Factors affecting self-efficacy and pain intensity in patients with chronic musculoskeletal pain seen in a specialist rheumatology pain clinic

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Objective. Chronic musculoskeletal pain is a very common and costly health problem. Patients presenting to rheumatology clinics with chronic pain can be difficult to manage. We studied 354 patients referred to a rheumatology chronic pain clinic over 5 yrs to identify factors affecting their self-efficacy and intensity of pain.

Methods. We collected data for each patient, covering demographic and psychosocial factors, characteristics of their pain and previous treatment. We measured self-efficacy using a validated questionnaire, and pain intensity (PI) on an NRS. We performed multiple regression analysis to determine as to which factors were independently associated with these outcomes.

Results. Despite extensive previous investigations and treatment, these patients had low self-efficacy [median = 26.5, interquartile range (IQR) 15–38, best possible = 60] and high PI scores (median = 7, worst possible = 10, IQR 5–9). Low self-efficacy was most clearly associated with depressive symptoms and not being employed. PI was most clearly associated with depressive symptoms, extensive pain and lower level of education.

Conclusion. Community-based studies suggest psychosocial factors are very important in determining outcomes in patients with chronic pain. This study suggests that the same is true in patients referred to rheumatologists due to chronic musculoskeletal pain and that these factors—particularly depressive symptoms and not being employed—are more important than site or duration of pain in those patients.

Key Words: Chronic musculoskeletal pain, Self-efficacy, Pain clinic.

Introduction

Chronic musculoskeletal pain is a common and costly health problem with a prevalence of about 30% in most studies [1, 2]. It is more common in women than men at all ages [1, 3, 4]. These prevalence figures are fairly consistent over time [1, 3, 4] and between populations studied in different countries [1, 2, 4–6]. The direct and indirect healthcare costs of chronic pain are high. Patients with chronic musculoskeletal pain have higher than average rates of disability and utilization of healthcare services [7] and medications [7, 8].

Patients with chronic musculoskeletal pain often suffer pain and disability for many years despite their use of healthcare services. One study showed that 80% of 72 patients with fibromyalgia had not improved at a median of 4 yrs follow-up, despite trying a range of treatments [9]. Several groups have used postal questionnaires to identify factors related to onset and persistence of chronic musculoskeletal pain in large community cohorts [1, 6, 10–12].

Psychosocial factors including illness behaviour and psychological distress [12, 13] are particularly important predictors of persistence of pain [11, 12]. However, they may not be predictors of response to treatment [14].

Less is known about the factors that influence clinical outcomes in the subgroup of patients seen in rheumatology clinics for management of chronic musculoskeletal pain. The same psychosocial factors identified in the community studies may also be the dominant influence on outcomes in these clinic patients, regardless of the modes of investigation and treatment employed. In a study of 196 patients attending a chronic musculoskeletal pain clinic, we found that 87% had been treated with drugs and 61% with physiotherapy. A total of 71% had radiographs and 30% MRI scans [15]. These patients were still in considerable pain with low patient self-efficacy scores and high numerical rating scores for pain intensity (PI). Depressive symptoms and not being employed were significantly associated with low self-efficacy [15].

In a qualitative study of patients who had been seen in this clinic, we found that they view ‘spoiled identity’ as a major feature of their chronic pain condition [16]. The limitations on their activities due to pain alter the way in which they, and others, view their identity. We are not aware of any direct measures of spoiled identity. However, self-efficacy is a measure of a person’s confidence in his or her ability to perform specific activities under particular conditions [17]. It is an important concept in the management of patients with chronic pain. In these patients, it is a mediator of relationships among PI, disability and depression [18], predicts pain and avoidance behaviours [19] and predicts outcomes in patients undergoing a pain management programme [20]. Furthermore, a recent Cochrane review found that lay-led educational programmes for chronic disorders consistently appear to improve self-efficacy [21]. It is possible that improved self-efficacy could, in itself, be a realistic goal for management of patients in a chronic pain clinic, distinct from any effect on PI. It is therefore important to identify the main determinants of self-efficacy in the subgroup of patients who are referred to such clinics for chronic musculoskeletal pain. This is the main aim of the current study.

