

General practitioners miss disability and anxiety as well as depression in their patients with osteoarthritis

DAVID S MEMEL

JOHN R KIRWAN

DEBORAH J SHARP

MAGGIE HEHIR

SUMMARY

Background. General practitioners (GPs) integrate physical, psychological, and social factors when assessing patients, particularly those with chronic diseases. Recently, the emphasis has been on assessment of depression but not of other factors.

Aim. To determine functional disability, psychological morbidity, social situation, and use of health and social services in patients with osteoarthritis and examine GP knowledge of these factors.

Method. Two hundred patients completed a validated postal questionnaire about functional disability (Health Assessment Questionnaire [HAQ]), mood (Hospital Anxiety and Depression Scale [HAD]), employment status, who they lived with, welfare benefits received, and use of health and social services. A similar questionnaire was completed by the patient's GP, including a HAQ. However, a three-point scale was used to assess depression and anxiety.

Results. Forty-seven per cent of patients were moderately or severely disabled (HAQ > 1). GPs underestimated functional disability: mean patient HAQ = 1.04 (95% confidence interval [CI] = 0.92–1.16), mean GP HAQ = 0.74 (95% CI = 0.65–0.83), and there was low correlation between patient and GP scores ($\kappa = 0.24$). There was moderate prevalence of depression and high prevalence of anxiety, which the GP often did not recognise: patient depression = 8.3% (95% CI = 4.1%–12.8%), GP depression = 6.0% (95% CI = 2.4%–9.6%), $\kappa = 0.11$; patient anxiety = 24.4% (95% CI = 17.8%–31.0%), GP anxiety = 11.9% (95% CI = 6.9%–16.9%), $\kappa = 0.19$. Only 46% of severely disabled patients (HAQ > 2) were receiving disability welfare benefits. GPs were often unaware of welfare benefits received or the involvement of other professionals.

Conclusion. GPs frequently lack knowledge about functional disability, social factors, and anxiety as well as depression in their patients with osteoarthritis.

Keywords: osteoarthritis; mental health; social factors; disability.

D S Memel, BSc, MMedSc, MRCP, special lecturer in primary health care, University of Bristol, and general practitioner, Air Balloon Surgery, Bristol. J R Kirwan, BSc, FRCP, MD, reader in rheumatology; and D J Sharp, FRCP, PhD, professor of primary health care, University of Bristol. M Hehir, BA, RMN, RN, research assistant, Air Balloon Surgery, Bristol. Submitted: 12 August 1999; Editor's response: 18 January 2000; final acceptance: 11 May 2000.

© British Journal of General Practice, 2000, 50, 645–648.

Introduction

GENERAL practitioners (GPs) often pride themselves on their intimate knowledge of their patients, particularly those with chronic diseases and disabilities. A principle of primary health care is that GPs are committed to the person rather than to a particular body of knowledge, group of diseases or special techniques.¹ This whole person view was summarised by the Leeuwenhorst Group: 'The general practitioner will include and integrate physical, psychological and social factors in his considerations about health and illness'.² Moreover, it is increasingly recognised that it is important for doctors to look beyond a specific disease or impairment, to the effects on patients' activities and participation in society.^{3,4}

It is important, therefore, to confirm whether GPs do have knowledge of functional, psychological, and social factors in their patients. Recent studies have shown that GPs fail to recognise half of their patients who are depressed, particularly those who have a chronic physical disorder,⁵ and this has led to the 'Defeat Depression Campaign' by the Royal Colleges of General Practitioners and Psychiatrists to try to improve GP awareness.⁶ However, despite research showing that GPs often fail to recognise functional disability,⁷ much less attention has been paid to this or to GP knowledge of patient anxiety or social situation.

To explore GP knowledge of these factors in patients with a common chronic disabling disease we looked at osteoarthritis of the hip or knee joint.⁸ Although hip and knee replacement operations are available, long-term care is largely provided in the primary care setting⁹ and it is a common reason for GP consultations.¹⁰

Method

Patients and practices

Following local ethical committee approval, the study was undertaken in two neighbouring general practices in central Bristol (a total of 20 900 patients). Neither operated fixed patient lists but both encouraged patients, particularly those with chronic diseases, to see the same doctor for non-urgent problems. The study population consisted of the first 200 consecutive patients who:

- had a diagnosis of osteoarthritis of the hip or knee joint made either by a GP or hospital specialist,
- were on a repeat prescription for analgesics or non-steroidal anti-inflammatory drugs and had obtained one or more in the last six months, and
- had seen their usual GP (the one responsible for the repeat prescription) for any reason in the previous week.

