Patient satisfaction with availability of general practice: an international comparison

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Abstract

Objective. To identify associations between the characteristics of general practitioners and practices and patients' evaluations of the availability of general practice.

Design. Written surveys completed by patients.

Setting. General practice care in nine European countries: Denmark, Germany, The Netherlands, Norway, UK, Belgium (Flanders and Wallonia), Switzerland, Slovenia and Spain.

Study participants. 15 996 adult patients consecutively visiting the general practitioner (response rates per country varied between 47 and 89%).

Main measures. The Europep instrument to assess patients' evaluations of five aspects of the availability of general practice care: (1) getting an appointment, (2) getting through on the phone, (3) being able to speak to the practitioner on the telephone, (4) waiting time in the waiting room, and (5) providing quick services for urgent health problems. Each general practitioner recorded age, sex, number of years in the practice, number of practitioners and other care providers in the practice, and urbanization level of the practice.

Results. Patients' more positive evaluations were associated with fewer general practitioners in the practice, except for quick services for urgent health problems (range of conditional overall odds ratios, 1.69–2.02). In addition, a number of significant unconditional overall odds ratios were found, particularly those related to the number of general practitioners' working hours and the number of care providers in the practice. Some of the associations was found consistently in all countries.

Conclusion. Patients favour small practices and full-time general practitioners, which contradicts developments in general practice in many countries. Policy makers should consider how the tensions between patients' views and organizational developments can be solved.

Keywords: continuity, general practice, international comparison, patient satisfaction, primary health care

Availability of the primary medical care team 24 hours a day is a core public demand, a demand that can only increase if the responsibility for patient care shifts from secondary to primary care [1]. Delivery of out of hours services has received increased attention in the past years, especially in health care systems where family physicians/general practitioners are no longer able to provide these services on a personal basis [1]. Personal continuity of care is highly valued by patients [2–4], but it requires that the care provider is available for patient care most of the time. It has been suggested that the ideal of personal continuity in general practice should be replaced by that of organizational continuity [5]. The percentage of GPs working in solo practices varies between countries (for example, 16% in the UK and

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The analyses were based on the logistic mixed effect model (GLIMMIX MACRO in SAS), which analyses fixed and random effects, because of the hierarchical structure of the study (patients nested within practices). We performed separate analyses for each aspect of care evaluated by the patients (response variable). We did not take potential clustering between GPs into account (particularly relevant in countries that provided more than one GP per practice), as the proportion of patient data clustered within GPs was small and we preferred to use the same two-level model in all countries. The regression models included patients’ age and sex as potential predictors of the variation of scores between patients (level one) and the six GP/practice characteristics mentioned above as potential predictors of the random variation of scores between GPs (level two). Patient age and sex were included in all the models.

Firstly, we calculated unconditional and conditional odds ratios for the total dataset from all countries (unconditional odds ratios were not controlled for the effect of other GP/practice characteristics, but were controlled for patients’ age and sex). For the calculation of conditional odds ratios, we entered all potential predictors in the model and reported on the results. We substituted the missing number of care providers per practice in The Netherlands on the basis of the data from Denmark, and the missing number of hours worked per week in Wallonia on the basis of the number from Flanders.

Next, countries were entered into this overall model to check for differences between countries and for interaction effects of countries with GP/practice characteristics.

Finally, we analysed each country separately, using a backward selection of significant indicators. GP/practice characteristics that were non-significant predictors ($P > 0.05$) were removed to determine the final model. We reported significant associations of GP/practice characteristics as the conditional odds ratios in the final logistic regression model. We performed 350 statistical tests (ten country-specific outcome variables, and seven predictors), so the results should be interpreted cautiously as associations may be significant by chance.

### Results

The nine countries that could be included in the analysis provided 15,996 responses, but in Wallonia and Spain the intended sample size was not reached (Table 1). The response rates varied from 47% in Germany to >70% except in Wallonia (47%) and Switzerland (69%). The mean age of patients was about 50 years, and approximately two-thirds of the patients were women. A total of 481 GPs was included in the analysis (Table 1). Their mean age was in the forties, except in Denmark and Germany where the mean age was 51 and 50 years, respectively. The majority were men, except in Slovenia where most GPs were women. GPs in Flanders worked the most hours per week. In the UK and Spain, they typically work with several other GPs in a practice. In Slovenia and Spain, GPs worked in health care organizations with many other care providers.