In our previous study [15], we were unable to investigate associations between self-efficacy at the time patients were seen in the pain clinic and their previous treatments. We had insufficient data from follow-up appointments to investigate whether patients’ self-efficacy and the associations observed between patient factors and self-efficacy changed over time. In the current article, we have extended our study to include 354 patients referred to the clinic over a 5-yr period. Data from a second visit were available for 140 of these patients, which allowed us to investigate these issues as a secondary research question.

Another subsidiary aim of this study was to show that useful and meaningful data can be collected from unselected patients.
with chronic musculoskeletal pain within the confines of a routine clinic consultation process.

**Participants and methods**

**Participants**

Patients with chronic pain (>3 months) can be referred to the chronic pain clinic at University College London Hospital (UCLH) by general practitioners or hospital doctors. During the study period, two consultant rheumatologists with an interest in pain (A.R. and M.E.S.) saw 20–25 new patients per month in this clinic. Between October 2000 and October 2005, we entered data about newly referred patients into an audit database held on a secure server. All the patients were outpatients. All the information recorded was of the type routinely obtained during the clinical consultation except that the patients were also requested to complete measures for self-efficacy [22] and PI. Of 418 new patients for whom entries were made on the database, 354 completed outcome measures of at least one visit to the clinic and are included in this study. Data were managed using Patient Analysis and Tracking System software (Axis Clinical Software Inc., Portland, OR, USA). The Caldicott Guardian of University College London Hospitals Trust gave ethical approval for this work.

We explored the effect of 11 explanatory variables on two clinically relevant outcome measures. The selection of these variables was based on previous published studies [2, 3, 5, 10, 12, 13, 23, 24] and clinical experience.

**Outcome measures**

(i) **Pain self-efficacy questionnaire** [22, 25] that consists of 10 questions about the patient’s confidence in carrying out various normal activities despite the pain. The answer to each question is rated on a 7-point numerical rating scale (NRS) where 0 is ‘not at all confident’ and 6 is ‘completely confident’. The possible values for self-efficacy score range from 0 to 60, where 60 represents normal function on all questions. Examples of questions incorporated in the questionnaire are ‘I can enjoy things, despite the pain’, ‘I can cope with my pain in most situations’ and ‘I can do some form of work, despite the pain’ (‘work’ includes housework, paid work and unpaid work). This questionnaire has been used by several authors [15, 19, 22, 25] in the assessment of the effect of chronic pain upon lifestyle.

(ii) PI measured on an 11-point NRS where 0 is no pain and 10 is worst imaginable pain. We asked participants to mark one of 11 equally spaced marks (0–10) on a horizontal scale to indicate the intensity of their pain over the previous month. PI is commonly used as an outcome measure in studies of painful conditions; for example, recent clinical trials of drugs for fibromyalgia [26–29].

NRSs are reliable for assessing pain in patients with chronic musculoskeletal pain [30, 31].

**Explanatory variables**

(i) **Age**—treated as a continuous variable.

(ii) **Education**—in years, treated as a continuous variable.

(iii) **Gender**.

(iv) **Site of pain**—divided into limited and extensive [15]. Limited pain was defined as pain confined to one site or two sites which were either ‘upper back/neck + upper limbs or ‘lower back + lower limbs’. All other distributions of painful sites were categorized as extensive pain.

(v) **Duration of pain**—classified into four categories (up to 3 yrs, 3–5 yrs, 6–10 yrs and over 10 yrs).

(vi) **Presence of depressive symptoms.** For the purpose of this study, patients were recorded as reporting depressive symptoms if they were being prescribed medication for depression and/or described symptoms of hopelessness, despair or frequent crying. A specific questionnaire was not used to identify depression—we based this on the clinician’s routine clinical assessment for depression in order to interfere as little as possible with the normal routine of the clinic.

(vii) **Employment status.** This was classified into four categories—employed, retired, housewife and unemployed.

(viii) **Ethnicity**—Asian, black, white or other.

(ix) **Previous treatment with drugs and injections only**—yes/no (i.e. anyone who had also had physiotherapy or osteopathy/ chiropractic would be in the ‘No’ group).

(x) **Previous treatment with physiotherapy**—yes/no.

(xi) **Previous treatment with osteopathy or chiropractic**—yes/no.

Although osteopathy and chiropractic are not the same, they are sufficiently similar to be considered together as manipulative therapy and the relevant professions have agreed to this [32].

