

Postal questionnaire study of disability in the community associated with psoriasis

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Abstract

Objective—To study the disability caused by psoriasis in patients recorded as having psoriasis by their general practitioner.

Design—Postal questionnaire survey using the psoriasis disability index and SF-36.

Setting—Five general practices in Cleveland.

Subjects—Of 767 patients identified, 546 completed the questionnaire and 435 were eligible and gave informed consent.

Main outcome measures—Scores on SF-36 and psoriasis disability index.

Results—The psoriasis disability index score was highly negatively correlated with all eight of the SF-36 health measures ($P < 0.0001$ for each), and the manual social classes scored higher than the non-manual social classes ($P < 0.0001$). The manual social class group scored significantly lower scores than the controls on all the SF-36 scales, and the non-manual group scored significantly lower for physical and mental role limitation ($P < 0.0004$ and $P = 0.026$), mental health ($P < 0.0001$), energy and vitality ($P < 0.0004$), and health perception ($P < 0.0001$). Also, the manual group had poorer health perception on five of the SF-36 variables when compared with the non-manual group.

Conclusions—Patients with psoriasis have an overall lower perception of their quality of life than healthy controls, and those in the lower social classes suffer a greater degree of disability from their disease than the higher social classes.

Introduction

A community study in 1976 showed that psoriasis affects 1–2% of the British population,¹ but only 3% of people with psoriasis see a dermatologist; 17% are treated by their general practitioner alone, and the other 80% do not consult the medical profession at all.² Several researchers have shown that doctors probably underestimate the degree of psychological and social morbidity.^{3,4}

A recent study of 369 people with severe psoriasis referred to consultant dermatologists throughout the United Kingdom showed that the disease had greatly affected their quality of life.⁵ There is evidence that psoriasis is associated with smoking and high alcohol consumption,⁶ although it is not clear whether these are causal links⁷ or a reflection of the despair felt by those with severe psoriasis.^{8,9}

These results suggest that the perceived disability of those studied may be greater than that of the rest of the psoriatic population.^{3,5} People with psoriasis who do not attend consultants may “suffer in silence” or simply not experience serious disability. We therefore set up this study to assess health seeking behaviour of people with psoriasis, to measure knowledge and membership of the Psoriasis Association, to compare the general health of people with psoriasis with that of the general

population, and to evaluate the psoriasis disability index as a measure of disability in a community based population.

Subjects and methods

The study took place in five general practices in Cleveland. None of the practices had any special provision for patients with psoriasis (for example, a clinic run by general practitioners or nurses). With the consent of the participating practices we compiled a list of all registered psoriatic patients aged 18–64 years old from the practice morbidity index and patients on repeat prescription lists for preparations used only for psoriasis (for example, dithranol, calcipotriol). Patients in whom the diagnosis was not clear were excluded.

We sent the patients a postal questionnaire. All patients and their general practitioners gave informed consent to the study. The first section started by asking the patients to answer the question “Do you think you have psoriasis?” Patients who answered “no” were excluded from the study. Those who answered “yes” were asked for details about their consulting patterns and use of treatments for psoriasis, membership of the Psoriasis Association, and social class. The second and third sections of the questionnaire comprised the British version of the health survey questionnaire SF-36 and the psoriasis disability index.

The SF-36 is a self administered questionnaire that is easy to use, acceptable to patients, and fulfils stringent criteria of reliability and validity.^{10,11} We used published normative data based on 9332 adults of working age (18–64 years) from Berkshire, Buckinghamshire, Northamptonshire, and Oxfordshire for comparison.¹² The psoriasis disability index was designed by Finlay *et al*.¹³ and contains 15 points answered on a 1 to 7 linear analogue scale. It covers five main areas, including daily activities, school or work, personal relationships, leisure, and treatment. Comparisons with the sickness impact profile and the psoriasis area and severity index have shown that it is an appropriate and quick method of assessing psoriasis disability in patients attending a hospital dermatological department.⁸ It has not been validated in any general practice based studies.