In all countries, a majority of patients reported very positive evaluations of the availability of general practice (Tables 3). There was, however, significant variation in the percentages of patients who rated aspects of care as very good/excellent’ across different countries, ages, patients, and different GPs. The proportion of variations in patients’ evaluations of care that related to systematic differences between GPs varied between aspects of care and countries, but it was usually <10%.

The overall odds ratios, based on data from all countries combined, are reported in Table 4. Patients’ evaluations of each of the five aspects of availability were more positive in practices with smaller numbers of GPs and care providers. In general, evaluations were also more positive if the GP worked more hours per week, except for the patients’ evaluations of the provision of services for urgent health problems. In addition, there were some associations with GPs age, sex, and number of years in practice. Looking at the conditional odds ratios, the number of GPs in the practice proved to be the dominant factor; it remained significantly related to patients’ evaluations of all aspects of the availability of care. Furthermore, GPs in villages received more positive patient evaluations for getting through on the phone, and male GPs had more positive patient evaluations for waiting time in the waiting room.

This analysis of overall conditional odds ratios also showed significant differences between patients’ evaluations in different countries. A second regression model, which added the interactions of country and GP/practice characteristics, showed that the number of significant interaction effects varied between three and six (out of the seven interactions studied) for the different aspects of availability. Therefore, we considered it relevant to continue with exploratory analyses for the countries separately.

Table 1 Patient variables ($n=15,996$)

<table>
<thead>
<tr>
<th></th>
<th>$n$</th>
<th>Response %</th>
<th>Age (mean)</th>
<th>Sex (% female)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>1307</td>
<td>83.7</td>
<td>45.9</td>
<td>72.7</td>
</tr>
<tr>
<td>Germany</td>
<td>2224</td>
<td>77.2</td>
<td>53.7</td>
<td>62.5</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>1772</td>
<td>87.5</td>
<td>47.6</td>
<td>67.7</td>
</tr>
<tr>
<td>Norway</td>
<td>1609</td>
<td>89.0</td>
<td>50.7</td>
<td>70.3</td>
</tr>
<tr>
<td>UK</td>
<td>1934</td>
<td>73.0</td>
<td>51.3</td>
<td>67.6</td>
</tr>
<tr>
<td>Belgium, Flanders</td>
<td>2530</td>
<td>81.1</td>
<td>49.6</td>
<td>64.3</td>
</tr>
<tr>
<td>Belgium, Wallonia</td>
<td>990</td>
<td>47.1</td>
<td>53.6</td>
<td>70</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1497</td>
<td>69.3</td>
<td>52.4</td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td>1808</td>
<td>83.7</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>316</td>
<td>72.1</td>
<td>54.4</td>
<td></td>
</tr>
</tbody>
</table>

Patient satisfaction with getting an appointment was highest in Germany (94%) and lowest in the UK (62%) (Table 3).
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Table 4: Overall associations between patients’ evaluations of availability and general practitioner characteristics

<table>
<thead>
<tr>
<th>Patients’ evaluations</th>
<th>Overall odds ratio²</th>
<th>Overall odds ratio²</th>
<th>Countries where associations were found (odds ratio)³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting appointment to suit you</td>
<td>Overall odds ratio²</td>
<td>Overall odds ratio²</td>
<td>Countries where associations were found (odds ratio)³</td>
</tr>
<tr>
<td>Getting through to the practice on the phone</td>
<td>Overall odds ratio²</td>
<td>Overall odds ratio²</td>
<td>Countries where associations were found (odds ratio)³</td>
</tr>
<tr>
<td>Being able to speak to the general practitioner on the phone</td>
<td>Overall odds ratio²</td>
<td>Overall odds ratio²</td>
<td>Countries where associations were found (odds ratio)³</td>
</tr>
</tbody>
</table>

1. Patients’ evaluations refer to the general practitioner’s characteristics.
2. Conditional and unconditional odds ratios.
3. The table continues on the next page.
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Comparing patient satisfaction with availability of general practice

were more satisfied if the GP worked fewer hours. In Spain, patients with younger GPs and with GPs who had more experience were more satisfied.

