GPs' attitudes to personal continuity:
findings from everyday practice differ from postal surveys

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ABSTRACT

We conducted a study in which we measured GPs' attitudes towards personal continuity directly after consultations, and identified which factors predicted its perceived importance. Moreover, we related these data to attitudes as measured by a postal survey. GPs varied considerably in their attitudes towards personal continuity. Continuity was valued for serious and psychosocial issues and also for routine checks for a chronic illness. There was no relation whatsoever between the importance that individual GPs attached to continuity after consultations, and their scores on the postal survey.

Keywords
continuity of patient care; family practice; questionnaires; physician-patient relations.

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INTRODUCTION

Personal continuity is considered an important attribute of general practice. Findings from postal surveys indicate that GPs value personal continuity especially for serious and psychosocial problems.[1] This may relate to GPs' assumptions that awareness of patients' contextual and medical antecedents favours good quality of care for such conditions.[2]

However, research on attitudes towards continuity is complex, and results from postal surveys should be interpreted cautiously, as these may yield only socially desirable answers. Nevertheless, it is worthwhile to gain more insight in GPs' attitudes to continuity, as this may have serious implications both for research and practice. For example, it may help identifying patient characteristics for which continuity matters, thus giving direction to appointment scheduling and patient routing in daily practice.

In order to further explore this theme, we conducted a study, in which we measured GPs' perceived importance of personal continuity directly after the consultation, and studied factors that might predict its importance. Moreover, we compared these to GPs' attitudes to continuity as measured by a postal questionnaire.

METHOD

We approached 102 GPs from 49 practices in the east of The Netherlands to participate in a project on continuity of care. Thirty GPs from 17 practices consented. Fourteen GPs worked with combined patient lists and 16 with personal lists. During study time, each GP completed a computerised questionnaire after 200 successive consultations. Among other questions, the questionnaire contained items on the perceived importance of personal continuity (see Box 1). We developed the questionnaire through a preceding qualitative pilot study. A panel of staff-members judged its face validity and feasibility. Prior to the start of the project, the GPs completed a postal questionnaire on the

perceived importance of continuity for a diversity of eleven clinical conditions (5 point Likert).[3]

We calculated average continuity scores for each GP and used multilevel models to explain the variance in the perceived importance of personal continuity. By constructing a null model (constant or intercept only model) it was possible to calculate which proportion of the observed variance might be explained on the practice level, on the GP level and on the consultation level. A null model is a model without explaining variables, which enables us to calculate the percentages of the variance that can be explained on the distinguishing levels. Next, we included the following clusters of independent variables in the model:

- GPs' age, sex, practice type (characteristics sampled by the postal questionnaire);
- patients' age and sex (extracted from the patient records electronically); and
- reason for encounter, consultation type, seriousness of symptoms (5-point Likert), and perceived coping behaviour, medical consumption and compliance (sampled by GP questionnaire).

We constructed one overall model, and four other models including a set of different variables. At last, we calculated predicted means (estimated marginal means; that is, means corrected for imbalance in other variables) for variables that attributed significantly to the model (*P*<0.01).

After analysing the data from the postal questionnaire with principal component analysis, we calculated individual 'survey scores'. In order to study if GPs who valued continuity in this postal survey, also valued continuity directly after consultations, we calculated the Pearson correlation coefficient for the relation between GPs' average 'consultation' scores and overall 'survey' scores.

RESULTS

The participating GPs filled in a total of 5741 questionnaires after the consultations, which is

How this fits in

Doctors value continuity of care dependent on the reason for encounter. Contrary to findings from postal surveys, they value continuity also for routine checks for chronic illness. GPs' views after real consultations differ from those views expressed in surveys.

Box 1. Continuity items from computerised questionnaire and calculations of scores.

▶ 1. Follow up consultation is   Continuity score

     a. Not necessary *(skip 2–4)*
     b. May be necessary
     c. Necessary

▶ 2. With whom preferably?

     a. Does not matter *(skip 3 and 4)*   1
     b. With myself *(skip 3)*
     c. With another GP, namely no …

▶ 3. GP number
     ... *(skip 4)*

▶ 4. How important do you feel it is that this patient visits *yourself* next time?

     a. A bit important   2
     b. Important   3
     c. Very important   4

Table 1. Variables contributing to the perceived importance of personal continuity (Multilevel models: 4027 consultations, the null model shows which percentage of the variance might be explained on the patient's and GP's level (practice level excluded).

