Chapter 8

Are professional attitudes related to gender and medical specialty?

"To recognise our need for the special skills of others is to acknowledge our limitations in medicine."

(Magraw 1975)

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8.1 Summary

Background
The importance of professional attitudes in medical care has long been recognized; however, medical training has not stressed attitude development until recently. In previous studies among medical students, we found that gender and specialty preference are important factors in attitudes. In this study, patient-centredness of trainees in general practice and surgery and of final-year clerks preferring one of these specialties was assessed in one medical school in the Netherlands. The effect of gender, specialty, and training level on attitude was investigated.

Methods
In 1995, attitudes of 37 general practice trainees, 31 surgery trainees, and 120 clerks were measured anonymously using questionnaires containing the Doctor-Patient Scale. This attitude scale measures patient-centredness versus doctor-centredness. Response rates were 78%, 58%, and 84%, respectively.

Findings
Attitudes were related to specialty. General practice trainees showed more patient-centredness than surgery trainees. In accordance with previous findings among younger students, no differences were found between final-year clerks and vocational trainees. In contrast to previous studies, gender was not related to patient-centredness.

Interpretation
Professional attitudes, in particular patient-centredness, seem to be related to specialty preference in the final year of graduate medical training and specialty as a career choice. It remains unclear whether professional socialization reinforces existing attitudes or whether existing attitudes result in specialty preference.

8.2 Introduction
Historically, professional attitudes have been recognized as very important in medical care. For example, at the end of the 19th century Sir William Osler stated that: "it is more important to understand which patient has a disease, than which disease a patient has". In medical training, however, attitude development was rarely stressed. This can be seen in the Flexner report of 1910 that based medical training on a bioscientific foundation. As a consequence, biomedical aspects of disease were more prominent during medical training than were the psychological aspects of patients.
Actual training of professional attitudes has seldom been an explicit part of the medical curriculum. It was assumed to happen automatically as students proceeded: attitude development remained a part of the ‘hidden curriculum’.3 Interest in medical students’ professional attitudes, however, received a strong impulse by the studies of Eron, almost forty years ago, who found that medical students developed a ‘cynical’ attitude during medical training.4,5 Although his research has been criticized, the ‘erosion of attitudes’ or ‘dehumanization’ has been affirmed in many other studies.6,7 At the Wickenburg conference in the 1980s, clinicians and medical teachers discussed the limitations of a bioscientific model for medicine, pleading instead for a biopsychosocial model including dialogue with the patient.8 The importance of a patient-centred approach has been especially recognized in general practice and psychiatry.9,10 Today, a professional evolution within American medicine seems to be heading toward a renewed regard for the patient’s perspective.11

Recently, the Dutch medical schools, reconsidering attitude development, have agreed upon a new definition of the final objectives of undergraduate medical education. In this ‘Blueprint’, medical competence explicitly includes professional attitudes, alongside of knowledge and skills.12 In contrast to previous training programmes, attitude development will now definitely become a part of the curriculum in all Dutch medical schools.

In contrast to the often-documented ‘erosion’ of attitudes, we found no differences between first and final year students in an attitude study among students at Utrecht Medical School, while the curriculum at Utrecht has a biomedical orientation.13 Factors influencing attitudes seemed to be gender and specialty preference, with female students and students preferring primary care specialties having more patient-centred attitudes than male students and students preferring biomedical specialties. However, preferences in the first years were diffuse and confounded by gender.13 Similar results have also been reported by others.6,14,15,16,17 In addition, male students seem to prefer technical specialties, while female students prefer patient-centred specialties.18,19,20 Little systematic research has been directed at comparing professional attitudes of clinical specialists to those of primary care generalists.1,21 Since attitude is an important issue in medical education, professional choice, selection for vocational training, medical competence, and patient care, the current study was undertaken.
Aims
The aim of this pilot-study at Utrecht Medical School was to gain insight into the professional attitudes of vocational trainees in different specialties and final year students preferring different specialties. We compared patient-centredness of general practice and surgery trainees, and of final year students preferring general practice versus surgery. In accordance with our previous studies, we hypothesized that attitudes would be related to specialty and gender, and not to level of training. We expected more patient-centred attitudes in women, general practice trainees and final year students preferring general practice.

