) curricula. Since no major curricular changes were made at this institution during the tenure of each of these student classes, all experienced essentially identical curricula. We collected data on gender from all students and additional demographic data from students in the fourth-year class.

Gender and attitude data among first-year students were collected as part of a first-year history and physical examination course. Students completed an optional survey during this course at the mid-point of the first year. Data on attitudes and gender in third-year students were collected throughout the 2015–2016 academic year during a 4-week family medicine clerkship. All students in our sample began clinical clerkships in the 18th month of medical school (January of the second year), so the third-year

students in our study

Measurement of student attitudes

Student attitudes toward the doctor–patient relationship were measured using a previously validated instrument.⁶ The Patient–Practitioner Orientation Scale (PPOS) is an 18-item instrument originally designed to be administered to either doctors or patients. It measures an individual's attitudes toward the doctor–patient relationship along two dimensions termed 'sharing' and 'caring', respectively. The sharing dimension consists of 9 items that measure the degree to which the respondent believes that power and control should be shared between doctor and patient, and the degree to which doctors should share information with the patient. Examples of sharing items include: 'the doctor's agenda is the one that should direct the course of the medical interview' and 'often it is in the patient's best interests if he/she does not have a full explanation of his/her medical condition'. The caring dimension consists of nine items that measure the extent to which the respondent cares about the value of warmth and support in the relationship, and the degree to which the respondent thinks the doctor should inquire about psychosocial issues and employ a holistic approach to medical care. Examples of caring items include: 'a good bedside manner is the most important thing a doctor can bring to a sick patient' and 'to understand their patients, doctors must explore relevant sources of stress in their patients' lives'.

Respondents were asked to rate their agreement or disagreement with individual items on a 6-point scale. The overall PPOS score was computed as the mean of the scores for the 18 items. Sharing and caring scores were computed as the mean of the scores for the nine items in each dimension, respectively. For this study, we calculated mean scores to range from a value of 1 (¼ doctor-centred or paternalistic) to 6 (¼ patient-centred or egalitarian).

Statistical analysis

We used factorial analysis of variance to examine the effect of gender, year of medical school, and their interaction on mean PPOS scores (overall PPOS, caring subscore, sharing subscore). Since mean PPOS values did not differ significantly between the two first-year classes (academic years 1997–98 and 2015–16, $P = 0.03$, Student's *t*-test) and since the addition of the 2014–15 data did not alter the findings of our analyses, we combined all first-year students' data in our reported results. We used linear regression to examine associations between mean PPOS score

and month of data collection among third-year students. For fourth-year students, we examined the relationships between PPOS scores (overall PPOS, caring subscore, sharing subscore) and demographic variables using linear regression for age and Student's t-test for dichotomous variables.

RESULTS:

We identified 673 eligible students, of whom 510 (76%) completed the PPOS instrument. Distribution of students by year and gender is shown in Table 1. The average total PPOS score for the entire cohort was $4.57 (\pm 0.48 \text{ SD})$. Total PPOS scores ranged from 2.50 to 5.94. Distributions of overall PPOS scores by medical school year and gender are shown in Fig. 1. Similar results were obtained on analysis of sharing and caring subscores (not shown). Higher PPOS values correspond to more patient-centred and egalitarian attitudes in regard to the doctor-patient relationship. Female students had a significantly higher overall PPOS score (4.65 ± 0.04 , least square mean \pm SE) than did male students (4.47 ± 0.03 , $P < 0.001$). There was a significant association of medical school year with

Table 1 Distribution of students by gender and year of school

Year of medical school	Number of students completing PPOS (number of students eligible)	PPOS Female	
			(%)
First year students	263 (352)	118 (45)	
Third year students	158 (159)	65 (41)	
Fourth year students	89 (162)	36 (41)	

PPOS score ($P = 0.03$). The pattern of change in PPOS scores across classes differed between females and males. The average class scores for females decreased with increasing years of school, while the male classes demonstrated an increase followed by a decrease in PPOS scores from the first- to the fourth-year class. This interaction between gender and year of medical school was statistically significant ($P < 0.001$).

Since the PPOS instrument was administered to third-year students throughout the year during rotation through a family medicine core clerkship, we analysed the association between the month of the year in which students completed the instrument and overall PPOS score. The month of the year in this

analysis reflects that amount of experience in other clinical rotations prior to the family medicine clerkship. While this analysis did not show a statistically significant association of the month of the year with PPOS scores, there was a trend toward PPOS scores being progressively more doctor-centred among students who completed data collection later in their third year ($P = 0.07$).

We collected additional demographic data in the survey that we administered to fourth-year students. These data are detailed in Table 2. Among the non-European-American students, 63% identified their ethnicity as Asian, 23% identified their ethnicity as Hispanic, and 9% identified their ethnicity as African.

