Age, gender, socioeconomic, and ethnic differences in patients’ assessments of primary health care

J L Campbell, J Ramsay, J Green

Abstract

Background—Patients’ evaluations are an important means of measuring aspects of primary care quality such as communication and interpersonal care. This study aims to examine variations in assessments of primary care according to age, gender, socioeconomic, and ethnic variables.

Methods—A cross-sectional survey of consecutive patients attending 55 inner London practices was performed over a 2 week period using the General Practice Assessment Survey (GPAS) instrument which assesses 13 important dimensions of primary care provision. Variations in scale scores were investigated for differences relating to age, gender, socioeconomic, and ethnic status as reported by respondents.

Results—A total of 7692 questionnaires were returned (71% response rate). Valid information on age, gender, socioeconomic status, and ethnicity was available for 4819 out of 5496 adult respondents. Approximately half the respondents reported their ethnic group as “white” and most of the remaining respondents reported belonging to “black” or South Asian groups. Significant differences existed between groups of patients defined by age or ethnicity for most of the scale scores examined. Black, South Asian, and Chinese respondents reported lower scores (representing less favourable assessments) than white respondents; older respondents reported more favourable evaluations of care than younger respondents; and less affluent groups reported lower scores than more affluent groups for two of the 13 dimensions. There was no significant difference between gender groups with respect to assessment of primary care. Age and ethnicity were independent predictors of respondents’ assessments of primary care.

Conclusions—Differences exist between identifiable subgroups of the population in their assessments of primary health care measured using the GPAS instrument. This work adds to the literature on variation in healthcare experience and the potential for patient assessment of primary care. Further work is required to investigate these differences in more detail and to relate them to differences in the nature and process of primary care provision. Primary care providers need to ensure that services provided are appropriate for all patient groups within their communities.

Key messages

- Primary care has a key role to play in developing an equitable health service responsive to the needs of different population groups.
- Patients’ evaluations are an important means of assessing whether such needs are being met, but few studies have conducted large-scale comprehensive and systematic research in this area.
- GPAS is a useful instrument for measuring patients’ assessments of primary care.
- This study provides evidence from a large scale survey that primary care services are evaluated less positively by younger patients and those from ethnic minorities.
- Further work is needed to relate these assessments to aspects of actual service provision and to expectations of services provided.
- Primary care providers need to ensure that services provided are appropriate for all patient groups within their communities.
general practitioner services and in reported priorities for the planning of general practice care. In addition, patient groups vary in their perceptions of difficulties encountered in accessing high quality primary care services. They do, however, share perceptions of the key attributes of good quality primary care, prioritising aspects such as the personal nature of care, technical competence among health professionals, and a collaborative approach to decision making.

There has been increasing interest in using patient assessment to evaluate these components of primary care. Patient assessments are the most direct way of measuring aspects such as accessibility, communication, and interpersonal care, and there is evidence that patients can make valid assessments of technical competence, although it is recognised that patient assessment may be only weakly related to other measures of clinical expertise. In addition, patient evaluations have been shown to relate to other outcomes of primary care such as their “compliance” with medical advice and treatment.

This study aims to examine differences between groups of patients defined by age, gender, socioeconomic, and ethnic status with respect to 13 important dimensions of primary care measured using the General Practice Assessment Survey (GPAS).

The General Practice Assessment Survey (GPAS)

The GPAS questionnaire (appendix 1) comprises seven multiple item scales and two single item scales addressing nine key areas of primary care activity (access to care, technical aspects of care, communication, interpersonal care, trust, doctor’s knowledge of the patient, nursing care, services provided by receptionists, and continuity of care provided by patient’s usual doctor). A further four single items relate to the patient’s perception of the general practitioner’s role in referral and coordination of care, their willingness to recommend their general practitioner, and their overall satisfaction with the care received. Detailed results relating to the performance of the GPAS in this study are reported elsewhere. Scaled scores (out of 100) for the nine multiple item scales and four individual items were calculated for each respondent. These scales (higher scores representing better perceptions of care) reflect the dimensions of care identified as important in previous research on patients’ evaluations of, and satisfaction with, primary care. A full version of the GPAS questionnaire may be seen on the Internet.