Patients in the UK and Norway were least satisfied with the ability to speak to the GP on the phone (51 and 54% of the patients had most positive evaluations, respectively). In Germany, The Netherlands, Norway, and Switzerland, a lower number of GPs in the practice was related to higher patient satisfaction, but in Denmark this effect was reversed (Table 4). In The Netherlands and Norway, patients were more satisfied if the GPs worked more hours per week, but in Spain this relationship was reversed. A lower number of care providers in the practice was more strongly related to lower patient satisfaction in Denmark and the UK.

In all countries, waiting times in the waiting room were less favourably evaluated compared with other aspects of care (Table 3). Table 4 shows that patients in Denmark and Germany were more satisfied if fewer GPs worked in the practice. In Denmark and Flanders, patients in cities were more positive about this aspect of care. In Flanders and Spain, patients were less satisfied if the GP worked fewer hours per week. In the UK, patients with younger GPs were more satisfied, but in Slovenia, patients with older GPs were most satisfied. In the UK, fewer care providers in the practice was related to higher patient satisfaction, but in Slovenia, more care providers was related to higher patient satisfaction. Finally, patients in Flanders were more satisfied with waiting times if the GP was male.

Patients had very positive evaluations of the GPs' provision of services for urgent health problems. In Denmark, patient satisfaction was higher if the number of GPs in the practice was larger, but in Norway this relationship was reversed (Table 4). In The Netherlands, patients had more positive evaluations if the GP worked more hours per week and if the practice was in a village. In Norway, patients were more satisfied if the GP was older. In the UK, patient satisfaction was lower if the number of care providers in the practice was low. Finally, patients in Spain were more positive if their GP was female.

Discussion

Patients' evaluations of the availability of general practice care in the nine European countries were generally positive, but there was some variation. Patient satisfaction was associated with characteristics of the patients and the practices. We found confirmation of our expectation that more positive patient evaluations of availability were associated with working more hours per week if the GP was single-handed, a selection of special GPs to work single-handed, a selection of specific patients to smaller practices, or an effect of cultural factors or organizational conditions.

None of the differences can be combined with the development towards larger practices and GPs working fewer hours per week in associations was consistently found in all countries, whereas in Wallonia, patient satisfaction was not statistically associated with any of the GP or practice characteristics.

Overall, this study suggests that there is an association between patients' positive evaluations of the availability of the GP and GPs spending many hours per week on patient care in practices with few other GPs or care providers. We were not able to elucidate in this cross-sectional study whether this was an effect of a selection of special GPs to work single-handed, a selection of specific patients to smaller practices, or an effect of cultural factors or organizational conditions.

This study used a previously validated patient satisfaction instrument, reasonably representative samples of patients and doctors. We did not have data on GP and practice characteristics for all 16 countries that participated in the European study, which may have led to a selection bias. Countries not included were: Austria, France, Finland, Iceland, Israel, Portugal, and Sweden. Wallonia had a relatively low response rate, which may be related to a lower research standing of group practices in Germany, The Netherlands, Norway, and the UK there may have been some confusion concerning the GP to whom the questionnaire referred. Higher patient satisfaction ratings may have resulted in a reverse effect, so that it was difficult to identify differences between GPs. Collinearity (correlations between GP/practice characteristics) may have influenced the results of the stepwise analyses per country.

The results of this study in general practice are similar to those in a study in a hospital setting, which showed that patient satisfaction is higher in smaller health care organizations [13]. The authors claimed that patients perceive larger hospitals as impersonal and intimidating. An alternative interpretation would be that larger health care organizations attract a specific type of patient or doctor. The availability of a personal list of patients may have a positive influence on GPs' positive evaluations of care, because it emphasizes the personal relationship between a patient and a doctor [15]. Personal lists are less often used in larger health care organizations. Patients in managed-care settings were less satisfied with continuity of care compared with patients receiving fee-for-service care [16]. Further research should reveal which factors determine patients' negative evaluations of larger health care organizations.

This study showed that the findings on determinants of patient satisfaction cannot easily be generalized across countries. There is considerable variation in the organization of general practice care within each of the countries, so a detailed analysis of the determinants of patient satisfaction within a specific country should complement an international comparison of patient satisfaction with care [3]. A positive association of patient satisfaction and the number of working hours was found in The Netherlands and Norway, but the association was reversed in Spain. Do GPs in The Netherlands and Norway work too few hours, as far as patients are concerned, and GPs in Spain too many hours?

This study raises the question of whether patients' preferences can be combined with the development towards larger practices and GPs working fewer hours per week in
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