

# What constructs do GPs use when diagnosing psychological problems?

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## SUMMARY

**Background:** The mismatch between general practice and psychiatric diagnosis of psychological problems has been frequently reported.

**Aims:** To identify which items from the 28-item general health questionnaire (GHQ-28) best predicted general practitioners' (GPs') own assessments of morbidity and the proportion of time spent in consultations on psychological problems.

**Design of study:** Cross-sectional survey.

**Setting:** General practice in southeast London.

**Method:** Eight hundred and five consultations were carried out by 47 GPs, during which patients completed the 28-item GHQ, and doctors independently assessed the degree of psychological disturbance and the proportion of the consultation spent on psychological problems. Data from the consultations were entered into a stepwise multiple regression to determine the best GHQ-item predictors of GP judgements.

**Results:** GPs' assessments of the degree of psychological disturbance were best predicted using only seven GHQ items, and their perceptions of the proportion of time spent on psychological problems were predicted by only four items. Items were drawn predominantly from the 'anxiety and insomnia' and 'severe depression' sub-scales, ignoring the 'somatic' and 'social dysfunction' dimensions.

**Conclusion:** In diagnosing psychological disturbance GPs ignore major symptom areas that psychiatrists judge important.

**Keywords:** consultation; mental disorders; psychiatric diagnosis; questionnaire.

## Introduction

A number of studies have claimed that general practitioners (GPs) consistently miss a large proportion of the psychiatric morbidity presenting to them.<sup>1,2</sup> Indeed, such has been the acceptance of this finding that a number of interventions have attempted to improve GPs' interviewing and diagnostic skills in this area.<sup>3-5</sup> The belief that GPs are failing to identify mental illness, however, is based mainly on comparisons between GPs' diagnoses and the 'gold-standard' of standardised psychiatric screening instruments, such as the general health questionnaire; yet this ignores the possibility that GPs may be identifying an alternative — and perhaps coherent — form of psychological distress that may have greater meaning for primary care.

A study of the prevalence of psychiatric morbidity in patients presenting in general practice enabled the psychiatric constructs used by GPs to be identified.

## Method

The study took place in 14 practices and involved 47 GPs (57% male and 81% United Kingdom graduates) within the South Southwark Primary Care Group in southeast London during a 1-week period. Practices were drawn from the same locality and had comparable high levels of deprivation and high proportions of ethnic minority patients, mainly African-Caribbean and African with smaller numbers from South Asia. The practices were typical of inner city general practice in that they had high rates of specialist mental health referral and high indices of community psychiatric need.

Consecutive patients aged over 16 years, who were well enough to take part and able to read and write sufficiently to complete the questionnaire, were invited to take part in the 'General Health study'. A researcher based in the waiting room explained the nature of the study, obtained verbal consent from patients, and asked them to complete anonymously a standardised instrument for detecting psychiatric morbidity (the 28-item general health questionnaire [GHQ-28]<sup>6</sup>), before seeing the GP. Patients attending on more than one occasion during the study period were only included for their first visit. Having seen the patient, the GP then scored the degree of the patient's psychological disturbance on a four-point scale (ranging from none, through mild, moderate, and severe), as well as the proportion of the consultation devoted to managing that disturbance (none, a little, about half, most, all).

The GHQ scores for each item, together with (log transformed) scores for both GPs' assessments of mental illness and the amount of time in the consultation devoted to mental health problems, were entered into a stepwise multiple regression (using SPSS 11.0). This produced two 'models' consisting of the GHQ items that best predicted

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**HOW THIS FITS IN***What do we know?*

It has been frequently reported that general practitioners (GPs) fail to identify patients with psychological problems, as judged by psychiatric colleagues.

*What does this paper add?*

The reason why GPs and psychiatrists do not agree on diagnosis is likely to be due to the different diagnostic criteria that they use and, by implication, the different ways in which they construe psychological problems.



the GPs' assessments of mental illness and the proportion of the consultation spent attending to mental health problems. The models were tested for multicollinearity.

**Results**

Two thousand three hundred and thirty-one patients were invited to take part during the census week. One hundred and sixty-one declined to do so and 465 questionnaires were not returned giving a total response of 1705 (73%). One thousand one hundred and ninety-five questionnaires were completed by patients seeing a GP, and 510 by patients seeing other members of the primary care team. GPs completed 1133 assessments, but many patients' questionnaires had missing data. Paired data from both patients and GPs were obtained for 805 consultations and the results below are based on these data.