Patients were identified from the practices' computerised appointment systems and medical records and diagnoses were verified in the paper records. The study was limited to patients with osteoarthritis of the hip or knee, since when these joints are affected there is major effect on physical function.¹¹ Patients were excluded from the study only if they had severe learning difficulties, dementia, or were terminally ill.

Assessments

Within 10 days of the consultation, all patients fulfilling the entry criteria were sent a structured postal questionnaire to be completed personally or, if necessary, with the help of a relative or friend. The questionnaire assessed difficulties with activities of daily living using the Health Assessment Questionnaire (HAQ), a well validated and widely used functional scale specific for arthritis¹² that has been shown in a community setting to be reliably completed by patients.¹³ The HAQ asks about difficulty in eight different areas of daily activity, the use of aids or devices, and whether personal help is required. The presence of anxiety and depression was assessed using the Hospital Anxiety and Depression Scale (HAD),¹⁴ which is a well established measure specifically developed to detect psychological morbidity in people with physical disease.

The questionnaire also asked about factors in the patients' social situation that are generally considered important for GPs to know about: employment status, who they lived with, welfare benefits received, and help received from health and social services professionals. Initial non-responders were sent a reminder letter two weeks later. A pilot study had assessed the test-retest reliability of the questionnaire by administration to 10 patients on two occasions two weeks apart and found that 98% of questions were answered identically.

A virtually identical questionnaire was given to the patients' usual GPs. The HAQ was slightly modified so that the GPs were asked about patients' overall functional level in each of the eight areas (eating, washing etc.) rather than the separate tasks within each area, as earlier discussions with GPs had ascertained that this was the level of knowledge that it was reasonable to expect GPs to have. As GPs could not be expected to score individual items on the HAD scale, they assessed anxiety and depression at the last consultation on a three-point scale (definitely present, borderline, not present).

The GPs were requested to complete the questionnaire by reference to the medical records and their personal knowledge of the patient but not to consult with other doctors or primary health care team members. This was to try to mimic the real life situation where GPs usually work and make decisions alone during consultations but have access to records.

Sample size and analysis

The sample size calculation of 200 was based on the ability to detect a mean difference between patient and GP HAQ scores of 0.25 ($\alpha = 0.05$, $P = 0.80$). This was derived from a previous study of patients with rheumatoid arthritis¹⁵ while allowing for an anticipated lower mean HAQ score in patients with osteoarthritis¹⁶ and assuming a response rate for both questionnaires of 90%.

Frequency distributions are reported for patient consultation rates, patient and GP HAQ scores, patient HAD scores, GP anxiety and depression ratings, living and employment status, welfare benefits, and professional help received. Results were analysed according to broad level of disability: nil (HAQ = 0), mild (HAQ > 0 but ≤ 1), moderate (HAQ > 1 but ≤ 2) or severe (HAQ > 2). Patient anxiety and depression were categorised as nil (HAD = 0–7), borderline (HAD = 8–10) or definite (HAD = 11–21). GP and patient scores were compared using kappa statistic and consultation frequencies and patient scores were compared using Spearman's rank correlation coefficient.

Results

Response rate

The 200 patients were identified over 11 weeks in Autumn 1997.

One hundred and eighty-two patient and 199 GP questionnaires were returned and useable, giving an overall response rate of 91%. There were 177 paired GP and patient HAQs and 168 paired patient HADs and GP anxiety/depression scores.

The mean age of the 182 patients was 71 years (range = 42–92 years) and 118 (65%) were female. All GPs (9) had patients in the study, the median being 22 (range = 7–35). Thirty-eight (21%) patients were seen on home visits.

