British Journal of Psychiatry (1994), **165**, 802–807

Coping with Chronic Pain
Some Patients Suffer More

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Background. A multi-dimensional approach was used to examine coping in chronic pain. The following hypotheses were tested: (a) patients who cope maladaptively also cope generally in a similar way; (b) patients' maladaptive coping is associated with childhood adversity.
Method. Cross-sectional and retrospective data were collected from 68 consecutive patients (aged 18–70) at a pain clinic where their disease was non-systemic and the pain had lasted for at least three months. Sixty-one patients were interviewed using the Structured Clinical Interview for DSM-III-R, and the Measure of Parental Care in Childhood. All patients completed questionnaires on their pain and personality.
Results. Two coping styles emerged from factor analysis. One was associated with chronicity, psychiatric morbidity, harm avoidance, immature defence style and reporting parental indifference.
Conclusion. Patients may be predisposed to cope maladaptively after the experience of parental indifference in early life. Such coping is likely to reflect more general patterns.

Patients with chronic pain do not always have demonstrable pathology to account for their symptoms (Gottlieb *et al*, 1977; Frymoyer, 1988; Walker *et al*, 1988). Such patients are frequently identified as having substantial psychological problems, which may resist the most intensive attempts at treatment. It is well established that psychiatric disturbance, in particular affective disorder, is common in pain clinic populations. Rates for depression obtained using standardised diagnostic criteria have been as high as 56% (Fishbain *et al*, 1986) and 87% (Lindsay & Wyckoff, 1981). Psychiatric morbidity occurs in patients both with and without demonstrable organic pathology (Edwin *et al*, 1984; Krishnan *et al*, 1985; Benjamin *et al*, 1988; Walker *et al*, 1988), and may be more prevalent in those patients with organic disease (Benjamin *et al*, 1988).

Previous studies

Pain-suffering as a mode of expression of psychological unease has been recognised since the publication of Breuer & Freud's (1895) case studies of patients with hysteria. Engel reported on a group of "pain prone" patients who appeared to seek out pain as a form of self-punishment (Engel, 1959). Patients' childhood relationships had been characterised by aggression and suffering, in some cases with alternating harsh chastisement and "over-compensating displays of affection". In other cases, parents had been cold and rejecting. Not infrequently, a parental figure had suffered pain or serious illness. Engel believed chronic pain provided an acceptable way for individuals to cope with their own aggression.

A number of authors have implicated childhood adversity in the aetiology of chronic pain in adults (Swanson *et al*, 1978; Hudgens, 1979; Gross *et al*, 1980; Violin, 1980; Roy, 1982; Walker *et al*, 1988). These studies were based on relatively small samples of patients selected on the basis of the specific location of the pain, severity, or psychotherapeutic need, and only one used standardised measures (Walker *et al*, 1988). It is difficult, therefore, to generalise the findings to the wider pain-suffering population. Studies which have refuted the possible causal links between earlier life experience and subsequent pain suffering have relied on questionnaire data alone (Gamsa, 1990; Gamsa & Vikis-Freibergs, 1991).

The cognitive–behavioural explanation is that pain and disability persist as a result of reinforcement contingent on avoidance behaviour and complaint behaviour (Fordyce, 1973, 1974, 1978; Block *et al*, 1980; Philips & Jahanshahi, 1985; Flor *et al*, 1987). A clear relationship between pain-related behaviour and beliefs has been shown; the beliefs of chronic pain patients about the nature of the pain and about their own capabilities are predictive of coping efforts and their efficacy (Harkapaa *et al*, 1991; Jensen *et al*, 1991; Williams & Keefe, 1991).

This model is not, however, incompatible with the possibility that those who have suffered early privations or punishment may be more susceptible to coping maladaptively with pain in later life. The aims of the present study were firstly to determine whether patients' styles of coping with pain fall into

https://doi.org/10.1192/bjp.165.6.802 Published online by Cambridge University Press

characteristic groups. We hypothesised that those with a more defeated style of coping would be more vulnerable to psychiatric morbidity. A further goal was to examine whether patients' coping with pain reflected how they coped more generally. Finally, we sought to ascertain whether there was any relationship between coping style and childhood adversity.

