Patient assessments of patient-centered consultation skills of general practice trainees

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Submitted
Abstract

Introduction
Teaching patient-centered consultation skills is high on the agenda of GP vocational institutes. We investigated the patients’ perspective on components of patient-centeredness: (a) ‘exploring the disease and illness experience’, (b) ‘finding common ground’ and (c) ‘personal context’.

Methods
A cross-sectional study based on 888 patient assessments. Forty-eight first-year general practice registrars (GPTs), at the VU medical center in Amsterdam, asked their patients to complete the Patient Perception of Patient-Centeredness questionnaire (item-score range: 1-4). The GPTs also completed a self-assessment version of the questionnaire. We applied regression analyses to identify variables that had effect on the patient assessments.

Results
The mean patient item-scores were 3.63 (SD 0.38). They scored high on component (a), but not so high on components (b) and (c). The mean GPT scores were 2.94 (SD 0.49), p<0.0001. Younger patients, male patients, lower language proficiency of the GPTs, and greater consultation complexity, were related to lower patient scores.

Conclusion
‘Finding common ground’ and ‘personal context’ are areas in which there is a need for change. Studying patient assessments of GPT consultation skills might form a basis for new learning strategies for GPTs, and might have implications for patient-doctor communication programmes.
**Introduction**

In primary care, a patient-centered approach has been advocated as the preferred method of communication, because it is related to improved patient outcomes, such as satisfaction, enablement, compliance, better health status, less symptom burden and less diagnostic testing expenditures\(^1\text{-}^4\). The patients themselves have a strong preference for a patient-centered approach\(^5\text{-}^6\).

There is a growing tendency to include the patients’ views on general practice care and the quality of consultations in the training of young professionals\(^7\text{-}^{14}\), creating opportunities for general practice trainees (GPTs) to learn from their patients’ feedback on their (patient-centered) consultation performance.

From the results of observational studies (interviews) there is evidence of what patients consider to be important components of patient-centeredness, and distinct differences are found between the perspectives of the patients and the perspectives of the doctors. The receptiveness of a doctor and the affective components of patient centeredness have been considered to be more important by GPs than by patients, but the patients showed greater endorsement of information\(^15\). However, less is known about the patients’ perceptions of these components of patient-centeredness within a setting of vocational training for general practice.

The acquisition of patient-centered consultation skills starts with learning about the patient’s evaluation of the patient-centeredness of the consultation. Because there is evidence that GP(T)s are better in finding a diagnosis than in giving information or shared decision-making\(^16\), we studied components of patient-centeredness, ‘exploring the disease and illness experience’, ‘finding common ground’ and ‘personal context’, from the patients’ perspective. Learning about the relative importance of these components might change the emphasis on certain aspects of the doctor-patient communication training programme.

GPTs at the VU medical center in the Netherlands are stimulated to acquire patient-centered consultation skills\(^17\), by means of validated feedback
questionnaires (Patient Perception of Patient-Centeredness [PPPC]) evaluating their consultation skills directly after a consultation.

In this study, we analysed the results of these questionnaires with regard to the components of patient-centeredness of the GPT consultations. We also analysed whether GPT characteristics, patient characteristics, and consultation complexity correlated with patient feedback scores, because this information could demonstrate that the evaluation of patient-centeredness might vary among patients, or might be consultation-specific. Doctor-related variables, for example, such as female gender, a younger age and better language proficiency, have been found to be correlated with better communication skills\textsuperscript{18}. Therefore, we addressed the following research questions:

- What are the patient feedback scores on the PPCP, with regard to the components of patient-centeredness?
- Which variables are correlated with the patient assessments on the PPCP?

**Methods**

**Design**
A cross-sectional study to investigate patients’ assessment of the components of patient-centered consultation skills. The analysis was based on the results of a total of 888 feedback questionnaires completed by patients.

**Setting**
From September 2005 until February 2006, 48 out of a total of 58 first-year GPTs at the VU medical center in Amsterdam, the Netherlands, attended a patient feedback training programme (10 did not attend for various reasons: pregnancy leave, different educational trajectories, or not completing the residency training). The patient feedback training programme provides the GPTs with theoretical and practical support in acquiring patient feedback on their patient-centered consultation skills\textsuperscript{17}. During a period of three months, the GPTs
were instructed to ask (personally or intermediated by others, e.g. practice assistants) 30 patients to give feedback on their consultation skills, by completing the PPPC directly after the consultation, and returning the questionnaire in a sealed envelope to the practice assistant.