Functional disability

There was a significant difference in the mean HAQ scores: the mean HAQ score for patients was 1.04 (95% CI = 0.92–1.16), whereas for GPs it was 0.74 (95% CI = 0.65–0.83). As can be seen in Table 1, whereas 47% of patients were moderately or severely disabled, GPs only rated 26% of their patients thus. Furthermore, there was low agreement between patient and GP scores (kappa = 0.24). For example, of the 26 severely disabled patients, eight were thought by their GP to be mildly disabled, 14 moderately disabled, and only four severely disabled. Overall, GPs identified 26 out of 83 (31%) of moderately and severely disabled patients correctly. Even after adjusting for the lower overall GP scores there was no significant increase in agreement (corrected kappa = 0.32).

Depression and anxiety

Table 2 shows that 8.3% (95% CI = 4.1%–12.8%) of patients had definite depression (HAD > 10), compared with the GPs' rating of 6.0% (95% CI = 2.4%–9.6%). However, the agreement was again low (kappa = 0.11) and, even including those rated by the GP as borderline, only 50% (seven out of 14) of definitely depressed patients were recognised by their GPs.

A greater proportion of patients (24.4% [95% CI = 17.8%–31.0%]) were definitely anxious. Significantly fewer (11.9% [95% CI = 6.9%–16.9%]) were rated as definitely anxious by the GP. Sixty-three per cent of definitely anxious patients were recognised by their GPs, if including those rated by the GP as borderline, but overall agreement was low (kappa = 0.19).

As the study examined consecutive patients, frequent attenders were more likely to be selected. However, there were low correlations between consultation rate in the last 12 months and disability ($r = 0.26$), anxiety ($r = 0.26$), and depression ($r = 0.30$). There were significant ($P < 0.01$) correlations between disability and depression ($r = 0.58$), disability and anxiety ($r = 0.40$), and between depression and anxiety scores ($r = 0.60$).

Social situation and involvement of other professionals

Of the 181 responding patients, 59 (32%) lived alone, 107 (59%) with a partner (with or without children), seven (4%) only with children, and eight (4%) with friends or others. GPs correctly identified 52 (88%) of the patients who lived alone and 84 (79%) of those who lived with a partner. Thirty-two (18%) out of 165 responding patients were currently working, nine (5%) had not worked for less than 12 months, and 124 (68%) for more than 12 months. The GPs correctly identified 21 (66%) of those currently working. GPs were aware of 19 (25%) of the 76 welfare benefits received by patients (Table 3). All severely disabled, and some moderately disabled patients were likely to be eligible for attendance allowance or disabled living allowance.¹⁷ However, even among severely disabled patients (HAQ > 2), only 12 out of 26 (46%) were receiving these important benefits.

There were low levels of involvement of other health and social care professionals in the previous 12 months (Table 4), especially other members of the primary health care team. GPs

Table 1. Comparison of patient and GP scores on the Health Assessment Questionnaire (HAQ).

GP HAQ score	Patient HAQ score				Total
	None	Mild	Moderate	Severe	
None	9	11	4	0	24 (14%)
Mild	17	52	30	8	107 (60%)
Moderate	0	5	22	14	41 (23%)
Severe	0	0	1	4	5 (3%)
Total	26 (15%)	68 (38%)	57 (32%)	26 (15%)	177 (100%)

Table 2. Comparison of patient scores on the Hospital Anxiety and Depression Scale (HAD) and GP scores for depression and anxiety.

GP depression score	HAD depression — patient score			Total
	None	Borderline	Definite	
None	90	23	7	120
Borderline	25	9	4	38
Definite	4	3	3	10
Total	119	35	14	168

GP anxiety score	HAD anxiety — patient score			Total
	None	Borderline	Definite	
None	68	24	15	107
Borderline	19	9	13	41
Definite	3	4	13	20
Total	90	37	41	168

Table 3. Welfare benefits received by patients and general practitioner knowledge.

	Received	GP knows
Sickness or incapacity benefit	10 (5%)	5 (50%)
Attendance allowance or disabled living allowance (AA/DLA)	33 (18%)	8 (24%)
Orange parking badge	29 (16%)	6 (21%)
Other	4 (2%)	0 (0%)

HAQ Score	Patients (n)	AA/DLA received
None	26	1 (4%)
Mild	68	4 (6%)
Moderate	57	16 (28%)
Severe	26	12 (46%)
Total	177	33 (19%)

Table 4. Involvement of other health and social care professionals in the last 12 months.