8.3 Methods
Subjects
Attitude questionnaires were handed out to all 37 general practice trainees finishing their two-year vocational training in Utrecht in the fall of 1995. Since only a few surgery trainees were enrolled in vocational training at Utrecht Medical School, all 31 surgery trainees in the Netherlands finishing their second year received a questionnaire by mail. In the period April-December 1995, all 120 final-year medical students at Utrecht Medical School attending the general practice clerkship, the final clerkship before graduation, also completed the questionnaire. Clerks preferring specialties other than general practice or surgery were then excluded from the study. Because most of the subjects were trained at the biomedically oriented Utrecht Medical School, the results of our study have a limited generalizability.

Variables and Instruments
Professional attitudes towards patients (patient-centred versus doctor-centred) were studied in relation to gender, and medical specialty (general practice versus surgery), and level of training (final year clerkship versus vocational training). Patient-centredness was assessed anonymously using the Doctor-Patient Scale. The Doctor-Patient Scale has been developed at a medical school in Great Britain to assess patient-centredness in attitudes of students and practising doctors. The scale contained 48 Likert-type statements with 5 alternatives ranging from strong agreement to strong disagreement. Examples of statements are: 'Listening to patients is more efficient than talking to them' and 'Clinical competence is based on
knowledge and skills, very little on attitude’. Previous studies on medical students’ and physicians’ attitudes have established the reliability and validity of this scale.\textsuperscript{13,14,16,22} Data on gender, specialty preference, and level of training were also obtained anonymously as part of the questionnaire.

\textit{Data analyses}

The different groups were compared cross-sectionally. Attitude-scale scores of general practice trainees, surgery trainees, and clerks were compared. Scores of male and female subjects were analysed apart to avoid a confounding gender influence. First, attitude-scale scores were transformed to percentage scores. Then, reliability of the scale was established by calculating Cronbach’s alpha. To assess the effect of exclusion, distribution of variables of the excluded group of clerks was compared with data of the included group. Analysis of variance was used to test the three hypotheses; $P$ values of $P<0.05$ were considered significant. Non-significant interaction terms were pooled. Effect sizes with a 95\% confidence interval were computed.

\textbf{8.4 Results}

Response rates for general practice trainees, surgery trainees, and final-year clerks were 78\%, 58\%, and 84\% respectively; in total, 149 forms were collected. Two forms were removed because of missing data, 1 from the general practice group and 1 unknown. Of the remaining 147, 62 more were excluded; these concerned clerks with other specialty preferences. Of these 62, relatively many were women, who preferred paediatrics, psychiatry, or gynaecology. There was no difference in attitude scores between included and excluded clerks ($P=0.20$).

A total of 85 forms remained: 27 from general practice trainees (13 female; 14 male); 18 from surgery trainees (5 female, 13 male), and 40 from final-year clerks (24 female, 16 male).

\textit{Reliability}

The reliability coefficient of the Doctor-Patient Scale was 0.79.
Patient-centredness
Mean scores of the different groups are shown in Table 8.1.

Table 8.1: Percentage scores on patient-centredness for specialty, level of training and gender.

<table>
<thead>
<tr>
<th></th>
<th>General Practice mean(SD)</th>
<th>Surgery mean(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clerks (n=23)</td>
<td>Trainees (n=27)</td>
</tr>
<tr>
<td></td>
<td>64.0 (5.6)</td>
<td>63.8 (5.1)</td>
</tr>
<tr>
<td>men (n=6)</td>
<td>62.5 (6.0)</td>
<td>64.8 (6.4)</td>
</tr>
<tr>
<td>women (n=17)</td>
<td>64.5 (5.6)</td>
<td>62.7 (3.2)</td>
</tr>
</tbody>
</table>

Table 8.2 shows that a significant effect (P< 0.001) was only found in specialty. Clerks preferring general practice and general practice trainees showed more patient-centred attitudes than clerks preferring surgery and surgery trainees.

