University of South Australia

The Relationship between Chronic Pain and Blame Assignment

A dissertation submitted to the Faculty of Humanities and social Sciences in partial fulfillment of the requirements of the Master of Psychology (Clinical)

by

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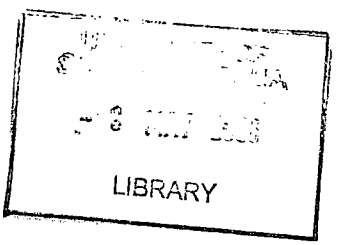

Supervisor: Dr Phil Mohr

Submitted on the 14th October 2005.

ACKNOWLEDGEMENTS

I extend my gratitude and appreciation to the following people;

Dr. Phil Mohr

With warm thanks to Phil for his tremendous encouragement, superb guidance, expert advise and endless patience.

The participants of the COPER program

For taking the time to participate in the COPER program research project.

Jane Kemp and Professor Ross Harris

For support and feedback in the earlier development of my thesis, particularly, their assistance in gaining access to the COPER program database.

STATEMENT OF AUTHORSHIP

I certify that this thesis does not contain any material previously submitted for a degree or diploma in any tertiary institution and that, to the best of my knowledge and belief, the thesis does not contain any material previously published of written by another, except where due reference has been made in the text.

Melody Burns

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CHAPTER 1 – LITERATURE REVIEW

Introduction

Chronic pain has been defined as a condition in which an individual experiences pain that continues for more than three months (National Institute of Arthritis and Musculoskeletal and Skin Diseases, 2003). There is no known single cure and conventional medical treatments are almost always unsuccessful. Researchers and clinicians have been forced to turn their attention to the role of psychological factors in the understanding and management of chronic pain. Traditional biological models of pain have been abandoned, in favor of theories which take account of the way in which the experience of pain is mediated by psychological factors. Fundamental research into biological mechanisms and empirical research of pain therapy have established the psychology of pain as a crucial aspect of both research and treatment (International Association for the Study of Pain [IASP], 1997). Central to the psychology of pain is the role of chronic pain patients' beliefs and emotions in the experience of and adjustment to their condition. In recent years, researchers have demonstrated that beliefs about the etiology and treatment of pain and perception of fault can influence a patient's level of distress and their response to treatment (Cats-Baril & Frymoyer, 1991; De Good & Kiernan, 1996; DeGood & Shutty, 1992; Jensen, Turner, Romano, & Lawler, 1994; Shutty, DeGood, & Tuttle, 1990).

Of particular interest to the current review is recent empirical evidence which suggests that chronic pain patients who blame other people (i.e., doctors, employers, family members) for their pain may suffer greater mood distress and be more resistive to treatment, relative to chronic pain patients who do not blame others for their pain (DeGood & Kiernan, 1996). The relationship between blame-assignment and chronic pain has received little attention from investigators. Nevertheless, the relationship of other chronic conditions and serious injuries to blame-assignment has been extensively studied. Results from this research together with DeGood & Kiernan's (1996) investigation suggest a possible role of blame-assignment in the experience of chronic pain.

This review explores the theoretical structure and empirical evidence for the apparent relationship between blame-assignment and adjustment to chronic conditions and injury. The aim of the review is to outline the historical understanding of chronic pain and highlight major current theoretical developments. Before these areas are reviewed, an historical understanding of chronic pain is presented and major current theoretical developments are introduced. Finally, the purpose of the current review is to evaluate evidence that relates specifically to the relationship between chronic pain and blame and discuss areas in need of further investigation.

Overview of Chronic Pain

Prevalence

Chronic pain is one of the most widespread (Pearce & Mays, 1994a) and most common causes of disability in the west today (Kinder, Curtiss & Kalichman 1986; Lisspers, Nygren & Söderman, 1998; Williams & Erskine, 1995). Reports from the United States indicate that more than half of the population suffers from some form of chronic pain at some point during their lifespan (Murray, 2003). Reports conducted outside of the United States have revealed that 40% of the adult population experience chronic pain (Martensson, Marklund, & Fridlund, 1999) A recent Australian study found that 17.6 percent of males and 20.0 percent of females from a sample of 17,000 respondents reported to have chronic pain (Blyth et al., 2001).