Method

Subjects

Sixty-eight patients, 28 men and 40 women, were recruited from consecutive attendances at a pain clinic. Inclusion criteria were: (a) age 18–70; (b) pain of at least three months' duration; and (c) non-malignant and non-systemic disease. Data were collected on each patient's first visit. The clinic anaesthetist made ratings for estimated organic and psychological contributions on 10 cm visual analogue scales.

Questionnaires

Pain-specific measures

The short form of the McGill Pain Questionnaire (Melzack, 1975, 1987) provided subscores for the affective and sensory components of pain, and ratings for pain intensity. The Pain Behaviour Checklist (Zarkowska, 1981; Philips & Hunter, 1982) has been validated on pain clinic populations. It derives scores for complaint behaviour and avoidance behaviour. The Pain Cognitions Questionnaire yields two positive factors (distraction/reassurance and support/trust) and two negative factors (helplessness and hopelessness). In pain clinic patients,the negative factors correlate with behavioural disruption and the affective dimensions of pain (Boston *et al*, 1990). The Whitely Index (Pilowsky, 1967) is a measure of 'hypochondriasis', with three subscales (disease conviction, bodily preoccupation and illness phobia) that are associated with somatic symptoms and depression (Barsky *et al*, 1986).

Non-pain measures

The Defence Style Questionnaire determines the use of mature defences (which includes sublimation and humour) versus immature defences (including projection and passive aggression) and neurotic defences (including undoing and altruism). Scores predict membership of DSM–III–R diagnostic groups (Andrews *et al*, 1989). The Tridimensional Personality Questionnaire defines three dimensions: novelty seeking, harm avoidance and reward dependence. Reliability and concurrent validity with other personality measures are satisfactory (Cloninger, 1987).

Interviews

Sixty-one patients agreed to undergo two semi-structured audiotaped interviews (by NE). The Structured Clinical Interview for DSM–III–R, omitting the psychotic section (Spitzer *et al*, 1989), and the Measure of Parental Care in Childhood, omitting the section on intrafamilial conflict (Harris *et al*, 1986), were used. The latter elicits information about changes in care arrangements during childhood. For each arrangement, information was collected about their relationship with the caregivers. Scores were simplified to indicate the presence or absence of parental indifference, parental disapproval and harsh control.

Details were obtained of chronic pain, invalidity or illness necessitating prolonged hospital treatment in the patient's childhood, whether suffered by the patient or a family member.

Data analysis

Spearman's rank correlations were computed for the pain-specific measures, including the number of different analgesic drugs taken at the time of interview. Factor analysis was carried out using the Principal Components and Varimax options. Two factors were extracted, and then examined for associations with the following:

(a) pain duration
(b) personality type
(c) defence style
(d) psychiatric morbidity
(e) parental care variables, including multiple care arrangements and loss of care-giver
(f) significant illness of either the patient or a close relative in childhood.

Associations between these variables and the extracted factors were examined using Spearman's rank correlations (a–c) or the Student's *t*-test (d–f).

Reliability

Twenty-one cases were randomly selected for rating by JT. Kappa coefficients were determined for ratings of presence or absence of DSM–III–R psychiatric disorder and for parental care variables.

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Results

Sample characteristics

The mean age was 50 years (s.d. 14). Forty patients were married, 18 single, and 10 widowed, divorced or separated. Fifty-eight were English/Irish in ethnic background, six African-Caribbean, three African and one French. The socio-economic class distribution (Goldthorpe & Hope, 1974) was: I–8; II–16; III–18; IV–15; V–11.