Methods

As part of a large study examining the quality of primary care provision in an inner city setting, 11,000 consecutive patients attending one of 55 inner London practices over a 2 week period in 1998–9 were invited to complete the GPAS. Patients were asked for sociodemographic information relating to age, gender, home ownership and car availability, and ethnicity. Results obtained from young people under the age of 16 or their accompanying adults were excluded from this analysis. Respondents were allocated to one of four age categories: 16–30 years, 31–45 years, 46–60 years, and 61 years or older. A score of socioeconomic status was derived from responses to questions on home ownership and car availability. This allowed definition of three socioeconomic groups: the advantaged (owning or purchasing their own home and normally having access to a car), those of modest means (either owning or purchasing their own home or normally having access to a car), and the less affluent (neither owning nor purchasing their own home nor normally having access to a car). The 1991 census question on ethnicity was used to define respondent’s ethnic grouping. This allocates respondents to one of nine ethnic groups on the basis of self-classification (table 1).

In four practices analysis of response rates among adult attenders was carried out by counting the number of consecutive attenders for whom a questionnaire was available. Information on age and gender was available for comparison of responders and non-responders. Analysis of variance was used to compare differences in GPAS scores between populations defined by age, gender, socioeconomic status, and ethnicity. Multiple regression was used to determine the significance of age group, gender, socioeconomic status, and ethnic group after adjusting for all of these variables. Since a large number of statistical tests were being applied to the data, Bonferroni’s correction was applied with significant association being determined where p<0.001, rather than the more usual p<0.05.

Statistical analysis was undertaken using SPSS and STATA software. Ethical approval for this study was obtained from local research ethics committees.

Results

Questionnaires were obtained from 7692 subjects (71% response rate). Of these, 4819 were over 16 years and had provided comprehensive information on age, gender, socioeconomic and ethnic status. Self-defined ethnicity was reported as white (n=3014, 63%); black, all groups (n=1140, 24%); South Asian, all groups (n=421, 9%); Chinese (n=39, 1%); and other ethnic groups (n=168, 3%). Detailed analysis of response rates among adult attenders in four practices showed that responders were of similar age to non-responders (43.7 (19.7) years v 45.0 (22.0) years, t=0.661, p=0.51), and that a greater proportion of

<table>
<thead>
<tr>
<th>Ethnic groups as defined in the 1991 UK census</th>
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<tbody>
<tr>
<td>White</td>
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<tr>
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<td>Black other</td>
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<tr>
<td>Indian</td>
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<tr>
<td>Pakistani</td>
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<tr>
<td>Bangladeshi</td>
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<tr>
<td>Chinese</td>
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<td>Any other ethnic group</td>
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Table 1

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Table 2 Regression analysis of the contribution of age, gender, socioeconomic status, and ethnicity to scale scores. Figures are regression coefficients and standard error for the contribution of each variable compared with the leading subgroup for each variable (p value).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Access</th>
<th>Receptionists</th>
<th>Continuity</th>
<th>Technical</th>
<th>Communication</th>
<th>Personal</th>
<th>Knowledge</th>
<th>Nursing</th>
<th>Recommend</th>
<th>usual doctor</th>
<th>Overall satisfaction</th>
<th>Referral</th>
<th>Trust</th>
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<td>Constant</td>
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<td>24.8</td>
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responders were women (220/282 (78%) male 
response rate χ² 375/437 (86%) female response rate, χ²=7.3, p<0.01).

Detailed GPAS scale scores have been 
presented elsewhere.20 In regression analysis 
(table 2), age and ethnicity were independent 
predictors of scale responses for 12 and eight of 
the 13 scales, respectively. In contrast, gender 
was not an independent predictor of scale 
responses and socioeconomic status was a pre-
dictor for only two scales.

Significant differences between age groups 
are evident for all except one (referral) of the 
GPAS scales, with older respondents reporting 
more favourable impressions for all the dimen-
sions examined. Particularly marked differ-
ences are evident in relation to the doctor’s 
reported knowledge of the patient, willingness 
to recommend their usual doctor, doctor’s role 
in coordinating care, overall satisfaction, and 
the assessment of interpersonal aspects of the 
nature of care.