The psychosocial impact of chronic pain

The problems frequently associated with chronic pain are often much broader than the pain itself. Commonly cited are the various psychological and social problems that often accompany this condition. First, chronic pain is nearly always distressing as it spills over into all aspects of life and inevitably alters the lives of individuals suffering chronic pain conditions. Life changes associated with chronic pain may involve disruption to family and social roles, changes to daily activities, and decreased occupational function. In general, chronic pain is often associated with a less active lifestyle across the

board. Second, the prevalence of chronic pain along with its wide range of associated complications generates major economic costs both in terms of lost time and productivity and its increasing demands on health care resources. Third, while conventional and surgical approaches have often been applied successfully in the treatment of acute and terminal pain, theses approaches have not proved useful in treating chronic pain. Typically, following various unsuccessful investigations and interventions, people with chronic pain are told that they must learn to live with their pain. This information is frequently given to chronic pain patients in the absence of practical advice on how one might learn to live with the condition. Finally, faced with the idea of intractable, unremitting pain, together with the various other complexities associated with chronic pain, many individuals are reported to develop iatrogenic complications (Pearce & Mays, 1994b).

Professional interest in chronic pain

The complexities of understanding and managing chronic pain have not dampened enthusiasm for research and practice in the area. It has attracted major attention from health professionals across a range of different disciplines. The attention given to the understanding and management of chronic pain has not been in vain. Major developments in theory and intervention have been made over the last fifty years. Nevertheless, the road to new developments has been a long and difficult one, as early theories

maintained considerable influence over more modern conceptualizations of pain (Main & Spanswick, 2000).

Early Theories of Chronic Pain

Although early theories of pain can be traced back to ancient times, Descartes' 17th century explanation of pain is considered to have had the greatest influence over modern understandings of pain. Descartes' theory of pain is remembered most famously for its dualistic notions of mind and body. The idea that the physical and psychological aspects of pain were entirely separate issues continued to dominate early scientific accounts of pain. These include the specificity theory and the pattern theory (see, Main & Spanswick, 2000). Both theories relied on the idea of a relationship between external stimuli and pain perception. In other words, pain is the result of physical damage and the intensity of the pain is proportional to the severity of the damage. In general, the relationship between pain and injury holds true. For example, a pinch of a finger produces mild pain while a car door slammed on it is excruciating. Nevertheless, there are many instances for which neither theory was able to explain certain types of pain: most notably, clinical phenomena such as causalgia (i.e., pain that continues to be felt in part of the body that has been amputated). Nor were these theories able to account for the marked variation of pain reports between individuals with (evidently) the same anatomical signs. For example, there are many accounts of soldiers

charging ahead despite having sustained gunshot wounds and later reporting they did not suffer pain at the time. Out of the battlefield context, a gunshot wound would be expected to be associated with a high level of pain. Although these theories lacked a composite picture of pain, they are considered building blocks for the gate-control theory, a turning point for our current understanding of pain (Melzac & Wall, 1965; Pennal, 1991).

Gate-Control Theory

Gate-control theory was the first theory to provide an anatomical basis for the view that sensory input could be modulated by certain physiological and psychological processes. This theory, postulated by Melzack and Wall (1965), remains the most accepted theory of pain today. It was the first theory of pain able to account for the marked variability in individual response to pain. In addition, it was able to offer an explanation for how variables such as memory, emotions, perceptions, attention and other psychological constructs could interact with physiological systems. The theory is complex and difficult to do justice in a paper this size, however, an attempt will be made to explain the fundamental elements of the gate-control theory.

