Deprivation, psychological distress, and consultation length in general practice

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SUMMARY

Background: Recent research has shown the benefits of longer consultations in general practice. Approximately 40% of patients presenting to general practitioners (GPs) are psychologically distressed. Studies have shown that psychological morbidity increases with increasing socioeconomic deprivation. The combined effects of psychological morbidity and socioeconomic deprivation on consultation length are unknown. In addition, though it is known that doctors correctly identify half their distressed patients as such, the effect of consultation length on identification is unknown.

Aim: To examine factors associated with presentation and recognition of psychological distress in GPs' surgeries and the interaction of these factors with consultation length.

Design of study: A cross-sectional study.

Setting: Nine general practices in the West of Scotland, involving 1075 consultations of 21 full-time GPs.

Method: The main outcome measures were patient psychological distress (measured by General Health Questionniare-12), doctors' identification of psychological distress, consultation length, and Carstairs deprivation category scores.

Results: The mean consultation length was 8.71 minutes (SD = 4.40) and the prevalence of positive GHQ scores was 44.7%. Increasing GHQ (greater psychological distress) and lower deprivation category scores (greater affluence) were associated with longer consultations. Positive GHQ scoring increased with greater socioeconomic deprivation and also peaked in the 30 to 39 years age group. Recognition of psychological distress was greater in longer consultations (50% increase in consultation length associated with 32% increase in recognition).

Conclusion: Increasing socioeconomic deprivation is associated with higher prevalence of psychological distress and shorter consultations. This provides further evidence to support Tudor Hart's 'inverse care law' and has implications for the resourcing of primary care in deprived areas.

Keywords: psychological morbidity; socioeconomic deprivation; inverse care law; consultation length.

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Introduction

UP to 40% of patients presenting to general practitioners (GPs) are psychologically distressed as measured by screening tools, such as the General Health Questionnaire (GHQ).[1-3] Of these distressed patients, doctors correctly identify approximately half.[1-3] Up to half of depressive illness in the community is missed by GPs.[4] Of the patients whose depression goes unrecognised, most present with, and are treated for, physical symptoms.[5]

General practice is the point of first contact with health services for most people who are psychologically distressed.[6] Poor mental health (chronic anxiety, depression, and emotional maladjustment) is a major predictor of future poor physical health.[7] Failure to diagnose and treat appropriately may promote chronicity and the inappropriate and unnecessary referral and medical treatment characteristic of somatic fixation.[8] Correct identification of the patient's psychological problem may reduce somatisation.[9]

Studies have shown factors associated with increased psychological morbidity. There is a middle-aged peak in prevalence.[2] Associations have been shown between socioeconomic deprivation and increased psychological morbidity.[10,11] There is a strong social gradient of increasing anxiety and depression scores by deprivation category (personal communication: Morrison C, Glasgow Monica Project, 1997).

Consultation lengths in the United Kingdom (UK) (mean = 8.4 minutes[12]) remain short by international standards (compare with 15 minutes in Canada and 21 minutes in Sweden[13,14]) Although the GP may be aware of issues involved in the detection of psychological distress, time available and the doctor's state of mind may make them choose not to confront it.[15] Longer booking intervals are of psychological advantage to the GP.[16] Recent research has also shown that patient enablement by the doctor is most closely correlated with increasing duration of the consultation.[21] Although some studies have suggested that, given longer consultations, doctors will make more diagnoses of psychological problems,[17] it has not been established whether this actually represents improved detection of psychological distress.

This study aimed to examine factors associated with presentation and recognition of psychological distress in GPs' surgeries and the interaction of these factors with consultation length.

Method

A cross-sectional study was carried out involving 21 full-time GPs in the West of Scotland, between November 1997 and May 1998, using methods that have already been described.[1-3,18] Two or three doctors participated from each of nine practices. All of the practices were accredited for the

HOW THIS FITS IN

What do we know?
About 40% of patients attending their general practitioners are psychologically distressed. The distress of only about half of these patients is recognised by their doctors in routine consultations. Improved recognition may improve patient outcomes. Longer consultations are known to be associated with an increasing tendency for doctors to make psychological diagnoses.

What does this paper add?
Accurate recognition of psychological distress increased with greater consultation length. Increasing socioeconomic deprivation is associated with both a higher prevalence of psychological distress and shorter consultations. This study provides further support for Tudor Hart's 'inverse care law'.