Patients
The GPTs could include patients from whom they wanted to receive feedback (which to our ideas enhanced the learning potential). Therefore, the selection of patients was not a random sample. As an indication, the GPTs were instructed to ask 30 patients to complete the PPPC (see assessment instruments). Insufficient command of the Dutch language was the only criterion for the exclusion of patients. If patients were too young, the accompanying adult could fill in the questionnaire. The patients gave oral informed consent to participate, and completed the PPPC in the practice. At the end of the training programme all the questionnaires were collected for analysis.

Assessment instrument
The questionnaire used in this study, the PPPC, was derived from the patient-centered clinical method developed by Stewart et al. The PPPC measures aspects of patient-centered communication within a consultation, and has been tested for validity and reliability. Patients can indicate their satisfaction concerning nine items on a 4-point scale (4=completely, 3=mostly, 2=a little, 1=not at all). The questionnaire has two parallel versions, one feedback version for the patient and one self-assessment version for the doctor.

The items in the PPPC refer to three components of the concept of patient-centeredness (see also the caption of Figure 1):
1. exploring both the disease and the illness experience (five questions: 1-4, 8),
2. finding common ground (three questions: 5-7),
3. personal context (understanding the whole person) (one question: 9).

The patient feedback version contains a cover page with questions on patient demographics, whether it was a first visit or a follow-up consultation, and the patient’s opinion about the complexity of the problem.
The self-assessment version had an attachment containing questions about the practical application of the questionnaire, such as: ‘Who recruited the patient?’.

**Analysis**
To evaluate patient feedback scores on the PPPC, we counted them per component of patient-centeredness. The patient scores and the GPT self-assessment scores are presented as a mean item-score (addition of single item-scores, range maximum=4 to minimum=1, divided by the number of questions involved).

For calculating the combined effect on the mean patient assessment scores (and on scores for the single components of patient-centeredness) the following variables were taken into account: patient characteristics and demographics (age, gender, location of practice), GPT characteristics (age, gender, work experience as a clinician, Dutch as first language [language proficiency]), motivational aspects (number of completed PPPCs they received from their patients), and consultation characteristics (who asked the patient, was it a first visit or a follow-up consultation, and how complex was the consultation according to the patients). We entered all variables with a value of p<0.2 into a backward elimination regression model.

**Results**

**Baseline characteristics**
The mean age of the patients was 39.8 years (SD 19.5), and the female/male ratio was 1.65. In 50.3% of the consultations the patient had visited the GPT for the first time. The practices were located in a large town (28.4%), a small town (60.0%), or in a rural area (11.6%). According to the patients, the consultations were highly complex (15.4%), of medium complexity (47.2%) or of low complexity (37.4%).

Most of the GPTs were in their early thirties (mean age 32.3 years [SD 5.7]), most of them were female (71.3%), and they had a mean work
experience of 3.5 years (SD 3.3). The mean number of PPPCs collected per GPT was 18 (SD 8.6, range 0–32).

**Assessments of the components of patient centeredness**

The calculated mean item-score for patient assessments was 3.63 (SD 0.38). The highest score was related to ‘exploring both the disease and the illness experience’ (3.78 [SD 0.34]), followed by ‘finding common ground’ (3.54 [SD 0.54]), and the lowest score was related to ‘personal context’ (3.17 [SD 0.96]). The GPT self-assessment scores were much lower: the mean item-score was 2.94 (SD 0.49), ranging from 3.22 (SD 0.48), to 2.63 (SD 0.74), to 2.43 (SD 0.96), respectively (p<0.0001, independent-samples t-test).

Figure 1 shows pair-wise the patient assessment scores and the GPT self-assessment scores for the single questions on the PPPC. Because of the relatively high patient ratings, the scores were dichotomized into the maximum category ‘completely satisfied’ versus the other three categories. Figure 2 presents dichotomized pairs of patient scores and GPT scores for the three components of patient-centeredness. We found that the patient scores, although significantly higher, followed the same pattern as the GPT scores.

**Variables correlating with patient assessments**

Table 1 presents the mean item-scores of the patient assessments, for the several variables that were taken into account. Table 2 presents a linear regression model with patient scores as a dependent value. The age and gender of the patient, language proficiency of the GPT, and the complexity of the consultation, all had significant regression coefficients, and therefore were correlated with the patient scores. Itemizing the dependent value into the three components of patient-centeredness did not identify any other variables with a significant regression coefficient.
Figure 1. Patient assessment scores and GPT self-assessment scores for the single items of the PPPC

Scores are dichotomized: the maximum category ('completely'), which is presented here, versus the other 3 categories ('mostly – a little- not at all').