The theory suggests the existence of a neural gate in the spinal cord that controls the extent to which impulses, traveling along pain fibers, actually continue on to the brain. After entering the spinal cord, A-delta and C

fibers pass into a collection of nerve cell bodies. These cells are considered to be the gate. When the pain signal arrives and the gate is open, the signal passes on to the brain. When the gate is closed or only partially open, impulses will stop, or only some of the impulses will be passed onto the brain. It is suggested that three factors will determine the extent to which the gate is open:

1. The amount of activity in the pain fibers.
2. The amount of activity in non-pain fibers.
3. Messages from the brain.

Although further developments towards our understanding of pain have been made, the basic tenets put forward by Melzac and Wall's (1965) theory remain the same. This theory has been critical from a psychological point of view, because it provided a testable model of how psychological factors could activate the physiological aspects of the pain processes, and thereby modulate pain. (Bonica, 1996; Main & Spanswick, 2000; Melzac & Wall, 1965)

Psychogenic versus Organic Pain

The greatest legacy remaining from early theories of pain is the assumption that pain has a direct one-to-one relationship with injury. In other words, the experience of pain (e.g. intensity, duration, frequency, and severity) should be closely related to the level or extent of the lesion. Cases

for which pain is supported by physiological evidence are considered organic in nature. Although pathology continues to support more general observations with regard to acute pain, this idea fails to explain our experience of chronic pain. Nevertheless, if pain is not demonstrated through pathology, it is often considered to be a product of purely psychological factors, most commonly a disturbed mind, and has been given the label psychogenic pain. As many chronic pain cases lack corroborating physical signs of damage, there was and remains a common tendency to treat such cases of pain as unauthentic and arising from psychological disturbance. However, there is no empirical evidence to suggest that certain psychological factors play a causal role in an individual's experience of pain. On the contrary, the evidence suggests that psychological problems may be the product and not the cause, of chronic pain. For example, many studies have demonstrated that once successful treatment of pain has been administered, symptoms of psychological disturbance are also abated (Sternbach, 1974; Sternback & Timmermans, 1975).

Chronic pain verse Acute Pain

Pain is now more usefully described as either acute or chronic. The distinction between chronic and acute pain has been based on two central variables: function and duration. The functional aspect of momentary and short-term pain has obvious benefits. It has been described as a warning

signal or indicator of physical damage that has occurred. For example, if you place your hand on a hot plate, the sensation of burning causes you to snatch your hand away from the hot plate and therefore interrupt and prevent further damage. The function of chronic pain has proved to be more elusive, however. While suggestions have been made as to the possible functional role that chronic pain may have, there is certainly no empirical evidence to support the functional role of chronic pain (Pearce & Mays, 1994a). What has proved more useful in making the distinction between chronic and acute pain is duration. If pain persists after the expected recovery period it is often considered chronic but for diagnostic and research purposes, pain may be considered chronic if it has continued for three months or more (Nicholas, 2002).

The Role of Psychologists

Clearly, there is a need to push back conventionally held notions about pain and examine the wide range of influences that perpetuate chronic pain. This has been the focal point of psychologists in particular; as noted by Williams and Erskine (1995) "Psychologists have contributed more to the study of chronic pain and its management than to any other single medical specialty" (Williams & Erskine, 1995 p.353). One line of research adopted by psychologists has been to examine attributions of causality, responsibility, and blame in a variety of populations including chronic pain patients.

Attribution theory, broadly speaking, deals with the way in which individuals explain events and their outcomes, most often in response to negative life events (Lundquist, Higgins, & Prkachin, 2002). Consequently, attributional process have been widely implicated in the process of adjustment and recovery from a wide range of negative life events, including life-threatening illness or injury (Rich, Smith, & Christensen, 1999; Taylor, Lichtman, & Wood, 1984), accidents (Brewin, 1984; Bulman & Wortman, 1977), rape (Frazier, 1990), and chronic pain (DeGood & Kiernan, 1996).

Attribution for illness and injury

The tendency for people to make attributions for illness and injury has been the subject of research among psychologists for the last three decades. It has been empirically established that most patients who have suffered serious illness or injury report attributions about the origin of their illness or injury. While there are a few exceptions, the majority of research indicates that patients who "report an explicit attribution are better adjusted in a variety of domains than patients who fail to report any type" (Turnquist, Harvey, & Anderson, 1988). Researchers have also been interested in the relationship between attributional content and adjustment. The weight of evidence suggests that blaming others for one's illness/injury predicts poor psychological adjustment (Bulman & Wortman, 1977; Sholomskas, Steil, & Plummer, 1990; Taylor et al., 1984), although some investigators have found

no correlation between other-blame and adjustment (Brewin, 1984). Generally, however, researchers have given greater attention to the association between self-blame and adjustment to illness or injury. Some researchers have reported self-blame to be associated with poor adjustment (Affleck, McGrade, Allen, & McQueeney, 1985; Graham, Thompson, Estrada, & Yonekura, 1987; Kiecolt-Glaser & Williams, 1987; Meyer & Taylor, 1986), others have reported self-blame to be associated with better adjustment (Bulman & Wortman, 1977), and still others have found no significant relationship between self-blame and adjustment (Taylor et al., 1984)