**Sample size and statistical analysis**

The primary analysis investigated the effect of explanatory variables on outcomes measured at the first visit. Estimation of 16 coefficients is required to include the explanatory variables listed above in a regression model. Using the rule of 10 observations per coefficient suggests that a sample size of 160 patients is necessary to carry out the analyses [33]. Thus, our sample of convenience provides ample data for the analyses even after allowing for missing data.

Linear regression analyses were used to identify associations between explanatory variables and the outcomes measured during the first visit. Backward elimination with a 5% significance level was used to select the final set of explanatory variables for each outcome measured at the first visit. For this analysis the sample size requirement of 160 needed to be inflated to allow for the correlation between the repeated measurements within a patient and the addition of time period as an explanatory variable in the model. Using the average of 1.4 measurements per patient and a correlation of 0.53 for self-efficacy, a total of 225 measurements are required to estimate the coefficients with desired precision. The requirement is lower for PI due to lower within-patient correlation. After excluding missing data there were 338 measurements for self-efficacy and 282 for PI which were adequate. A backward elimination with a 5% significance level was used to select the final explanatory variables.

Assumptions of normality and non-linearity for continuous explanatory variables were assessed using residual plots and through the inclusion of non-linear terms in the models, respectively.

The assumption of missing at random required by the models [35] was investigated by creating a binary variable indicating whether the outcome was missing or not and using a logistic regression to investigate factors associated with missingness. A multiple imputation method using five data sets and the multiple-chained equation MICE [35] technique was used to impute missing data. Sensitivity of the results from the primary analysis to missing data was investigated by comparing the results of the regression analyses based on complete and imputed data.

All analyses were carried out using STATA 9.0 (StataCorp, TX, USA) and MLwiN version 2.02 (Centre for Multilevel Modelling, University of Bristol).
Results

Characteristics of patients

We studied 354 patients. Data on 196 of these patients had been analysed in our previous study [15]. The median age of the patients was 47 with interquartile range (IQR) of 38–58; 254 (72%) were females. Median duration of education was 13 yrs (IQR 11–16 yrs). At the first visit to the clinic median self-efficacy score for this group of patients was 26.5 (IQR 15–38, n = 330). Median PI score was 7 (IQR 5–9, n = 317).

These patients had been extensively investigated in the past, 77% had had radiographs and 34% MRI scans of the painful area(s). They had also had a range of treatments, with 90% having taken drugs and 68% having had physiotherapy. Only a minority (22%) had been treated with drugs and injections alone, and 14% had seen an osteopath or a chiropractor.

Numbers of participants categorized according to the variables being analysed in this study are shown in Table 1.

We had outcome data for 140 of these patients at a follow-up visit to the clinic. All 140 patients had completed PI scores and 123 had completed self-efficacy scores at the second visit. Of these, 21 did not have any PI score and 11 did not have any self-efficacy score measured at the first visit. The median values of the outcome measures were very similar to those found in patients who had measurements at the first visit. At the follow-up visit, median self-efficacy score was 26 (IQR 14–37). Median PI score was 7 (IQR 5–9). The median time between the two clinic visits was 287 days (IQR 38–525). Thus the measures did not change over time.

Factors associated with self-efficacy

The fact that 60.5% of the participants did not provide follow-up data is a clear limitation of the study. There were a number of different reasons for the lack of follow-up data. Since the project was designed to take place during routine clinic appointments and not as a stand-alone research study, we could not obtain data from patients who were discharged at the first clinic visit (n = 37) or who did not attend for follow-up (n = 50). In the other cases, data were not collected at the follow-up visit for logistical reasons. During the limited time available to conduct this study in the clinic, the emphasis was on collecting data from new patients. It was not always possible to collect data from patients who were being followed up as well.

Treatment modalities recommended at the first visit

A wide variety of different treatment modalities were recommended at the first visit. These included a change in drugs in 108 (31%) referral for physiotherapy in 95 (27%), local injections in 30 (9%), referral to a pain management programme in 49 (14%) and referral to a pain anaesthetics’ clinic in 28 (8%) of the cases. Three (1%) were referred for surgery. In many cases, two or more of these modalities were used in combination. Some patients did not tolerate or complete the treatments recommended at the first visit (e.g. did not take drugs or did not attend for physiotherapy). This led to such a large number of possible treatment combinations that categorizing patients according to these combinations would be meaningless in statistical analysis. We have therefore not attempted any analysis of the effect of treatment recommended at the first visit on clinical outcome at the follow-up visit.