Questions on the PPPC:
1. To what extent was your main problem(s) discussed today?
2. How satisfied were you with the discussion of your problem?
3. To what extent did the doctor listen to what you had to say?
4. To what extent did the doctor explain this problem to you?
5. To what extent did you and the doctor discuss your respective roles?
6. To what extent did the doctor explain treatment?
7. To what extent did the doctor explore how manageable this (treatment) would be for you?
8. How well do you think your doctor understood you today?
9. To what extent did the doctor discuss personal or family issues that might affect your health?
Figure 2. Patient assessment scores and GPT self-assessment scores for the three components of patient-centeredness

*error-bars represent standard deviation.
Table 1. Patient assessment scores

<table>
<thead>
<tr>
<th>category</th>
<th>Variables</th>
<th>range</th>
<th>n</th>
<th>patient assessment of PPPC$^1$</th>
<th>Mean, SD</th>
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<tbody>
<tr>
<td>Patient</td>
<td>Age$^2$</td>
<td>16-49</td>
<td>491</td>
<td></td>
<td>3.61</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥50</td>
<td>290</td>
<td></td>
<td>3.67</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>male</td>
<td>314</td>
<td></td>
<td>3.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td>female</td>
<td>516</td>
<td></td>
<td>3.67</td>
</tr>
<tr>
<td></td>
<td>Practice location</td>
<td>city</td>
<td>242</td>
<td></td>
<td>3.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td>town</td>
<td>508</td>
<td></td>
<td>3.66</td>
</tr>
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<td></td>
<td></td>
<td>village</td>
<td>101</td>
<td></td>
<td>3.60</td>
</tr>
<tr>
<td>GPT</td>
<td>Age</td>
<td>&lt;30</td>
<td>330</td>
<td></td>
<td>3.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥30</td>
<td>487</td>
<td></td>
<td>3.63</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>male</td>
<td>202</td>
<td></td>
<td>3.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>female</td>
<td>676</td>
<td></td>
<td>3.64</td>
</tr>
<tr>
<td></td>
<td>Work experience as a clinically involved doctor (years)</td>
<td>≤1</td>
<td>287</td>
<td>3.63</td>
<td>(0.34)</td>
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<tr>
<td></td>
<td></td>
<td>1-5</td>
<td>268</td>
<td></td>
<td>3.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥5</td>
<td>261</td>
<td></td>
<td>3.60</td>
</tr>
<tr>
<td></td>
<td>Language proficiency (Dutch as first language)</td>
<td>yes</td>
<td>715</td>
<td>3.65</td>
<td>(0.34)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>163</td>
<td></td>
<td>3.56</td>
</tr>
<tr>
<td></td>
<td>No. of received PPPCs completed by patients</td>
<td>≤10</td>
<td>65</td>
<td>3.72</td>
<td>(0.38)</td>
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<td></td>
<td></td>
<td>10-20</td>
<td>239</td>
<td></td>
<td>3.62</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥20</td>
<td>579</td>
<td></td>
<td>3.63</td>
</tr>
<tr>
<td>Patient selection</td>
<td>Who included the patient?</td>
<td>GPT</td>
<td>726</td>
<td></td>
<td>3.64</td>
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<tr>
<td></td>
<td></td>
<td>assistant</td>
<td>122</td>
<td>3.63</td>
<td>(0.40)</td>
</tr>
<tr>
<td></td>
<td>First consultation or follow-up</td>
<td>first</td>
<td>441</td>
<td></td>
<td>3.64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>follow-up</td>
<td>436</td>
<td>3.63</td>
<td>(0.38)</td>
</tr>
<tr>
<td></td>
<td>Complexity of the consultation (patient report)</td>
<td>complicated</td>
<td>116</td>
<td>3.56</td>
<td>(0.40)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>moderate</td>
<td>356</td>
<td>3.61</td>
<td>(0.40)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>simple</td>
<td>282</td>
<td></td>
<td>3.69</td>
</tr>
</tbody>
</table>

$^1$Patient Perception of Patient-Centeredness; $^2$patients younger than 16 were not included because a companying adult completed the questionnaire.
Table 2: Linear regression model of variables correlating with patient assessment scores