	Involved	GP knows
Rheumatologist/orthopaedic surgeon	31 (17%)	31 (100%)
District nurse	5 (3%)	3 (60%)
Health visitor	7 (4%)	0 (0%)
Practice nurse	3 (2%)	0 (0%)
Occupational therapist	8 (4%)	0 (0%)
Physiotherapist	28 (15%)	9 (32%)
Social worker	7 (4%)	2 (29%)
Home care assistant	12 (7%)	6 (50%)

knew of the involvement of 100% of hospital doctors but levels for other professionals were much lower.

Discussion

This study shows that of 200 consecutive patients attending their GP with osteoarthritis of the hip or knee joint, 47% were moder-

ately or severely disabled, yet there was little involvement by other health and social services professionals, including hospital specialists. GPs were not aware of many aspects of their patients' lives relevant to providing high quality care. GPs had relatively accurate knowledge of whom patients lived with, and whether a hospital specialist was involved, but significantly underestimated functional disability, anxiety, and depression. Welfare benefits received by their patients and involvement of other health and social care professionals were not well known.

GPs' significant underestimation of functional disability confirms our previous findings in patients with rheumatoid arthritis in the same practices.¹⁵ However, 71% of the rheumatoid arthritis patients had seen a rheumatologist or orthopaedic surgeon in the previous year, compared with only 17% of patients in this study. Thus, for patients with osteoarthritis, the GP's role is particularly crucial because in the great majority of cases they were the only health professional involved. It is therefore important that GPs are able to accurately recognise their patients' level of disability, particularly if they are moderately or severely disabled. If GPs underestimate patients' functional disability it is likely they will fail to make appropriate beneficial interventions. These will vary according to the patients' level of disability and could include referral to an orthopaedic surgeon for joint replacement, to an occupational therapist for aids and home adaptations or suggesting application for disability welfare benefits.

Patients in this study were not chosen to be representative of all patients in the practices with osteoarthritis of the hip or knee. We considered whether the high levels of disability and anxiety found in this study occurred because patients attending frequently were more likely to be selected but found that for both variables there were low correlations with the consultation rate in the previous 12 months.

Many of the patients were elderly and some had other chronic diseases (such as cardiac failure, diabetes, and chronic obstructive pulmonary disease) that may have contributed to their disability score. However, we did not correct for co-morbidity as we felt it was even more important for the GP to have good knowledge about patients who had more than one disease. Excluding

patients with co-morbid conditions made little difference to the range of HAQ scores in a large general practice survey.¹⁶

The prevalence of depression was similar to that in the general population¹⁸ and that GPs identified half the cases concurs with other studies.⁵ We found that a quarter of patients were anxious and that GPs missed many of these cases. Hitherto, less attention has been paid to anxiety than depression, though other studies have shown higher levels of anxiety than depression, both in patients with rheumatoid arthritis and osteoarthritis.¹⁹ There was a low correlation between anxiety and physical disability in this study, however high levels of anxiety may reflect uncertainty about the future, poor coping mechanism or poor pain control,²⁰ none of which were measured in this study. There is potential for effective treatment of anxiety, whether by treating the associated causes, such as pain; or with anxiety management groups²¹ or medication, such as SSRIs.²²

Conclusion

This study has shown that GPs lack knowledge about functional disability, social factors, and anxiety as well as depression in their patients with osteoarthritis. The recent emphasis on the detection of depression should be extended to include other important aspects of patient assessment, particularly in patients with chronic disabling diseases. Supplying a functional assessment by asking patients to complete a questionnaire prior to seeing the doctor has improved patient management, both in a hospital rheumatology clinic²³ and in a primary care setting,²⁴ and it would be useful to explore this further. Greater involvement by other members of the primary health care team and the sharing of assessments are also likely to improve the quality of care.²⁵