Table 2 shows the results of regression analysis of the factors associated with self-efficacy at the first appointment in the pain clinic. The significant explanatory variables were employment, presence of depressive symptoms, previous physiotherapy and previous osteopathy/chiropractic. The mean self-efficacy scores for housewives and the unemployed were lower by 10.2 U (95% CI 5.1, 15.4) and 9.5 U (95% CI 5.3, 13.8), respectively, compared with employed people. Retired people had slightly higher scores for housewives and the unemployed were lower by 10.2 U (95% CI 5.1, 15.4) and 9.5 U (95% CI 5.3, 13.8), respectively, compared with employed people. Retired people had slightly higher scores (mean 7.3 U less than employed people with 95% CI 2.8, 11.7). These results are highly statistically significant (P < 0.001). Patients with depressive symptoms had mean self-efficacy scores

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency, % (n = 354)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>100 (28.0)</td>
</tr>
<tr>
<td>Female</td>
<td>254 (72.0)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>206 (58.2)</td>
</tr>
<tr>
<td>Black</td>
<td>32 (9.0)</td>
</tr>
<tr>
<td>Asian</td>
<td>26 (7.3)</td>
</tr>
<tr>
<td>Other</td>
<td>30 (8.5)</td>
</tr>
<tr>
<td>Missing</td>
<td>60 (17.0)</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>137 (38.7)</td>
</tr>
<tr>
<td>Housewife</td>
<td>49 (13.8)</td>
</tr>
<tr>
<td>Retired</td>
<td>68 (19.2)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>91 (25.7)</td>
</tr>
<tr>
<td>Missing</td>
<td>9 (2.5)</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td></td>
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<tr>
<td>Present</td>
<td>120 (34.0)</td>
</tr>
<tr>
<td>Absent</td>
<td>225 (63.5)</td>
</tr>
<tr>
<td>Missing</td>
<td>9 (2.5)</td>
</tr>
<tr>
<td>Site of pain</td>
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<tr>
<td>Limited</td>
<td>156 (44.1)</td>
</tr>
<tr>
<td>Extensive</td>
<td>193 (54.5)</td>
</tr>
<tr>
<td>Missing</td>
<td>5 (1.4)</td>
</tr>
<tr>
<td>Duration of pain, yrs</td>
<td></td>
</tr>
<tr>
<td>0–3</td>
<td>89 (25.1)</td>
</tr>
<tr>
<td>3–5</td>
<td>105 (29.7)</td>
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<td>6–10</td>
<td>83 (23.4)</td>
</tr>
<tr>
<td>&gt;10</td>
<td>73 (20.6)</td>
</tr>
<tr>
<td>Missing</td>
<td>4 (1.1)</td>
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<td>Previous physiotherapy</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>241 (68.0)</td>
</tr>
<tr>
<td>No</td>
<td>113 (32.0)</td>
</tr>
<tr>
<td>Previous osteopathy/chiropractic</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>51 (14.0)</td>
</tr>
<tr>
<td>No</td>
<td>303 (86.0)</td>
</tr>
<tr>
<td>Previous drugs/injections only</td>
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<tr>
<td>Yes</td>
<td>78 (22.0)</td>
</tr>
<tr>
<td>No</td>
<td>276 (78.0)</td>
</tr>
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</table>
5.1 U lower than those who did not have such symptoms (95% CI 1.6, 8.6; \( P = 0.005 \)). Patients who had received osteopathy/chiropractic had higher mean self-efficacy scores (difference 5.5 U; 95% CI 0.6, 10.4; \( P = 0.029 \)) than those who had not while those who had received physiotherapy had lower self-efficacy (difference 5.0 U; 95% CI 1.4, 8.5; \( P = 0.006 \)) than those who had not. There was no significant association of self-efficacy at the first visit with age, gender, duration of pain, site of pain or treatment with drugs/injections only (data not shown in Table 2).

The results from the analyses including self-efficacy scores at first and second visits are shown in Table 3. The results were similar except that site of pain was identified as an additional risk factor and the association with ethnicity had reduced. Patients with extensive pain had mean self-efficacy scores 3.2 U lower than those with limited pain (95% CI 0.2, 6.3; \( P = 0.039 \)). There was no significant association of self-efficacy with time period between visits.