Please indicate, by circling one number, your assessment of the psychological distress of the patient you have just seen.

1. Normal/stable person with or without physical illness.
2. Person with subclinical emotional disturbance.
3. Person with mild psychological disturbance.
4. Person with moderate psychological disturbance.
5. Person with severe psychological disturbance.
6. Psychological disturbance warrants admission.

Did you issue an acute prescription? Y/N (if yes, what is the name of the drug?)
Did you arrange a repeat appointment for the patient? Y/N
Did you carry out a physical examination of the patients? Y/N
Did you arrange any investigations Y/N (If yes, please specify.)
Did you refer the patient? Y/N

Box 1. Questionnaire to estimate the patient's degree of psychological distress.

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teaching of undergraduate students or for postgraduate training. The practices covered both affluent and deprived areas. Data were collected in routine, booked surgeries from a series of at least 50 consecutive consultations with adult patients (aged 16 years or over) for each doctor. The GHQ-12 (along with a consent form and a short questionnaire to gather sociodemographic data) was administered to each patient of each doctor. This was done after the consultation to avoid influencing the patient's normal consulting behaviour. After each consultation, the doctor completed a six-point scale to estimate the patient's degree of psychological distress (Box 1). Each consultation was timed by a research assistant observing patients from the waiting room.

Postal codes were collected from each patient and used to generate a Carstairs deprivation category score (from 1 = most affluent, to 7 = most deprived).[19]

Statistical methods

Data were entered using Access for Windows 95 (v7.0) and were analysed using S-Plus for Windows (v4.5) and SPSS for Windows 95.

For those patients who were actually distressed (GHQ score of four or more), the doctors' assessment of patient distress (cut-off score 2/3 — Box 1) was modelled by logistic regression. The cut-off scores were similar to those used in previous studies.[1-3] The regression model included a term for each doctor as a categorical variable to allow for variation in identification rates between the GPs.

Patient age, sex, and deprivation category,[19] as well as consultation length, were examined for their effects on identification. Age and consultation length were treated as continuous variables, while sex and deprivation category were modelled as categorical variables.

Consultation length was log transformed, since the assumption of normally distributed random errors was not satisfied when the raw times were used, and this transformation resulted in a better model fit.

For all patients, ordinary least squares regression was used to model consultation length. Log transformation again resulted in a better fitting model, with more normally distributed residuals. As with identification, the statistical model allowed for a different average consultation length for each

doctor. Patient age, sex, and deprivation category, as well as their GHQ score and the doctors' own rating of the patient's level of distress were examined for any associations with consultation length.

Finally, logistic regression was used to determine which of patient age, sex, and deprivation category were significantly associated with positive GHQ scores.

Results

A total of 21 full-time GPs from the West of Scotland participated in this project. All were in group practices. Six (28.6%) were female. Data were collected from a total of 1075 consultations. The prevalence of psychological distress (GHQ score of four or more), identification rates, mean deprivation category scores, and patient characteristics for each of the GPs are shown in Table 1. Numbers of patients in each deprivation category are shown in Table 2.

The mean consultation length for the whole sample was 8.71 minutes (SD = 4.40, range = 1–45 minutes). The range of individual doctors' mean consultation lengths was 6.63–10.51 minutes.

Consultation length was seen to be associated with the age of the patient and their level of distress, as determined by the GHQ score and the score assigned by the GP (doctor score).

A 10-year increase in patient age was associated with a 2.69% increase in consultation length (95% CI = 1.00–4.41%). The doctors' rating of distress showed a strong association with consultation length. An increase of one point on the doctor scale was associated with a 5.89% increase in consultation length (95% CI = –2.96–8.89%) (Figure 1). A one-point increase in the GHQ score was associated with a 1.62% increase in consultation length (95% CI = 0.77–2.48%) (Figure 2). Consultation length was also found to be strongly associated with deprivation category scores. Consultation length decreased with increasing deprivation scores (Figure 3). A one-point increase on the deprivation scale was associated with a 3.37% decrease in consultation length (95% CI = 1.96–4.77%).