Review of empirical investigations

One study that has received substantial attention is that of Bulman & Wortman (1977). These investigators reported that accident victims who blamed themselves for their accidents rather than other people were judged by their therapists as better copers. Their sample consisted of 29 spinal-cord-injury accident victims; all were asked to indicate, on a 5-point rating scale, "How much do you blame yourself for what happened?" (p.354). In addition, participants were instructed to "assign a percentage of blame to each factor [self, other people, environment, and chance] so that the overall assignment of blame totals 100%" (p. 354).

Another study which set out to investigate whether or not attributions are related to adjustment was that of Brewin (1984). This researcher

investigated the reported relationship between blame attribution and adjustment with the view of extending the results of Bulman and Wortman (1977) in several ways. Central to the current review is Brewin's attention to the measures that confounded blaming oneself and blaming others. More specifically, the assignment of blame for self, other people, environment, and chance were investigated as separate variables. Participants for this research were 93 male victims of industrial accidents. Attributional measures were constructed on 5-point rating scales. Examples of the questions designed to tap self-blame included the following: "My actions contributed to causing the accident"; My actions had no effect on what happened"; "My actions were justified in my view", "My actions were negligent by my standards, "My actions were bound to cause an accident one day" and "My actions are mostly careful ones" (p 158) Other-blame measures involved two separate questions, the first relating to the actions of their employers and the second relating to the actions of their workmates. Responses were collected on a 10-cm line anchored at one end with the phrase "completely unable to prevent it" and at the other end with the phrase "completely able to prevent it" (p. 159). Ratings of adjustment to injury included several separate measures. Participants were asked to report any changes in work behaviour (e.g., since returning to work, had they worked fewer hours, taken extra rest periods). Recovery rate was calculated by dividing actual time off work by the mean of two independent estimates required for a particular injury (as judged by two senior registrars in

orthopedics). Other measures included the Stress and Arousal Checklist (Mackay, Cox, Burrows, & Lazzerini, 1978), and the General Health Questionnaire (Goldberg, 1972). Results for this study were similar to Bulman and Wortman's (1977) research in that it was found that self-blame was linked to positive rehabilitation outcome. However, results did not support poor adjustment for other-blame; it was found that other-blame had no relationship with rehabilitation outcome.

A second study which set out to replicate and extend the Bulman and Wortman (1977) study is that of Sholomskas, Steil, and Plummer (1990). These researchers investigated the proposed relationship between attributions of blame for a negative life event and patient coping. In contrast to previous research Sholomskas, Steil, and Plummer (1990) distinguish respondents' attributions of responsibility, fault and blame. In addition, these researchers also made an attempt to differentiate between attributions of responsibility for the cause of the event and responsibility for rehabilitation.

Respondents were 31 spinal-cord-injured patients admitted to a rehabilitation hospital in the northeastern United States. The Profile Mood States (McNair, Lorr, & Droppleman, 1971) and ten bipolar adjectives (e.g., happy-sad) were used to assess respondents' mood. Interviews were conducted to collect demographic information as well as respondents' descriptions of the accident. In addition to employing Bulman and Wortman's