### Factors associated with PI scores

The results for PI are presented in Table 4 (PI at first visit) and Table 5 (PI at first and second visits).

The correlation between self-efficacy score and PI was 0.7, but only some of the factors significantly associated with PI were the same as those associated with self-efficacy. Mean PI score was 0.6 U (95% CI 0.05, 1.1; \( P = 0.031 \)) higher in those with depressive symptoms than those without, and 1.0 U lower (95% CI 0.3, 1.7; \( P = 0.004 \)) in those who had seen an osteopath or chiropractor than in those who had not. Unlike the self-efficacy score, the PI score at the first visit was significantly associated with fewer years of education and with the site of pain. Those with extensive pain had mean PI scores 0.9 U higher than those with limited distribution of pain (95% CI 0.4, 1.4; \( P = 0.003 \)). For each additional year of education PI was 0.1 U (95% CI 0.02, 0.2; \( P = 0.016 \)) lower on average. There was no significant association with age, gender, ethnicity, duration of pain, employment, previous physiotherapy or treatment with drugs/injections only (data not shown in Table 4).

Very similar results were obtained in the analysis including the PI scores at the second visits (Table 5). There was no significant association of PI with time period between visits, which is in line with these findings.

### Missing data and sensitivity analysis

The missingness for self-efficacy was found to be associated with education (non-response decreased with increasing years of education) and ethnicity (non-white patients were more likely to be missing) and that for PI score was found to be associated with gender (males more likely to be missing). These factors were therefore included in their respective regression models to preserve the assumption of data missing at random. The explanatory variables found to be significantly associated with self-efficacy and PI were confirmed in the imputed data analysis, which suggests that the results are not sensitive to missing data. Comparison of the characteristics of patients who had self-efficacy and PI scores assessed at both visits with those of patients who had scores missing at the second visit did not show any differences except for the percentage of patients with depressive symptoms. Patients with missing self-efficacy scores at the second visit were less likely to have depressive symptoms than those with complete scores (30% vs 49%). The corresponding figures were 28 and 45% for missing vs complete PI scores. There were no significant differences between the self-efficacy or PI scores at baseline between patients who had scores captured at two visits and those who only had scores from one visit. Mean self-efficacy at baseline was 26.2 (s.d. 14.6) for those with two scores and 27.3 (s.d. 14.4) for those with one score. Mean PI at baseline was 7.3 (s.d. 2.2) for those with two scores and 6.8 (s.d. 2.1) for those with one score.

### Discussion

In this article, we report our experience of managing 354 patients referred to a chronic musculoskeletal pain clinic in a department of rheumatology over a 5-yr period. It is important to study these patients, because they form 10–20% of those seen in rheumatology clinics [2]. Management is difficult, as these patients often do...
not fall into groups for which validated evidence-based care pathways exist. Published observational data from unselected patients in such clinics would help, but few are available. In this study, we chose an approach that would maximize the number of patients studied and minimize the disruption to their treatment in the clinic. Any clinician working in a similar scenario could obtain the data on outcomes and explanatory variables that we collected without the need for extra research staff or time. However, this pragmatic design of the study meant that we could not collect data on every potentially interesting variable (e.g. BMI or participation in sports) and this is a limitation of our work. All new patients attending the clinic were eligible for the study. We used simple and rapidly completed instruments to collect data. We used an NRS for PI. We added the pain self-efficacy questionnaire [22] due to evidence of its usefulness in studies by ourselves [15] and others [18–20]. This questionnaire has strong psychometric properties, which have been described in detail elsewhere [22]. In particular, it has high internal reliability (Cronbach’s-α > 0.9 in several studies) and high test–retest correlation (0.73 over a period of 3 months) under conditions of no change in pain or disability. There is also good evidence for its validity (by correlation with other measures of self-efficacy and pain-related disability) and sensitivity to change, for example, in patients attending a pain management programme [22].

A limitation of our study was that we did not use a validated questionnaire to define depression. We defined depression in a way that we feel would be routinely used by clinicians taking a history, who would be unlikely to use a validated questionnaire for each patient. Other limitations include the lack of follow-up data and the limited data available for some subgroups of patients. For example, only half of those who had osteopathy or chiropractic completed all the outcome measures. This mandates caution in interpretation of the data from that subgroup of patients.