Three demographic variables had significant associations with overall PPOS scores in fourth-year students. These data are shown in Table 3. Female students, students who reported their ethnicity as European-American, and students who reported a primary care specialty choice demonstrated significantly more patient-centred scores than students who were male, of non-European-American ethnicity, or reported non-primary care specialty career choices ($P < 0.05$ for each comparison). Age, educational background, extracurricular coursework, and family background did not show significant associations with PPOS scores. Slight trends

Table 2 Demographic characteristics of fourth-year Students (n = 89)

Characteristic	n (%)
Primary care specialty choice	44 (49)
European-American ethnicity	45 (51)
BS undergraduate degree	46 (52)
Science and technology undergraduate major	55 (62)
Advanced degrees (Masters, PhD or equivalent)	10 (11)
Extracurricular activities	28 (31)
Family members in the medical professions	45 (44)
Mean age (SD)	25 (2.3)

Table 3 Total and subscale PPOS scores via

demographic in fourth-year students*

Demographic variable	Total PPOS	Caring	Sharing
Gender: female (male)	4.57 (4.37)<	4.51 (4.43)	4.62 (4.31)<
Ethnicity: European-American (non-Euro-American)	4.57 (4.32)<	4.55 (4.38)<	4.59 (4.28)<
Specialty choice: primary care (non-primary care)	4.56 (4.34)<	4.55 (4.39)<	4.56 (4.30)<
College major: non-science (science)	4.53 (4.40)	4.47 (4.46)	4.59 (4.33)<
Extracurricular activity: yes (no)	4.56 (4.40)§	4.49 (4.45)	4.63 (4.34)<
College degree: BA (BS)	4.42 (4.47)	4.44 (4.49)	4.40 (4.46)
Family in the medical profession: yes (no)	4.44 (4.45)	4.45 (4.48)	4.43 (4.42)

* All scores are mean scores, n = 89.
< P < 0.05, Student's t-test. P = 0.16, Student's t-test.
§ P = 0.11, Student's t-test.

Were seen toward higher (more patient-centred) scores in students who reported non-science and technology majors and students who reported extracurricular activities, but they were not statistically significant (P = 0.16, P = 0.11, respectively). Analysis of sharing subscale scores revealed additional associations with demographic variables. Higher sharing scores indicate a greater belief in shared power between doctor and patient and in the doctor's sharing of information with the patient. Females, European-American students, students choosing primary care specialties, students who reported non-science and technology majors and students who reported extracurricular activities had higher sharing scores (P < 0.05 for each

comparison). The type of undergraduate degree, advanced degrees, age, and family background were not significantly associated with sharing scores.

DISCUSSION:

Despite the emphasis placed by medical educators, health care administrators, and practising doctors on the importance of curricula that foster patient-centred attitudes among medical students,⁷ our data suggest that the attitudes of students in the later years of medical school are more doctor-centred or paternalistic than those of students in earlier years. Doctor-centred attitudes have been shown to be associated with lower patient satisfaction⁸ and may contribute to decreased trust in the doctor-patient relationship. The doctor-centred attitudes among senior students that this study demonstrates may be associated with a decline in senior students' patient-centred behaviours that others have observed.⁹ Medical sociologists and anthropologists suggest that methods for managing work, mistakes and emotions, in addition to the language and manner of presentation those students acquire during their training, direct students away

from patient-centred patterns of interactions in both peer groups and with patients.^{5,10-12} These data suggest that the culture of medicine and the structure of medical education erode patient-centred attitudes in spite of the international movement toward patient satisfaction and patient-centred care. Unfortunately, the influence of socialization on the practice of medicine is difficult to mediate with curricular interventions alone. Medical educators have noted that interventions timed during the pre-clinical years and intended to foster patient-centred attitudes and behaviours are often overshadowed by the powerful experiences of the clinical years as embodied in the informal, or 'hidden' curriculum.⁵ Our data would support this observation, since third-year students demonstrated a progressive trend toward doctor-centred attitudes as successive cohorts completed the PPOS during the course of this initial clinical year. In order to be maximally effective, we believe that educational interventions intended to foster patient-centred attitudes and behaviours must occur during the clinical years and must counter-balance the experiences embodied in the 'hidden' curriculum that foster the opposite. Ideally, patient-centred attitudes should be nurtured in the setting of patient care through active learning approaches and strong patient-centred role-modelling by respected attending doctors.¹³ (accounts were written) seem to corroborate this qualitative finding.

In a previous study, freshman female medical stu-

dents were shown to have more patient-centred attitudes than male students.¹⁵ Our present study shows that this difference between female and male students exists in the fourth year of medical school as well. This difference in attitudes may be linked to demonstrated differences in gendered patterns of communication among male and female doctors.¹⁶ It has been suggested that the patient-centred communication pattern employed by women doctors may account for demonstrated differences according to gender of doctor in a diverse array of patient outcomes, including satisfaction and provision of preventive services such as hormone replacement therapy.¹⁷ Further study and understanding of the nature and development of this gender difference in attitudes toward the doctor-patient relationship may significantly inform efforts to eliminate disparities by gender in the provision of high quality medical care.

In this study, we demonstrated a strong association between student ethnicity and patient-centred attitudes. We hypothesize that this observation can be explained by cultural differences in students' views of the 'ideal' doctor-patient relationship. For example, the majority of non-European-American students in our sample identified themselves to be of Asian ancestry. Others have noted that the fundamental nature of the doctor-patient relationship in terms of power-sharing and holistic care tends to vary among cultures, and that social norms in certain Asian cultures tend to favour a more doctor-centred relationship.¹⁸ We hypothesize that students enter medical school with their own specific views of the 'ideal' doctor-patient relationship, views that are shaped by diverse factors, including social and cultural norms, gender, past experience as patients, and portrayals of doctors in various mass media. These 'baseline' impressions of the doctor-patient relationship may be especially important in determining students' attitudes toward patient-centred care upon graduation from medical school. We argue that a critical developmental task for student doctors is to develop awareness and understanding of the background of their own views toward patient-centred care. Since ethnic differences between doctors and patients are often barriers to partnership and communication in the doctor-patient relationship, such an awareness may help students to manage the relational dynamics between themselves and patients of different ethnicity more effectively. In addition, awareness of personal views and biases has been proposed as an essential ingredient for high quality patient care and teaching.¹⁹

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