According to the GPs' assessments, 29.2% (235 out of 805) of patients had mild, moderate or severe psychological disturbance. The reported proportion of the consultation spent dealing with psychological problems is shown in Figure 1.

Table 1 shows that only two of the four GHQ dimensions, namely 'anxiety and insomnia' and 'severe depression', predicted GPs' assessment of psychological disturbance in addition to the proportion of the consultation devoted to such problems. This pattern was confirmed using individual GHQ items (Table 2). GP assessment of psychological problems was best predicted using only seven out of the 28 GHQ items. There were no items from the somatic sub-scale and only one from the social dysfunction scale, 'difficulty keeping busy' (GHQ item C1). The other two sub-scales each produced three significant items. Items with the two highest coefficients came from the severe depression scale, namely 'feeling life was hopeless' (D2) and 'feeling nerves were bad' (D5).

The best predictive model of the proportion of the consultation spent on psychological problems involved only four items. These were drawn from three of the four sub-scales and showed little overlap with the predictive model for GP psychological assessment.

Given the close relationships between the items in the GHQ there is a danger of multicollinearity in which, for example, a predictive variable might be concealing another one with which it is highly correlated. The variance inflation factor, which tests for multicollinearity, was less than 2.5 for

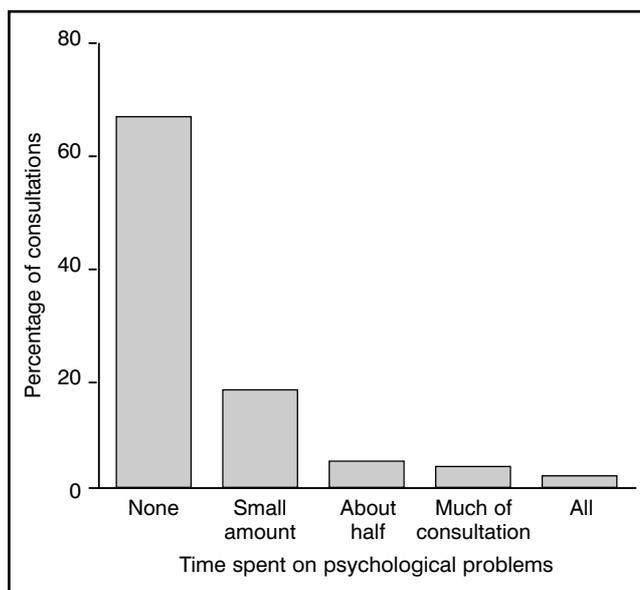


Figure 1. Proportion of consultation devoted to psychological problems.

all variables except for excluded items D1, D3 and D4 in the diagnostic model and excluded item D3 in the time model.

**Discussion***Summary of main findings*

The GHQ was originally derived by choosing items that best reflected psychiatrists' judgement of psychological distress. In similar fashion this study identified those GHQ items that best predicted GPs' assessments of psychological distress. In effect the predictive GHQ items represent the types of constructs that GPs use when identifying and working with psychological problems. The results showed that GPs used only a limited number of GHQ items and that these items were largely drawn from only two sub-scales, namely anxiety and insomnia, and severe depression. Failure to use any items from the somatic sub-scale might indicate a temptation to pursue a somatic diagnosis rather than a psychological one in these cases.<sup>7</sup> Similarly, the single item drawn from the social dysfunction scale might suggest either a failure to uncover these dimensions of their patients' problems or a refusal to classify them as other than 'problems of living'.

Table 1. Predictive models using GHQ dimensions.

GHQ dimensions	Predictors of psychological disturbance		Predictors of time spent in consultation	
	$\beta^a$	P-value	$\beta^a$	P-value
Predictive model				
Anxiety and insomnia	0.144	0.001	0.172	0.001
Severe depression	0.308	0.001	0.169	0.001
Variables not in model				
Somatic	0.011	0.783	0.016	0.698
Social dysfunction	0.052	0.191	0.012	0.771

<sup>a</sup>Standardised coefficients. GHQ = general health questionnaire.

The predictive model for the time spent on psychological problems in the consultation was even more restricted with only four items achieving statistical significance. This model claims to represent the 'operational' side of psychological morbidity since it indicates the amount of consultation 'resource' used for these problems; for example, although 'needing a good tonic' (A2) and 'feeling nervous and strung up' (B7) were not predictive of the formal definition of the presence of a psychological problem, they were implicated in the time spent in the consultation on such problems. This mismatch between 'definition' and 'activity' suggests that much psychological disturbance is identified only as a sub-text in the consultation where the main focus is on other issues. Equally, the importance of time spent in the consultation of symptom clusters, such as 'feeling in need of a good tonic' (however it is expressed by the patient), might suggest the existence of a group of perhaps 'normal' symptoms that lead to discussion but do not in themselves constitute sufficient indication for a specific diagnosis.