STATISTICAL ANALYSIS

We assessed the relation between the psoriasis disability index score and age, and also each of the SF-36 health measures using the correlation coefficient. The effect of social class and sex was assessed by analysis of variance. As SF-36 scores vary with age and sex, the individual scores for each SF-36 variable were converted to a z score, where $z = (\text{observed score} - \text{mean for that age and sex group}) \times \text{SD}$ for that age and sex group. The z scores are normally distributed with a mean of 0 (SD = 1). For each variable, the scores for the non-manual and manual groups were compared with those published for healthy controls¹² by testing if the mean z score was different from 0 (using the *t* test);

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Table 1—Comparisons of z scores of patients with psoriasis adjusted for age and sex with controls¹² and between non-manual and manual social classes for all SF-36 variables

	Patients		P value (compared with controls)	P value (non-manual v manual)
	No	Mean (SE) z score		
Physical function:				
Manual	209	-0.36 (0.100)	0.0004	0.014
Non-manual	165	-0.03 (0.084)	0.084	
Role limitation (physical):				
Manual	218	-0.59 (0.075)	<0.0001	0.004
Non-manual	169	-0.28 (0.077)	0.0004	
Role limitation (mental):				
Manual	218	-0.44 (0.091)	<0.0001	0.059
Non-manual	169	-0.20 (0.089)	0.026	
Social function:				
Manual	216	-0.39 (0.086)	<0.0001	0.024
Non-manual	168	-0.11 (0.085)	0.20	
Mental health:				
Manual	215	-0.51 (0.075)	<0.0001	0.09
Non-manual	167	-0.32 (0.076)	<0.0001	
Energy and vitality:				
Manual	214	-0.43 (0.081)	<0.0001	0.12
Non-manual	166	-0.25 (0.078)	0.0004	
Pain:				
Manual	213	-0.18 (0.073)	0.014	0.013
Non-manual	166	0.09 (0.076)	0.25	
Health perception:				
Manual	206	-0.58 (0.084)	<0.0001	0.037
Non-manual	163	-0.33 (0.082)	<0.0001	