Differences between men and women were 
generally small, attaining statistical signification 
for none of the domains examined. Patients 
who were less affluent had lower GPAS scores 
for two scales than those who were more 
advantaged.

Differences in scores between ethnic groups 
were evident for eight of the 13 scales 
examined. White respondents consistently re-
ported more favourable scores in each of the 
domains examined than those from other 
ethnic groups. Respondents from black ethnic 
groups tended to give intermediate responses 
while those from the Indian, Pakistani, or 
Bangladeshi communities tended to report 
lowest scores. In particular, substantial differ-
ences existed between ethnic groups in relation 
to the reported performance of reception staff, 
the perceived accessibility of care, and the trust 
between doctor and patient.

Discussion

This study has shown significant differences 
between people of varying age and ethnicity 
with respect to their assessments of primary 
care using a reliable and valid instrument to 
measure patients’ views. Differences between 
people of varying socioeconomic status were 
less marked and were negligible for patient 
groups defined by gender. In regression analy-
sis, age and ethnicity were independent predic-
tors of patients’ assessments of primary care.

More research is needed to determine the 
extent to which these differences reflect 
variations in the provision of primary care 
across the population. The major limitation of 
using a cross sectional survey to examine 
differences in assessments of care between 
subgroups in the population is difficulty in dis-
tinguishing three potential explanations of dif-
fferences. These are (1) that differences in 
reported assessments reflect actual differences 
in quality or appropriateness of primary care 
delivery; (2) that differences in reported assess-
ments reflect cultural differences between and 
within population groups in willingness to 
report unfavourable assessments, and (3) that 
differences in reported assessments reflect 
variation in expectations of or needs for 
primary care between and within population 
groups.

AGE

Older patients rated care more favourably than 
younger patients in all domains examined. 
Given the well reported association between 
and favourable perception of care,27–29 this 
finding may reflect cultural differences in will-
ingness to report unfavourable assessments 
among older patients. However, actual differ-
ences between the youngest and oldest age 
groups examined were often substantial, and 
trends in scores were evident for all except 
“referral” of the 13 dimensions of primary care 
considered. Higher morbidity and consulting 
rates among older patients may mean that this 
group may have more contact with primary 
care and thus have more opportunity to be 
favourably influenced by the services provided. 
Alternatively, younger patients may be per-
ceived as somehow having less legitimacy in 
using primary care services and this may be 
being communicated to, or perceived by, such 
patients.

GENDER

Although men and women make very different 
use of primary care (with adult women having 
substantially greater consultation rates across 
all illness categories in the Fourth National 
Morbidity Survey3 30 and women being more 
likely than men to consult if they have an illness 
episode31), there were no significant differences 
between men and women in GPAS scale scores 
after correction for other variables under inves-
tigation.

SOCIOECONOMIC STATUS

In this study a score of socioeconomic status 
was derived from responses to questions on 
housing tenure and car ownership.32 Less afflu-
ent individuals differed from the more advan-
taged in reporting less favourable assessments 
of two dimensions of primary care (their 
impression of their doctor’s technical ability 
and willingness to recommend their usual doc-
tor). Overall, differences in socioeconomic sta-
tus accounted for a relatively small amount of 
variability in patient assessment of care.

ETHNICITY

Overall, 37% of respondents in the study iden-
tified themselves as being from non-white eth-
ic minorities. In line with the census question, 
no inferences can be drawn about the origin of 
respondents from the “other” ethnic groups 
which make up 0.5% of residents of Great 
Britain.33 Non-white ethnic minority respond-
ents reported less favourable assessments of 
care than white ethnic majority respondents for 
all except two of the 13 dimensions of care 
examined. Differences were most marked in 
the performance of reception staff (where 
Asian respondents reported the least favour-
able assessments), in the reported accessibility 
of care, and in the evaluation of trust between 
patient and doctor. Curtis and Lawson32 have
recently reported on the poorer health experience of Afro-Caribbeans—especially Afro-Caribbean women in London—but did not relate these to the accessibility and use of primary care by this population group. It is possible that the poorer perceptions of the accessibility of primary care reported here by South Asian respondents might, for example, be related to the reported lack of access to women practitioners as well as to administrative and language barriers known to be a deterrent to service uptake in other areas.15,16 While there have been no studies of the ethnic status of reception staff, experience suggests that the majority of such members of the primary healthcare team are drawn from the white ethnic majority—which perhaps accounts, at least in part, for the lower scores on this domain by members of non-white ethnic minorities compared with the white majority. Ensuring representation of ethnic minorities among reception staff in areas of high ethnic mix might be a means of addressing this issue.