References

1. McWhinney IR. *A textbook of family medicine*. Oxford: Oxford University Press, 1989.
2. Leeuwenhorst Group. The work of the general practitioner. Statement by a working party appointed by the second European conference on the teaching of general practice. *J R Coll Gen Pract* 1977; **27**: 117.
3. World Health Organization. *International Classification of Impairments, Activities, and Participation (ICIDH-2). A Manual of Dimensions of Disablement and Functioning*. Geneva: WHO, 1997.
4. Memel D. Chronic disease or physical disability? The role of the general practitioner. *Br J Gen Pract* 1996; **46**: 109-113.
5. Freeling P, Rao BM, Paykel ES, et al. Unrecognised depression in general practice. *BMJ* 1985; **290**: 1880-1883.
6. Wright AF. Continuing to defeat depression. *Br J Gen Pract* 1995; **45**: 169-170.
7. Calkins DR, Rubenstein LV, Cleary PD, et al. Failure of physicians to recognise functional disability in ambulatory patients. *Ann Intern Med* 1991; **114**: 451-454.
8. Symmons D, Bankhead C. *Health Care Needs Assessment for Musculoskeletal Diseases*. Chesterfield: Arthritis and Rheumatism Council, 1994.
9. Kirwan JR, Snow SM. Which patients see a rheumatologist? *Br J Rheumatol* 1991; **30**: 285-287.
10. Office of Population Censuses and Surveys. *Morbidity Statistics from General Practice: Fourth National Study 1991-2*. London: HMSO, 1995.
11. Felson DT. Osteoarthritis. *Rheum Dis Clin North Am* 1990; **16**: 499-512.
12. Kirwan J, Reeback J. Stanford health assessment questionnaire modified to assess disability in British patients with rheumatoid arthritis. *Br J Rheumatol* 1986; **25**: 206-209.
13. Sullivan FM, Eagers RC, Lynch K, Barber JH. Assessment of disability caused by rheumatic diseases in general practice. *Ann Rheum Dis* 1987; **46**: 598-600.
14. Zigmund AS, Snaith RP. The hospital anxiety and depression scale. *Acta Psychiatr Scand* 1983; **67**: 361-370.
15. Memel DS, Kirwan JR. General practitioners' knowledge of functional and social factors in patients with rheumatoid arthritis. *Health and Social Care in the Community* 1999; **7**: 387-393.
16. Blackburn SCF, Ellis R, George CF, Kirwan JR. The impact and

17. treatment of arthritis in general practice. *Pharmacoepidemiology and Drug Safety* 1994; **3**: 123-138.
17. Benefits Agency. *Disabled Living Allowance Medical Report, DLA General (Mobility and Care)*. [DLA 140.] London: Department of Social Security, 1996.
18. Meltzer H, Gill B, Pettigrew M. The prevalence of psychiatric morbidity among adults aged 16-64, living in private households, in Great Britain. In: Office of Population Censuses and Surveys. *OPCS Surveys of Psychiatric Morbidity 1*. London: OPCS, 1994.
19. Hawley D, Wolfe F. Anxiety and depression in patients with rheumatoid arthritis: a prospective study of 400 patients. *J Rheumatol* 1988; **15**: 932-941.
20. Newman SP, Revenson TA. Coping with Rheumatoid Arthritis. In: Newman S, Shipley M (eds). *Psychological Aspects of Rheumatic Disease*. [Ballière's Clinical Rheumatology; 7:2.] London: Ballière Tindall, 1993.
21. Busch C, Bartholomew J, Sharp D. Group treatment of anxiety and stress in a general practice setting. *Primary Care Psychiatry* 1996; **2**: 59-66.
22. Bell CJ, Nutt DJ. Serotonin and panic. *Br J Psychiatry* 1998; **172**: 465-471.
23. Young JB, Chamberlain MA. The contribution of the Stanford Health Assessment Questionnaire in a rheumatology clinic. *Clin Rehabil* 1987; **1**: 97-100.
24. Rubenstein LV, McCoy JM, Cope DW, et al. Improving patient quality of life with feedback to physicians about functional status. *J Gen Intern Med* 1995; **10**: 607-614.
25. Rigby M, Roberts R, Williams J, et al. Integrated record keeping as an essential aspect of a primary care led health service. *BMJ* 1998; **317**: 579-582.

Acknowledgements

This study was supported by the Scientific Foundation Board, Royal College of General Practitioners, and the NHS Executive South and West Research and Development General Practice Scheme. We thank the patients and doctors who participated in the study and Tony Hughes for statistical advice.

Address for correspondence

Dr David Memel, Division of Primary Health Care, University of Bristol, Canynge Hall, Whiteladies Road, Bristol BS8 2PR. E-mail: david.memel@bris.ac.uk