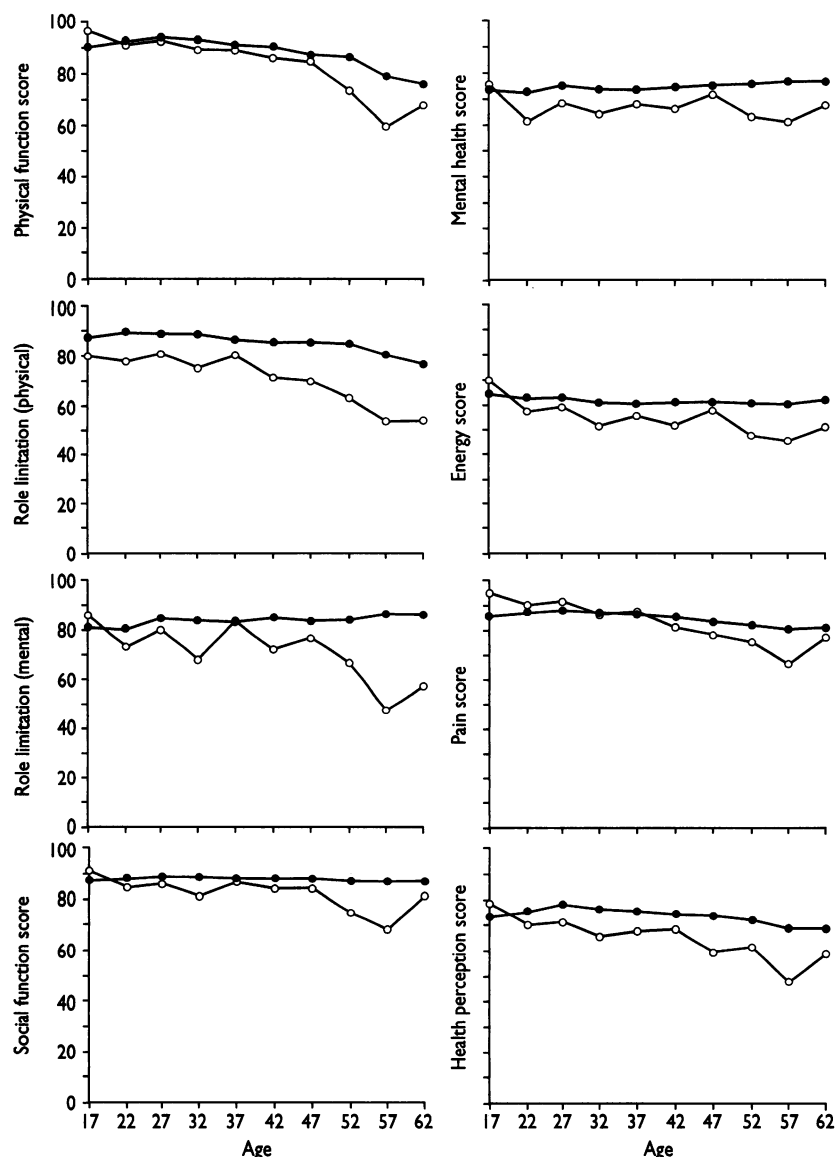


Fig 1—SF-36 scores for patients with psoriasis and controls¹² according to age

0 is the expected mean z score if the data were randomly drawn from the control population. We compared mean z scores between the non-manual and manual classes by the two sample *t* test. SF-36 questionnaires containing missing values were scored strictly according to the instructions provided by the original authors.

Results

We identified 767 patients with psoriasis from the five participating practices. The total list size was 58 257, giving a prevalence of 1.3%. A total of 546 returned completed questionnaires after two postings, a response rate of 71%. Of these, 68 (12%) felt that they did not have psoriasis and 43 (8%) did not wish to take part, leaving 435 patients for analysis.

Fifty six patients had consulted a doctor about their psoriasis within the past month, and a further 183 had consulted in the past year; 196 had not consulted a doctor about their psoriasis in the past year. Only 52 subjects had been seen or treated for psoriasis in hospital or as an outpatient in the past year. However, 274 said that they had used a treatment for their psoriasis in the past week.

Although 170 patients had heard of the Psoriasis Association, only five were members.

When asked, 239 respondents expressed an interest in more information about psoriasis and 300 in advice about treatments and how to use them. Only 39 were interested in support from other people with psoriasis.

Figure 1 shows that for all eight scales of the SF-36, our subjects had generally lower scores than the general population, indicating that they perceive themselves to have poorer health.

Subjects in the manual social group had significantly lower perception of health than controls for all SF-36 variables whereas subjects in the non-manual social group were apparently not impaired in terms of physical function, social function, or pain (table 1).

Table 2 shows that all the SF-36 variables were highly negatively correlated with the psoriasis disability index score. Table 3 shows the breakdown of mean psoriasis disability index scores by social class and sex. Analysis of variance showed a highly significant difference with social class ($P = 0.001$) but no effect with either sex ($P = 0.92$) or social class and sex together ($P = 0.96$).

Table 2—Correlation of psoriasis disability index with SF-36 score

SF-36 variable (no with available data)	Correlation	P value
Physical function (n = 408)	-0.29	< 0.0001
Role limitation (physical) (n = 425)	-0.32	< 0.0001
Role limitation (mental) (n = 425)	-0.34	< 0.0001
Social function (n = 424)	-0.44	< 0.0001
Mental health (n = 420)	-0.38	< 0.0001
Energy/vitality (n = 419)	-0.35	< 0.0001
Pain (n = 417)	-0.31	< 0.0001
Health perception (n = 404)	-0.38	< 0.0001