Our findings confirmed the effects of employment and depressive symptoms on self-efficacy reported in our previous study on a smaller group of patients [15]. Only one of the 10 questions in the self-efficacy questionnaire relates to paid work so that this score is not a direct measure of ability to work. Our previous study suggested that the presence of extensive pain might be associated with low self-efficacy, but the results of this study do not support that idea. In this larger study, the association was of borderline significance.

In fact both site and duration of pain seem to have little or no effect on self-efficacy score. This supports the hypothesis that outcomes in many of these patients depend more upon psychosocial issues than on the physical characteristics of the pain. It is increasingly believed that chronic pain should be managed using a biopsychosocial model, which takes into account the social and emotional impact of the pain in an individual patient [36]. Psychosocial distress and illness behaviour are known to predict both the onset [11, 13] and persistence [12, 37] of chronic widespread pain. A high prevalence of depression in patients with chronic widespread pain was noted in Canadian and American studies [2, 24, 38].

We studied possible associations between previous treatments and self-efficacy at the first visit to the pain clinic. Although 68% of the patients had previous physiotherapy, having experienced this form of treatment was associated with lower self-efficacy. We suspect, but cannot prove, that those patients who respond even partially to physiotherapy are less likely to be referred to the chronic pain clinic. Thus, a history of physiotherapy in patients referred to this clinic is probably a marker for particularly troublesome and refractory pain. Although 14% of the participants who had tried osteopathy/chiropractic had higher self-efficacy scores and lower PI scores than the 80% who had not done so, we view these results with caution. The CIs for the effects of osteopathy/chiropractic were wide and 43 of the 51 patients who received these treatments had also received physiotherapy. Only half the osteopathy/chiropractic group completed self-efficacy and/or PI scores. In the United Kingdom, most consultations with osteopaths or chiropractors are privately purchased, whilst most physiotherapy is provided free by the National Health Service. Those patients who had consulted osteopaths or chiropractors may have been a group with the physical capability, initiative and funds to arrange this, which may itself be a marker of higher self-efficacy.

In the previous study [15], we did not find differences between factors affecting PI and those affecting self-efficacy. In this study, we examined both presence of extensive pain and fewer years of education were associated with increased PI but not reduced self-efficacy, whereas not being employed was associated with lower self-efficacy but not increased PI. It seems reasonable that ability to continue in employment should be more closely tied to self-efficacy than to PI. The ability to carry out some jobs is more affected by pain than others. Others have suggested that widespread pain is associated with poorer outcomes than localized pain [5]. Andersson et al. [5] carried out a community questionnaire study in 1609 subjects in Sweden and found that those with pain at multiple sites had higher PI, more sick leave and were less likely to be working than those with more localized pain. Education has also been linked to chronic pain. MacFarlane et al. [3] and Bergman et al. [10] identified lower educational level as a factor associated with persistence of chronic widespread pain in community studies.

We found that median self-efficacy and PI scores were consistent between this study and the previous study [15] and between the first and follow-up visits in this study. Despite extensive investigations and treatment, this group of patients have persistently low self-efficacy and high PI scores. Within the limitations of this study we were not able to determine the effects of treatments offered in the pain clinic upon these outcome measures. This will be difficult to investigate because of the heterogeneity of clinical presentations and methods of treatment employed in this clinic population, and because of the dominant effects of factors such as depression and employment that we and others have demonstrated. It is important to carry out such studies because a range of different management strategies is already available for patients with chronic musculoskeletal pain and more are likely to be available in the near future. For example, several new drugs for the treatment of fibromyalgia are being studied in clinical trials [26–29]. In order to use these treatments in an efficient and cost-effective way, we need to be able to assess as to which patients are likely to benefit and what benefits are likely to accrue. For example, some patients may continue to have the same intensity of pain but may experience improved self-efficacy.

### Rheumatology key messages

- Patients with chronic musculoskeletal pain seen in a rheumatology pain clinic have persistently low self-efficacy and high PI despite previous investigation and treatment.
- Psychosocial factors, particularly depressive symptoms and not being employed, influence self-efficacy more than the extent or duration of pain.

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### Disclosure statement

The authors have declared no conflicts of interest.
References