The mean duration of pain was 5.8 years (range 0.3 to 35 years). Data for the pain diagnosis were complete for 60 of the 68 patients. Diagnoses, according to the Classification of the International Association for the Study of Pain (1986), were as follows: chronic back pain, 38%; neuralgic syndromes, 18%; reflex sympathetic dystrophy syndromes, 20%; miscellaneous, 23%.

Twenty-nine (48%) of the patients had a DSM–III–R psychiatric diagnosis: 24 (39%) had major depression or dysthymia, three (5%) somatoform disorder, and one each (2%) of generalised anxiety disorder and panic disorder. Of the depressed/dysthymic patients, nine also fulfilled criteria for an anxiety disorder and seven had a somatoform disorder. This prevalence for depression is within the range previously described among chronic pain patients (Romano & Turner, 1985).

Twenty-seven (44%) patients had had two or more care arrangements during childhood. Fifteen (25%) had experienced the death of a parent or other care-giver. Significant illness had occurred in the families of 16 (26%), while 12 (20%) had themselves been ill.

Reliability

There was agreement for psychiatric morbidity ratings for 20 of the 21 rated patients, with 13 being rated as cases and 7 being rated as non-cases. The Kappa coefficient was 0.89. Kappa coefficients were 0.5 for both parental indifference and parental disapproval.

Correlations of pain-specific measures

Nineteen of the 45 pairwise variable combinations correlated with each other at the 5% level. Only one variable, distraction/reassurance, failed to correlate significantly with any other variable.

Factor analysis of pain coping styles

The factor analysis was performed in order to clarify the relationships between these variables. Two factors were found to emerge (Table 1). The first factor is a 'solitary suffering' coping style, composed of predominantly illness-affirming and help-rejecting elements. The second factor is a 'comfort-seeking' coping style, composed of more trusting attitudes and behaviours. Avoidance behaviour is common to both coping styles. Neither coping style correlated significantly with any index of pain severity.

Table 1
Rotated factor matrix showing factor loadings on the two coping styles

	Factor 1 (solitary suffering)	Factor 2 (comfort-seeking)
Disease conviction	0.86	0.07
Helplessness	0.81	0.04
Hopelessness	0.66	0.36
Bodily preoccupation	0.61	0.17
Support/trust	−0.60	0.43
Avoidance behaviour	0.47	0.49
Complaint behaviour	0.15	0.83
Number of analgesic drugs	0.00	0.63

Solitary suffering correlated negatively with the anaesthetist's ratings of the organic contribution ($r = -0.33$, $P \leqslant 0.01$). Patients who coped in this way were assessed as having less demonstrable disease. In addition, solitary suffering, but not comfort-seeking, correlated positively with the duration of pain suffering ($r = 0.39$, $P \leqslant 0.01$). Solitary suffering was high in patients with a DSM–III–R diagnosis ($t = -2.78$, d.f. $= 50$, $P \leqslant 0.01$), but comfort-seeking did not show this effect. Harm-avoidant personality and immature defence style both correlated strongly with solitary suffering ($r = 0.45$, $P \leqslant 0.001$, and $r = 0.47$, $P \leqslant 0.001$ respectively).

Solitary suffering, but not comfort-seeking, was increased in patients reporting parental indifference ($t = 2.47$, d.f. $= 47$, $P \leqslant 0.05$). Parental disapproval and harsh control did not distinguish patients' coping style scores. Neither coping style was associated with multiple care arrangements, significant illness or loss of care-giver.

Discussion

Our data highlight the correspondence between the way patients with chronic pain conceptualise their illness, and the way they behave in relation to it. We have identified at least two distinct coping styles. Solitary suffering represents a cluster of beliefs and behaviours in which the patients are preoccupied with bodily sensations and with the untreatability of the condition. In contrast, comfort-seeking is associated with complaining to those whom they trust to provide help. The two factors differ principally in the extent to which patients value the efforts of others.