### *The strengths and the limitations of this study*

A relatively large number of patients and GPs were studied, giving the results some generalisability, although because the work was undertaken in a small geographical area, the results may reflect unknown characteristics of this patient population and its GPs. The response rate to the request to complete assessments was good for both GPs and patients producing a potential pool of over 1000 consultations. The number of patients completing all 28 items of the GHQ, however, was fewer so that paired data were only available for 805 consultations. There are a number of reasons why patients might not have completed all 28 items of the GHQ, including psychological distress. But even if the paired data had been from a healthier group of patients, the study was not examining prevalence rates of psychological distress but the predictors of GPs' psychological assessments of the patients. Arguably this would have been less likely to have been affected by the prevalence of these conditions in the dataset that was analysed.

It is possible that recording a psychological assessment on each patient changed GPs' usual diagnostic thresholds, although this is unlikely to have changed the underlying constructs they used. Equally, estimates of proportion of the consultation spent with psychological problems may have been affected by the task, although a systematic overestimate would still not have affected the criteria that best predicted the time spent.

The analysis revealed some multicollinearity, particularly with the items from the severe depression scale. This does not challenge the main conclusion, however, that GPs are using constructs from only two of the GHQ's four dimensions.

### *How and why it agrees or disagrees with the existing literature*

Existing studies in this area, which compare GHQ and GP assessments, have tended to use the GHQ as the gold standard with the result that GPs appear to be poor diagnosticians. What this study tries to do is not criticise GPs' diagnostic acumen but understand why GPs and the GHQ might not

Table 2. Predictive models using GHQ items.

GHQ items	Predictors of psychological disturbance		Predictors of time spent in consultation	
	$\beta^a$	P-value	$\beta^a$	P-value
<b>Somatic</b>				
A1 in good health	-	-	-	-
A2 need good tonic	-	-	0.082	0.02
A3 run down	-	-	-	-
A4 felt ill	-	-	-	-
A5 pains in head	-	-	-	-
A6 tightness in head	-	-	-	-
A7 hot and cold spells	-	-	-	-
<b>Anxiety and insomnia</b>				
B1 lost sleep/worry	-	-	-	-
B2 difficulty staying awake	0.092	0.02	-	-
B3 under strain	0.142	0.002	-	-
B4 edgy/bad tempered	-0.126	0.003	-	-
B5 scared/panicky	-	-	-	-
B6 getting on top of you	-	-	-	-
B7 nervous/strung up	-	-	0.122	0.003
<b>Social dysfunction</b>				
C1 keep busy	0.079	0.02	-	-
C2 taking longer	-	-	-	-
C3 doing things well	-	-	-	-
C4 satisfied with tasks	-	-	-	-
C5 playing part	-	-	-	-
C6 capable of decisions	-	-	-	-
C7 enjoy activities	-	-	-	-
<b>Severe depression</b>				
D1 self worthless	-	-	-	-
D2 life hopeless	0.178	0.001	0.125	0.008
D3 life not worth living	-	-	-	-
D4 suicide thoughts	-	-	0.088	0.04
D5 nerves too bad	0.144	0.001	-	-
D6 wishing dead	-	-	-	-
D7 taking own life	0.097	0.01	-	-

<sup>a</sup>Standardised coefficients. GHQ = general health questionnaire.

concur. The main reason would appear to be that GPs are using different criteria when judging mental distress. Whether they should be or not is a separate question.

### *The implications for future research or clinical practice*

The GHQ is a well-validated instrument that is meant to replicate psychiatric judgement. Lack of concordance between GPs and the GHQ therefore represents a conflict between GPs and psychiatrists about what is a 'real' case of mental illness. Yet, GPs and psychiatrists see a very different morbidity spectrum and show different approaches to illness management,<sup>8</sup> so it might be expected that definitions might differ and by reconstructing GPs' diagnostic criteria in terms of GHQ items the basis for the mismatch between the two can be made clearer. Moreover, whereas psychiatric diagnosis has been extensively formalised, GP diagnosis remains a complex assessment process in which, not only the patient's state is evaluated, but also the availability of time and resource in the management of any problems 'uncovered'. At the very least the study shows that GPs do not use the same criteria to identify and

manage psychological problems as do psychiatrists (as indicated by the GHQ). The implication is that 'skills' training is unlikely to be successful without attending to these other factors that influence GP diagnosis.

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