<table>
<thead>
<tr>
<th>variables</th>
<th>B</th>
<th>SE</th>
<th>p</th>
<th>confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>patient’s age*</td>
<td>-.813</td>
<td>.403</td>
<td>.044</td>
<td>-1.604 - 0.023</td>
</tr>
<tr>
<td>patient’s gender†</td>
<td>-.825</td>
<td>.251</td>
<td>.001</td>
<td>-1.317 - -0.333</td>
</tr>
<tr>
<td>GPT’s language proficiency‡</td>
<td>1.007</td>
<td>.316</td>
<td>.002</td>
<td>0.386 - 1.628</td>
</tr>
<tr>
<td>consultation complexity§</td>
<td>-1.200</td>
<td>.365</td>
<td>.001</td>
<td>-1.917 - -0.484</td>
</tr>
</tbody>
</table>

* age category 16-49 versus age category ≥50 (years), † male versus female, ‡ Dutch as a first language (yes versus no), § complex and moderate complexity versus relatively easy consultations.

Discussion

Main results
Learning the patients’ view with regard to the components of patient-centeredness is an important basis for acquiring patient-centered consultation skills. We investigated the patient assessments of the three components of patient-centeredness included in the PPPC. The scores for items concerning the components ‘personal context’ and ‘common ground’ were relatively low (for both patients and GPTs). The patient scores were significantly higher than the GPT self-assessment scores, in other words, the GPTs were more critical about the patient-centeredness of their consultation skills than the patients, which is as we expected. In general, however, the assessments followed the same pattern.

Interpretation of the results
The lower scores for items referring to the explanation and the manageability of the proposed treatment (‘common ground’), and the lower scores for the item referring to the personal and family issues (‘personal context’) might be caused by the tendency of physicians to focus on the medical content of a consultation.
This finding conforms with the results of earlier research\textsuperscript{16,20,21}, and with our personal experience as teachers, i.e. that first-year GPTs are preoccupied with the first phase of a consultation (finding a diagnosis), and that there is yet no room for finding agreement or giving information. For the patients, however, receiving information is important\textsuperscript{15,22}. It is likely that for comparable reasons personal and family issues were often not discussed, and therefore rated as low by the patients. It seems that GPTs consider this item to be context-related, i.e. less relevant when dealing with relatively simple medical issues (personal interviews with GPTs). In contrast to the results of other studies in which doctors clearly over-rated the amount of time and attention they spent on providing information\textsuperscript{23,24}, the GPTs in our study seemed to be well aware of their relative deficiencies.

**Correlations**

Younger patients and male patients appeared to be more critical in their assessments. However, although these differences in outcome were significant, they appeared to be quite small. It is reassuring that in general, patients seem to be able to give feedback on consultation skills, and there is no reason for GPTs to exclude patients for asking for feedback. GPTs who were lacking in language proficiency (whose first language was not Dutch) also had lower patient feedback scores. Other GPT characteristics, such as age, gender or work experience, were not related to patient feedback scores, in contrast to what has been reported in other studies\textsuperscript{18,25}. Furthermore, the complexity of the consultation was significantly associated with lower patient assessment scores. This indicates that patient-centered consultation skills are context-related, probably because there is a greater demand for skills, and therefore more opportunities for critical feedback\textsuperscript{26}.

**Limitations**

In this study, the patient scores for items related to ‘exploring the disease and the illness experience’ were relatively high (ceiling effect), which might limit the validity of the results. This finding is similar to the results of most previous studies\textsuperscript{11,27,28}. Although it could simply be suggested that the patient-centered
consultation skills appeared to be good, there is evidence from other sources (such as the training staff) that there is still room for improvement. The GPTs themselves think that these high scores do not reflect the reality of a consultation. Another limitation might be that, despite the large number of patients, the selection of patients is not a random sample. In order to enhance the educational aspect of feedback from patients, the GPTs were encouraged to include patients from whom they thought they would receive relevant feedback.

**Practice implications and future studies**

The patient assessments have indicated that the GPTs performed less well on the components ‘personal context’ and ‘common ground’. This may indicate that more emphasis should be laid on these components in the doctor-patient communication training programme. Studying the effect of this intervention on the skills of GPTs would be an interesting subject for future research. For educational purposes, however, as the GPT training advances, the focus should be on increasingly complex interactions, in keeping with the progress of the GPT. It will be interesting to investigate whether or not there would be a shift in the assessment of patient-centeredness if more experienced GPTs or registered general practitioners were the subjects of study.

**Conclusion**

This study focused on the patients’ view with regard to the components of patient-centeredness, within the GP vocational training setting. These aspects were scored relatively low by the patients. These findings may form an important basis for GPTs in acquiring patient-centered consultation skills, and also have practical implications for the design and content of patient-doctor communication programmes.
References