Models	Overall (%)	Doctor level (%)	Patient and consultation level (%)
Variance to be explained null model	100	33.3	66.7
Variance explained Overall model (including 1, 2, 3 and 4)	28.2	11.6	16.6
1. GP's age, sex, and practice type	9.4	9.4	0.0
2. Patient's age and sex	1.0	0.0	1.0
3. Reason for encounter, consultation type, seriousness	19.8	3.9	15.9
4. Perceived consumption, compliance, coping style	6.0	3.1	2.9

96% of the intended 6000. A follow-up consultation was considered applicable in 4027 of these 5741 consultations. GPs differed considerably in their attitudes towards personal continuity. The GPs' average scores ranged from 1.08 (corresponding with personal continuity does not matter) to 3.04 (corresponding with continuity important) (mean = 1.82; standard deviation [SD] = 0.52). The multilevel analysis including practice, GP and patient level (initial null model) showed that only 3% of the variance might be explained on the practice level, so this level was excluded from further analysis. The null model without practice level showed that 33.3% of the variance might be explained on the level of the GP, and 66.7% on the level of the patient and consultation. The variables included in the analysis could explain one-third of the variance

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Table 2. Perceived importance of personal continuity (predicted means; higher scores indicate that GPs attach more importance to continuity (maximum 4 — minimum 1; n = 4027). Variables contributing significantly to the model (P<0.01)

	Percentage	Predicted	95%CI
Seriousness			
Not at all	10.4	1.74	1.47 to 1.96
Not serious	32.6	1.82	1.56 to 2.04
Neutral	39.2	2.03	1.76 to 2.23
Serious	16.3	2.42	2.14 to 2.62
Very	1.5	2.93	2.59 to 3.17
Consultation type			
First contact new episode	47.3	2.01	1.77 to 2.25
Follow up contact known episode	35.2	2.13	1.89 to 2.38
Routine check chronic illness	17.5	2.16	1.92 to 2.41
Nature main reason for encounter			
Somatic	74.8	1.92	1.66 to 2.14
Psychological	11.7	2.50	2.23 to 2.73
Functional/nervous	8.6	2.20	1.92 to 2.42
Social	1.7	2.31	2.01 to 2.58
Different/unclear	3.2	1.92	1.58 to 2.20

on both levels (Table 1). Only a few variables contributed significantly to the model. Of these, the perceived seriousness of symptoms proved to be a strong predictor for GPs' preference to see patients back themselves (Table 2).

GPs differed considerably in their attitudes as expressed in the postal survey. Scores ranged from 17 to 39 (mean = 28.8; SD = 5.9). However, survey scores from individual GPs hardly related to their consultation scores. The Pearson correlation coefficient, representing the relation between GPs' individual 'survey' and 'consultation' scores, was very low (- 0.097).

DISCUSSION

The finding that GPs value continuity mainly for serious and psychosocial conditions matches results from postal surveys.[1] However, GPs' individual attitudes after consultations were not consistent with their attitudes as expressed in postal surveys. Therefore, it seems wise to interpret survey results cautiously. On the other hand, the after-consultation attitudes in this survey are difficult to interpret as well, as, to some extent, these may also reflect socially desirable answers. An explanation for the intra-GPs' contradictory attitudes might be that survey results reflect attitudes towards a concept, whereas results derived from everyday practice reflect patient- and consultation-related attitudes. We think that measuring after-consultation attitudes is a way to reveal hidden determinants and motives for daily

routines. GPs differ considerably in how important they find continuity during everyday consultations, but their scores on surveys cannot predict this. Other factors may be of influence, such as sympathy for patients and personal preferences and future studies should include this aspect. It is also insufficiently clear which patient-related factors cause GPs to value continuity. For instance, it was quite surprising that GPs considered continuity important for routine appointments for chronic illness. This certainly contradicts findings from surveys and the tendency to delegate care to practice nurses and other staff. Furthermore, GPs did not value continuity particularly for older patients or for patients who distinguished themselves on consumption, compliance or coping behaviours. This is noticeable, as more vulnerable patients themselves have been found to value continuity,[4]

Inevitably, this study had some flaws. The sample reflects the attitudes of only 30 GPs, although supplementary analysis showed that their attitudes to continuity did not differ from a random sample of Dutch GPs.[2] Also, the sample number of 30 limits the explanatory power of the practice and GP levels to some extent. Moreover, although they proved to have face validity, the questionnaires were not formally validated.

In summary, what are the implications of this study? First, appointment scheduling and patient routing in daily practice should preferably not be based on survey results, as these apparently uncover only a part of GPs' attitudes to continuity. Second, it certainly uncovers the need to examine other factors that influence GPs' attitudes. Qualitative work could reveal motives and conceptions underlying GPs' diverse attitudes. In our opinion, future studies should take qualitative interviews with GPs as the point of departure; preferably these should focus on real consultations.

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