The overall prevalence of a positive GHQ score was 44.7%. Positive GHQ scores were associated with patient age and deprivation category. The age effect on GHQ was not linear; mean scores rose from 3.8 in the under 20-year-olds, to a peak of 5.1 in the 30 to 39 year age group, with a

Table 1. Summary data for each doctor arranged in order of increasing mean deprivation score.

GP Number	Mean patient deprivation	Prevalence positive GHQ score (%)	Mean GHQ score	Patients scored as distressed by GP (%)	Female patients (%)	Mean patient age	Mean consultation length	Cases identified (%)	Normals identified (%)
1	1.34	44	3.12	44	70	49.08	10.31	72.7	78.6
2	1.47	37.3	2.76	19.6	66.7	51.37	10.18	47.4	96.9
9	1.68	34	2.62	12	48	55.84	9.24	23.5	93.9
10	1.89	55.1	4.04	28.6	51	51.49	9.29	48.1	95.5
20	2.14	36	2.48	16	42	53.7	8.78	33.3	93.8
21	2.55	49	4.69	54.9	31.2	49.57	10.51	84	73.1
14	2.69	44	3.52	22	62	53.86	9.36	45.5	96.4
13	2.92	44.2	3	15.4	42.3	49.83	8.08	17.4	86.2
15	3.85	45.3	3.57	32.1	56.6	47.94	7.08	29.2	65.5
17	4.05	54	3.52	52	84	44.38	10.22	63	60.9
16	4.08	60	4.48	24	46	41.5	7.7	33.3	90
19	4.21	54.7	4.26	60.4	64.2	52.57	7.15	75.9	58.3
3	4.56	55.1	4.1	49	40.8	45.29	9.29	70.4	77.3
4	4.67	51	3.47	30.6	67.3	45.46	6.88	48	87.5
18	4.68	50	4.02	24.1	53.7	45.83	8.63	40.7	92.6
6	6.27	64.7	4.88	37.3	64.7	44.92	9.86	48.5	83.3
5	6.57	66.7	5.39	49	74.5	41.98	8.2	55.9	64.7
12	6.65	68	5.5	60	58	42.78	8.86	73.5	68.8
8	6.65	58	4.66	60	48	46.12	8.54	79.3	66.7
11	6.66	79.6	6.33	49	70.8	42.18	6.63	56.4	80
7	6.82	58.3	4.42	41.7	58.3	42.18	8.37	51.4	72

Table 2. Numbers of patients in each deprivation category.

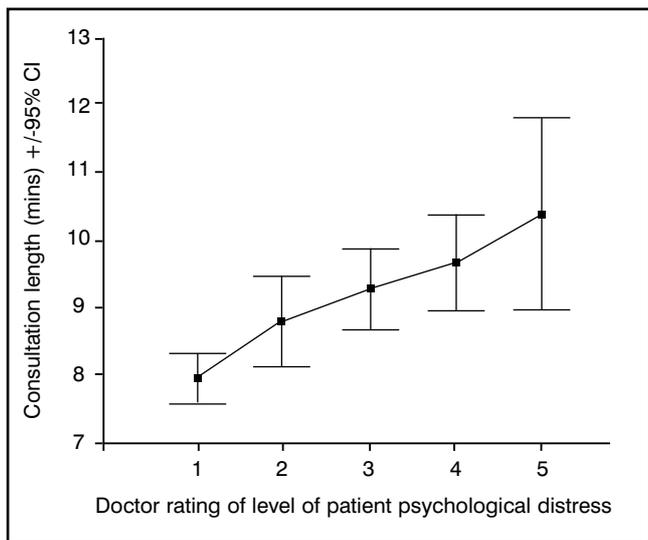| Deprivation category	1	2	3	4	5	6	7
Number of patients	180	121	142	121	106	77	270

Figure 1. Mean consultation length (with 95% confidence intervals) against doctor rating of patient psychological distress.

gradual decline to a mean of 2.0 in the over 90-year-olds. As Figure 3 shows, GHQ score rises with increasing deprivation category, although it appears to flatten out between deprivation categories 3 and 5.

A total of 59.0% of the patients with positive GHQ scores were rated as distressed by the doctors, while 80.4% of the patients with negative GHQ scores were rated as not distressed by the doctors.