Given the differing needs for primary care of specific ethnic communities, it is likely that reported differences in assessments of quality reflect inadequacies in the provision of appropriate care.

Conclusion
In a large survey of primary care patients in London we found significant differences in assessments of services between subgroups of the population. Of particular concern are the less favourable assessments given by younger groups and those from ethnic minority groups. It is likely that these may reflect inequalities in the provision of appropriate primary care services. More research is needed to determine whether these differences reflect variation in the provision of care, greater expectations of services, or merely differences in reporting behaviour. Where it is unlikely that variations do not result from differences in reporting behaviour, primary care providers need to consider how to provide services appropriate for all patient groups within their community.

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### Appendix 1  The General Practice Assessment Survey (GPAS)

Descriptive characteristics and content of the nine GPAS scales and four individual items are shown in the table below.

<table>
<thead>
<tr>
<th>Scale/item</th>
<th>No of items</th>
<th>Response format</th>
<th>Item content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>7</td>
<td>Evaluative</td>
<td>Location, opening hours, phoning through to reception or the GP, availability of specific or any GP, waiting times in surgery</td>
</tr>
<tr>
<td>Receptionists</td>
<td>1</td>
<td>Report</td>
<td>Same day urgent availability of GP</td>
</tr>
<tr>
<td>Continuity of care</td>
<td>1</td>
<td>Evaluative</td>
<td>Service provided by receptionists</td>
</tr>
<tr>
<td>Technical care</td>
<td>5</td>
<td>Evaluative</td>
<td>GP's medical knowledge, thoroughness of physical examination, arranging tests, treatment prescribing, diagnosis</td>
</tr>
<tr>
<td>Communication</td>
<td>3</td>
<td>Evaluative</td>
<td>Continuity of care provided by patient's usual doctor</td>
</tr>
<tr>
<td>Interpersonal care</td>
<td>3</td>
<td>Evaluative</td>
<td>GP's thoroughness asking questions, attention, explanations</td>
</tr>
<tr>
<td>Trust</td>
<td>4</td>
<td>Evaluative</td>
<td>Frequency of leaving surgery with unanswered questions.</td>
</tr>
<tr>
<td>Knowledge of patient</td>
<td>3</td>
<td>Evaluative</td>
<td>GP's spending time with patient, showing patience, showing caring and concern</td>
</tr>
<tr>
<td>Nursing care</td>
<td>3</td>
<td>Evaluative</td>
<td>Trusting of GP's judgements, GP's truthfulness about medical condition, GP's valuing your health above costs, overall trust in GP</td>
</tr>
<tr>
<td>Referral</td>
<td>1</td>
<td>Report</td>
<td>GP's knowledge of patient's medical history, worries, responsibilities at home/work</td>
</tr>
<tr>
<td>Coordination</td>
<td>1</td>
<td>Report</td>
<td>GP's knowledge of patient's medical history, worries, responsibilities at home/work</td>
</tr>
<tr>
<td>Recommend</td>
<td>1</td>
<td>Evaluative</td>
<td>GP's knowledge of patient's medical history, worries, responsibilities at home/work</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>1</td>
<td>Evaluative</td>
<td>GP's knowledge of patient's medical history, worries, responsibilities at home/work</td>
</tr>
</tbody>
</table>

Patient assessments of primary health care
Age, gender, socioeconomic, and ethnic differences in patients' assessments of primary health care

J L Campbell, J Ramsay and J Green

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