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Those with higher scores on solitary suffering were more likely to fulfil criteria for a psychiatric diagnosis. Because our data are cross-sectional, it is not possible to determine whether the solitary suffering style of coping placed patients at risk of becoming depressed. This possibility is suggested, however, by the additional associations between solitary suffering and harm-avoidant personality, as well as an immature defence style. Personality questionnaire items typically endorsed by solitary suffering patients included "Even when I am with friends, I prefer not to open up very much", and "I am always treated unfairly". These associations suggest that solitary suffering arises from long-standing patterns of belief and action. Viewing pain as untreatable and unmanageable can then be seen as part of a larger pattern of caution and mistrust.

Comfort-seeking appears more adaptive than solitary suffering, in that the constellation did not correlate with psychiatric morbidity or with chronicity. This factor includes complaint behaviour and a greater use of analgesic drugs (Table 1). Conventionally, these behaviours have been thought to predispose to chronicity through reinforcement effects (Fordyce *et al*, 1973; Trieschmann, 1973; Fordyce, 1974; Block *et al*, 1980). However, in the light of our data, it is possible that complaining can also generate valuable emotional support, which may lead to actions being taken towards the amelioration of the pain. In contrast, the pervasive mistrust of solitary sufferers may restrict patients' opportunities for social or emotional support.

The association of solitary suffering with parental indifference offers some support for the view that chronic pain-suffering reflects psychological difficulties originating in childhood (Engel, 1959). We would, however, depart from Engel in his description of the pain-suffering as a masochistic activity. We prefer to use the attachment model (Bowlby, 1988), in which a patient's preference for independence has developed as a defensive substitute for overt distress, in order to avoid rejection by the care-giver (Main, 1982; Cassidy & Kobak, 1988). Studies of non-clinical samples (Parker & Barnett, 1988; Parker *et al*, 1992) have shown that adults' recollections of the quality of their relationships with care-givers do colour perceptions of the adequacy of subsequent social support networks. Solitary suffering then becomes a practice arising out of an ingrained habit of independence.

The absence of any association between solitary suffering and any of the more objective measures of adverse events in childhood (illness, death or multiple care situations) was unexpected. However, reactions to such events were extremely variable. For example, for some patients the loss of a parent led to a marked deterioration in care, while for others, separations or "losses" were experienced as lucky escapes from detrimental situations.

The cross-sectional and retrospective design of the study means that it is possible that patients' coping styles reflected differences in the nature or stage of their pain or disease. This is supported by the association between solitary suffering and chronicity. It is possible that patients first go through a phase of actively seeking support from others, but that with the persistence of their pain, they become depressed and cynical about the capacity of others to help. However, coping styles were not associated with severity of pain, and those patients who adopted solitary suffering scored lower on the anaesthetist's ratings of 'organicity'. Without a longitudinal study, it cannot be established whether the coping styles are separate or sequential.

Conclusions

In spite of the limitations imposed by the study design, we would tentatively offer the following formulation; the relationships between psychiatric disorder, chronicity and the solitary suffering coping style indicate that this particular coping style is not an adaptive one. Our data point to the childhood experience of parental indifference as predisposing pain-sufferers to cope in a strikingly independent way, not only in their response to pain but also in a variety of situations.

We would caution against the idea that we are proposing a psychological aetiology for chronic pain. Illness-related coping styles have been similarly identified in physical conditions such as rheumatoid arthritis (Brown *et al*, 1989) and breast cancer (Watson *et al*, 1984; Dean & Surtees, 1989), but are clearly not implicated in their aetiology.

Acknowledgements

We would like to thank Mrs J. Lathem and Mrs L. Boyes, the pain clinic sisters, for their help and support throughout the project, and Dr T. Levine for helpful comments on the manuscript. This work was carried out while NE was based at the Maudsley and Bethlem Royal Hospitals.

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https://doi.org/10.1192/bjp.165.6.802 Published online by Cambridge University Press

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(First received 13 September 1993, final revision 28 February 1994, accepted 11 March 1994)

https://doi.org/10.1192/bjp.165.6.802 Published online by Cambridge University Press