PSYCHOSOMATIC DIMENSIONS OF CHRONIC MUSCULOSKELETAL PAIN

A Thesis

by

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Dedicated to Homo Dolorosus

Psychosomatic Dimensions of Chronic Musculoskeletal Pain -

A Thesis Abstract

This thesis sets out to explore some psychosomatic dimensions of chronic musculoskeletal pain.

Pain is a phenomenon which is universally recognised and experienced but nevertheless presents a very real epistemological problem. For convenience, the philosophical approach chosen here is that of linguistic parallelism which views pain as a range of abstract concepts defined in a variety of 'languages' or disciplines in a complementary and interactive way.

Psychiatric formulations of pain include the concepts of conversion, object relations and the associations of pain with a developmental history of suffering and defeat and a diagnosis of depression. These ideas have been to some extent confirmed by nomothetic studies of pain patients. Chronic, as opposed to acute, pain is associated with a broad range of physical, emotional and social changes and is a problem of such clinical magnitude that special multidisciplinary clinics have now become a feature of clinical services in most large centres.

My own experience as a psychiatrist working in the Auckland Pain Clinic is described in this thesis. Over a four year period, 172 patients were assessed, comprising 15-20% of the total referrals to the clinic. The modal age was 45-54 years, with a male/female ratio of 7:10. The duration of pain was 5-10 years, the back being the

most common site and musculoskeletal pain was by far the most frequent presentation. Most of the patients presented with psychiatric disorders in the neurotic-personality disorder spectrum; depression, anxiety and hysteria being frequent diagnoses. These findings are similar to other studies reviewed. Treatment was instituted in half of the patients seen and half of the treated patients improved or recovered. One third of the original sample returned a completed follow-up questionnaire 18 months to 5 years after presentation. Just under a half remained improved or recovered, the treated patients faring no better or worse than those who refused or were not offered treatment, or who were referred elsewhere. There was a high rate of further consultation amongst all groups, but especially so for those who declined treatment. The treated patients and those referred elsewhere were significantly more likely to have found the psychiatric consultation helpful. EMG feedback, drug withdrawal and psychotherapy were more frequently associated with improvement than pharmacotherapy on short-term evaluation. On follow-up only EMG feedback maintained an advantage, Issues which emerged were the relationships between chronic pain, depression and antidepressant medication response; the role of anxiety and tension in chronic pain and the strong tendency towards continued help seeking amongst the majority of patients.

Muscle tension has been invoked in the aetiology and maintenance of a variety of pain syndromes. The most intensively researched areas have been tension headache and temporomandibular joint pain

where EMG feedback has become an established treatment technique, although there is still some controversy as to whether EMG feedback has any advantage over relaxation training as such. The use of EMG feedback training in other musculoskeletal conditions has been less well researched and doubt remains as to the role of generalised muscle tension in the causation of these conditions.

An EMG feedback study was undertaken at the Auckland Pain Clinic using a within-subjects control design. Eighteen subjects (12 females and 6 males) with neck and back pain were studied in terms of subjective reports of pain and EMG activity measurements under standardised conditions. Three conditions were compared, viz EMG feedback training, a control condition and a waiting list condition. The sequences of presentation of these conditions was counterbalanced in a design using two sets of latin squares to pick up any order effects. EMG feedback was the only treatment which significantly reduced EMG activity across sessions. An order effect was evident in that biofeedback was most effective when presented first but less so when presented after the control condition. Although estimates of present pain correlated with EMG activity, there was no statistical difference between pain score reductions when EMG feedback and control conditions were compared. Pain scores tended to decline during both conditions but the scores for "worst pain over one week" tended to rise. During the waiting list condition, present pain tended to increase while "worst pain over one week" tended to decline. Eleven subjects experienced an overall decrease in pain scores at the end of the study, while seven had increased pain. Declines in pain scores

tended to be associated with a biofeedback training effect but this was not statistically significant. Improvement in pain was associated with high present pain/EMG correlations when a rank order correlation was computed. This study provides some support for the use of relaxation methods in the management of musculoskeletal pain. It suggests that muscle tension may well play a role in the production and/or maintenance of musculoskeletal pain, although it does not account for all of the variance.

The more interpersonal factor of illness behavior may well explain some aspects of pain not accounted for by pathophysiological factors such as muscle tension. Parson's notions of the sick role and Mechanic's concept of illness behavior have stimulated the development of an "illness behavior questionnaire" by Pilowsky and Spence. We have made use of this questionnaire in a study involving 200 pain patients. A cluster analysis of these results produced profiles very similar to those found in Adelaide and adds validity to the groupings described by Pilowsky and Spence. Characteristically, patients with chronic pain tend to view their problems in somatic terms and to deny other problems in their lives, or if problems are admitted, to ascribe these problems to their pain. Illness behaviour profiles were found to cut across diagnostic categories when results from patients overlapping between the clinical diagnostic study and the illness behavior study were analysed. These illness attitudes therefore seemed to provide an alternative level of description to diagnostic systems. An analysis of therapeutic outcome in patients undergoing the biofeedback trial did not support the use of illness behaviour profiles as a prediction

patients discussed here. Third is the Freudian mechanism of "conversion" which may account for pain syndromes where pathophysiological changes are not necessarily evident. These three concepts provide interlinking mechanisms between adverse life experiences (with unpleasant affect) and musculoskeletal pain. These are part of an intrapersonal system which is potently influenced by the interpersonal and physical environment of the individual. Illness behaviour is at the social interface between intrapersonal and interpersonal systems. Research directions are suggested which may further elucidate the workings of this proposed psychosomatic formulation of chronic musculoskeletal pain.

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