Identification of distress was seen to be associated with the length of the consultation and the age of the patient. A 50% increase in consultation length was associated with a 32% increase in identification (95% CI = 10.7–57.3%). This tendency for identification to increase with longer consultations was greatest in the shorter consultations (up to six minutes) (Figure 4). Patient sex and deprivation category were not found to be important factors in identification of distress.

Though there was a slight decrease in identification of distress in the youngest patients (15 to 25 years) and a slight increase in the oldest patients (over 70 years), the bulk of those seen were between these ages, and the data supported a linear decreasing trend in identification with the age of the patient. A 10-year increase in patient age was associated with a 13.3% decrease in identification (95% CI = 2.1–23.3%).

The association of deprivation category, GHQ score, and mean consultation length is illustrated in Figure 3.

Discussion

Because recruitment was by invitation, this group of doctors is not representative. All of the practices used were in some way involved in teaching and were therefore potentially more motivated than average. It is also likely that these doctors have an interest in psychological medicine and they may therefore be better at detecting psychological distress than colleagues without such an interest. This is borne out in the results with 59% of distressed patients correctly identified as such by the doctor. Some bias may also have resulted from participating GPs knowing that their 'performance' was being observed. However, the main findings of this
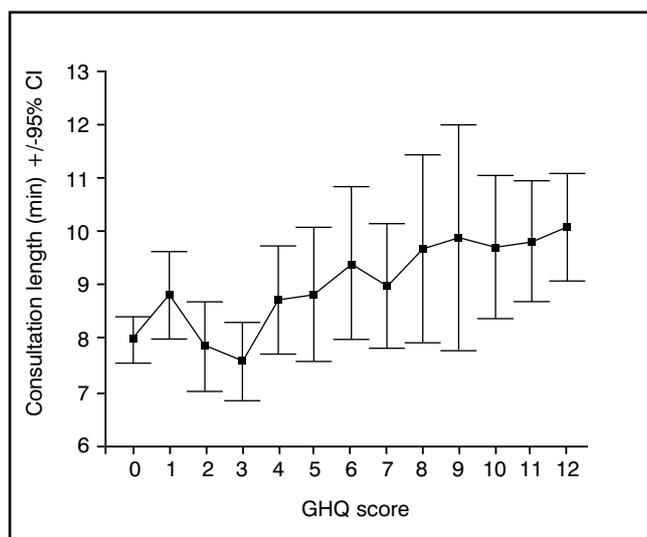
Figure 2. Mean consultation length (with 95% confidence intervals) against GHQ score.

Figure 4. Proportion of true cases identified against consultation length in minutes (consultation times are rounded to the nearest minute).
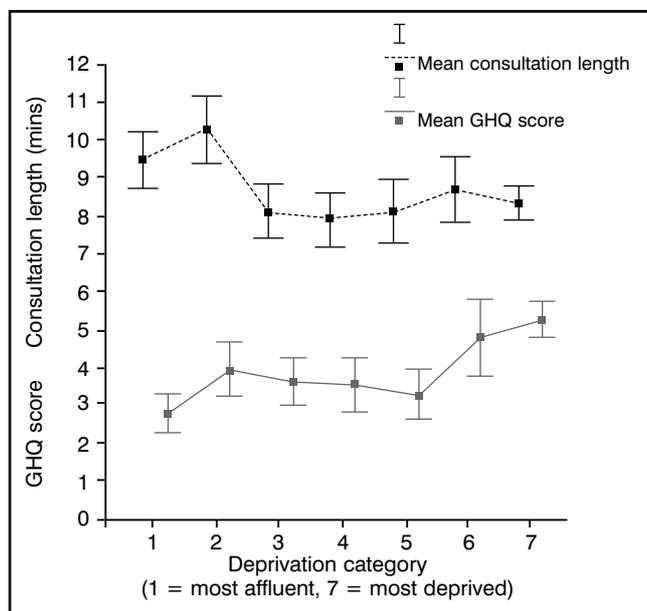

Figure 3. Consultation length and GHQ score against deprivation category.

study are based upon comparisons of consultation lengths at different levels of deprivation, psychological distress, and identification of psychological distress. As such, they do not depend upon the absolute level of doctor performance.