Table 8.2: Effect sizes of specialty, level of training and gender on patient-centredness.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean* (N)</th>
<th>Mean* (N)</th>
<th>Effect</th>
<th>95% CI</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialty</td>
<td>General Practice</td>
<td>Surgery</td>
<td>6.8</td>
<td>4.3-9.3</td>
<td>0.001</td>
</tr>
<tr>
<td>Training level</td>
<td>Clerks</td>
<td>Trainees</td>
<td>1.1</td>
<td>-1.4-3.5</td>
<td>0.383</td>
</tr>
<tr>
<td>Gender</td>
<td>Men</td>
<td>Women</td>
<td>0.04</td>
<td>-2.5-2.5</td>
<td>0.972</td>
</tr>
</tbody>
</table>

* all means (percentage scores) are adjusted for the other variables, using analysis of variance.

Patient-centredness seemed to be unrelated to level of training and gender: no differences were found between clerks and vocational trainees, nor between men and women.
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8.5 Discussion
Our pilot-study among trainees of a Dutch medical school shows that professional attitudes, especially patient-centredness, are related to medical specialty. As expected, final-year clerks preferring general practice as a specialty as well as vocational trainees in general practice showed more patient-centred attitudes than surgery trainees and clerks preferring surgery. In this study, no relation between gender and patient-centredness was detected. In the final year of medical education and later during vocational training, male and female subjects within the different professional groups seem to hold similar attitudes. This absence of gender differences in later phases of medical training was surprising because our previous studies showed that among younger classes, female students were more patient-centred than male students. Attenuation in gender differences over time has, however, been reported by other authors and has been interpreted as the result of a process of professional socialisation in medical training.

Differences in doctors’ attitudes have been explained as a result of a complex learning process. For instance, in general practice, a primary care specialty, many problems cannot be diagnosed neatly and many contain psychological and social elements, thus demanding a comprehensive approach and special attention to the consultation. Because of this, vocational training in general practice devotes one third of its curriculum time to interpersonal skills and attitude development. Evaluations of programmes show an influence on trainees’ attitudes as a result of professional socialization and experience. Thus, general practitioners will probably show patient-centered attitudes. In surgery, however, a hospital-based specialty, highly technical skills are needed to resolve physical problems. In vocational training for surgeons, competence in physical issues is stressed. Attitude development is present during the later years of surgical training, taking up 10% of training time. This seems to influence surgeons towards a doctor-centred attitude. Differences in attitudes have been affirmed in several studies: patient-centred attitudes were most apparent among psychiatrists, followed by general practitioners, while doctor-centred attitudes were prominent among surgeons. It has been proposed that these differences in attitudes, resulting from a combination of preference and training, can have an impact on the doctor-patient communication. It would appear from our results that, while gender seems to be important for undergraduate professional attitudes, specialty orientation seems to become more important later in training. Attitudes of final-year clerks seem to be a reflection of attitudes in vocational training. It remains unclear, however, whether attitudes precede
specialty orientation or vice versa. It has been suggested that attitudes affect career choice; others, however, have found only a weak relationship. Even though other studies show similar results regarding final-year students and vocational trainees, there are several limitations to our study. First, only a cross-sectional comparison was made; groups were not followed over a longer period of time. Second, our analysis was based on relatively small groups of subjects in one medical school with a biomedical orientation. Third, it is uncertain whether the subjects studied in the different professional groups were representative for the whole population: response rate was moderate due to mailing in the group of surgeons, and only those final-year clerks with a crystallized specialty preference were studied. Therefore, caution is needed when generalizing from our results.
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8.6 References