Table 3—Mean (SD) psoriasis disability index scores (%) for non-manual and manual social classes according to sex

	Non-manual	Manual	Total
Men:			
No	72	96	168
Mean (SD)	25.8 (14.0)	33.3 (19.9)	30.1 (17.9)
Women:			
No	94	119	213
Mean (SD)	26.0 (14.7)	32.8 (19.1)	29.8 (17.6)
Both sexes:			
No	166	215	381
Mean (SD)	25.9 (14.4)	33.0 (19.4)	

Key messages

- Little is known about the wellbeing of people with psoriasis in the community
- In this study people with psoriasis had a greater disability than healthy controls
- These patients did not consult about their skin condition frequently, yet most used some treatment
- The manual social classes suffer greater disability than non-manual classes
- The psoriasis disability index may help measure disability in general practice

Discussion

It is concerning that in this large community based study of psoriasis over two fifths of patients had not been seen by a doctor for over a year, even though almost two thirds continued to use some kind of treatment. Knowledge of the Psoriasis Association was quite high but not reflected in the figures for membership.

Previous studies have looked at selected groups in whom the disability might be expected to be worse.^{3-5 13} Nevertheless, even in those selected groups doctors underestimate the degree of disability caused by psoriasis.^{3 4} Our results suggest that people with psoriasis in the general population suffer serious disability in many aspects of daily life compared with healthy controls. Scores on the psoriasis disability index showed strong negative correlations with all variables on the SF-36 general health questionnaire, and the mean scores were lower than the overall mean reported in Finlay *et al*'s hospital study (38.8%, SD 23.3).⁵ The consistently lower scores of our patients on the SF-36 questionnaire (fig 1) also support this conclusion. In particular, we found that the perceived social function of psoriatic patients in the manual social class is significantly lower than both the controls and the non-manual patients in most categories of the SF-36 questionnaire.

The high correlation between the SF-36 and the psoriasis disability index suggests that this index is a suitable tool for assessing morbidity among psoriatic patients in the community. However, in view of the effects of social class on the scores, this factor would have to be taken into account in any analyses.

Our control data were derived from the largest published British study using the SF-36 questionnaire. The study was intended to provide normative data for comparison with other populations and samples. The sociodemographic characteristics of their sample mirror closely the characteristics of the general population when compared with 1991 population estimates and the social class distribution in the 1981 census. Although subsequent work has shown that there may be regional

variations in normative values for the SF-36, the differences were not found to be due to age, sex, or social class.¹⁵ We could have selected controls from the same population as the subjects, but this also leads to problems of selection bias and such controls cannot be considered normal for a geographical area.¹⁵

In conclusion, we have found that people with psoriasis perceive themselves to be less healthy than a normal population. The most severely affected are manual workers, and these might be a priority group to be targeted for particular attention. The SF-36 with the psoriasis disability index may be a useful means of identifying those in most need of intervention and of auditing their progress.

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Conflict of interest: None.

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ANY QUESTIONS

Do we have any evidence that aggressive lowering of lipid concentrations in patients with hyperlipidaemia with renal artery stenosis causes regression of the condition, as has been shown in the case of the coronary arteries?

There is one report of angiographic regression of renal artery atherosclerosis (including remission of hypertension), which the authors considered was largely due to lipid lowering treatment.¹ There is, however, no lipid lowering trial providing evidence of regression of renal atherosclerosis as there is in the case of coronary and femoral atherosclerosis. Nevertheless, in patients with renal artery stenosis due to atheroma, coronary heart disease may already be clinically overt, but, even if it is not, the likelihood of a clinical coronary heart disease event over the next 10 years must be at least 30%. There

is thus a strong case for starting effective cholesterol lowering treatment in such patients in view of the substantial evidence from clinical trials that this will decrease the incidence of coronary heart disease and prolong life in those at high risk of coronary heart disease.^{2 3}—PAUL N DURRINGTON is professor of medicine in Manchester

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