The overall prevalence of positive scoring on the General Health Questionnaire is close to that found in previous studies.[1-3] This study confirmed previous findings of a middle-aged peak in cases of distress measured by the GHQ.[1,2] There is also confirmation of the socioeconomic gradient in psychological distress, with the highest prevalence being in deprivation category 7 (high deprivation). Consultation length also decreases as socioeconomic deprivation increases, as shown previously.[20] Figure 3 illustrates one of the problems facing GPs working in areas of high socioeconomic deprivation. Mean consultation length falls as the prevalence of positive GHQ scores rises across the depriva-
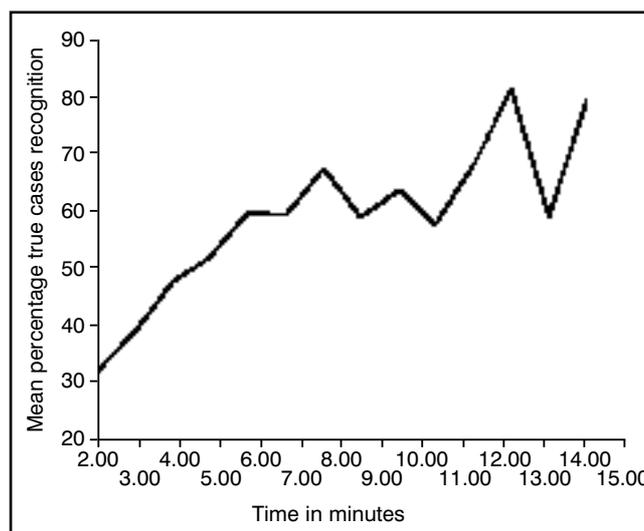
tion categories. Doctors in deprived areas thus have shorter consultations and see more patients with psychological morbidity. This mismatch of high consultation rates with higher workload of potentially difficult consultations has obvious implications for the provision of general medical services in deprived areas. It appears from these data that psychologically distressed patients in affluent areas are getting more time with their doctors than similarly distressed patients elsewhere.

Doctors' identification of psychological distress tended to decrease with increased patient age. This raises questions about the consulting behaviour of younger versus older patients and whether there could be differences in the way that older patients who are psychologically distressed formulate and present their distress to doctors. This finding is at odds with Kessler's recent study[22] which found that recognition of depression and anxiety was lowest in those patients who had a normalising style of symptom attribution — i.e. those who did not attribute their symptoms to pathology, either psychological or physical. It was found that patients who normalised their symptoms were younger. A more qualitative research approach may shed light on this area.

This study also showed that identification of psychological distress in GPs' consultations is associated with longer consultations. This finding had not been demonstrated before. It is not possible to say from these data whether or not this relationship is causal; a randomised controlled trial would be required (we have just completed the pilot phase of such a trial). It could be argued that this finding simply represents doctors choosing to consult longer when they identify psychologically distressed patients. This is borne out by Figure 1, which illustrates that the more distressed the doctor thinks the patient is (regardless of actual GHQ score), the longer are the consultations. However, this raises the question of where the doctor gets the extra time for these consultations. Clearly, doctors in deprived areas faced with high prevalence of psychologically distressed patients, and shorter than average consultation lengths, will have the greatest

time pressure in their surgeries. The fact that average consultation length is shorter in deprived areas than in affluent areas, despite the higher prevalence of longer consultations with psychologically distressed patients, suggests that in deprived areas, consultations that do not involve distressed patients are very short. These data provide further evidence to support Tudor Hart's 'inverse care law' — the availability of good quality medical care is inversely proportional to its need.[23] In this case, those in the most deprived areas, who have the greatest need, have the least time with their doctor. In addition, patients in deprived areas who are not distressed are getting considerably less time with the doctor than those in affluent areas.

These findings have implications which are in harmony with the general move in recent years toward longer booking intervals in GPs' surgeries. There is a growing body of evidence that longer consultations appear to be better for patients and doctors. From this study, a strong case can be made that allocation of resources to allow doctors to spend more time with patients should be directed particularly toward general practice in areas of high deprivation.

Conclusion

This study demonstrates that GPs working in areas of high socioeconomic deprivation are faced with a higher prevalence of psychologically distressed patients. They also have shorter average consultation lengths than doctors in affluent areas. Consultations involving distressed patients were longer than those where there was no distress. This mismatch of a greater prevalence of high demand consultations and shorter consultation lengths dramatically illustrates the continuing relevance of Tudor Hart's 'inverse care law'.[23]

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