measures of causal attributions, these researchers used the Causal Dimension Scale (Russell, 1982). Assessment of coping included staff (nurse,. occupational therapist and physiotherapist) evaluations via a questionnaire designed by the researchers. The construct of coping was measured in two ways. First, the single item measure from Bulman and Wortman's study was employed (i.e., "In your opinion how well has the patient coped with his/her disability?' (i.e., 1= has coped extremely poorly to 15 has coped extremely well). Second, staff were asked five questions anchored on a 4-point scale (i.e., 1 = not at all, 4 = a great deal). For example, "To what extent is the patient aware of the limitations of his/her condition?" and "To what extent do you feel the patient has accepted the limitations of his/her condition?" p.554. Third, Lipowski's (1970) dimensions of coping (emotional, attitudinal, behavioural, physical) were operationalised by five questions anchored on a 4-point scale (i.e., 1 = much worse to 4 = much better. For example, "Compared to other patients with similar disabilities, how would you rate this patient's progress (a) emotionally [mood], b attitudinally [attitude towards disability], (c) behaviourally [ward behaviour], (d) physically [physical condition] and (e) overall?" p.554. Finally, staff satisfaction with the patient's rehabilitation was assessed on a 4-point scale with the following question: "How satisfied are you with this patient's (a) effort in therapy, (b) generally attitude, and (c) overall progress?" p.554.

The results from this study did not indicate a relationship between attributions of self-blame and staff ratings of coping. Attributions of other-blame, however, were associated with poorer coping. Patients did not discriminate between concepts of responsibility, fault and blame for the cause of the accident.

Other research has also suggested that blaming others for one's own illness may be related to adjustment. Taylor, Lichtman, and Wood, (1984) examined the relationship between blame and adjustment to breast cancer. Participants were 68 breast cancer patients admitted to a United States Hospital. Examples of attributional items included "If you had to attribute responsibility to one of the following four things, which would it be: yourself, someone else, the environment, or chance?" (p.492). Participants also rated the causal significance of 22 variables that may be considered potential causes of breast cancer (e.g., stress, genetics, and diet). A paraphrased question from Bulman & Wortman's (1977) study was also employed asking participants "to rate the causal responsibility of the self, some other person, the environment, and chance, on five-point scales" (p.493). Findings indicate that self-blame, the environment, or chance bore no relationship with adjustment, while blaming someone else was significantly related to adjustment.

In summary, the majority of research tends to indicate that blaming others for one's illness or injury relates to poorer outcomes for patients with serious illness or injury. The role of self-blame on adjustment provides less clarity, however, and it remains uncertain whether self-blame is an adaptive or maladaptive response to illness or injury. It appears that research in the area of blame and adaptation to chronic illness and injury has slowed, perhaps under the weight of equivocal findings. What is apparent, though, is that this research is characterized as suffering from at least two pitfalls. The first, and most often cited, shortcoming is that studies investigating the relationship between attribution and adjustment to illness and injury do not use the same attributional measures and therefore are not comparable. Second, the patient populations recruited for examining attributions and adjustment are extremely varied and it may be the case that attributions play an important role for some illnesses and injuries and not others (Turnquist, Harvey, & Anderson, 1988)

Chronic pain and blame

An area that appears to have largely escaped the attention of researchers is the relationship between chronic pain and blame. Shaver (1985) postulates that the assignment of blame is an essential ingredient of recovery from many unpleasant experiences. Some researchers have argued that the influence of the attributional process is more likely to be an issue when chronic pain patients have suffered a traumatic onset of pain due to an

accident (Turk, 2002). Since a large proportion of chronic pain patients attribute their chronic pain to some form of accident (Turk, 2002) it is possible that chronic pain patients may make and report attributions for the origin of their pain.

In what appears to be the first study of its kind, DeGood and Kiernan (1996) presented evidence indicating that an individual's perception of fault may have important implications for their experience of chronic pain. These investigators set out to examine the relationship between attribution of blame and various other constructs including: demographic, psychosocial, and behavioral variables, treatment goals, expectations, and present and past response to treatment. One hundred and eighty-eight outpatients of a pain management program participated in the study (86 males, 102 females). Participants were required to complete a pain questionnaire as part of standard clinical procedure of the University of Virginia's Pain Management Centre. The questionnaire contained items assessing direction of blame (i.e. self, employer, other, and no one), job and disability status, current and anticipated average pain, activity interference, and perceived fair treatment. In addition, participants also completed the Pain Treatment Questionnaire and the Symptom Check List-90-R (Derogatis, 1977).

Only 11 of the 188 respondents blamed themselves for their pain, and as such were eliminated from the statistical analysis. The remaining groups, blaming 'employer', 'other' and 'no one', did not differ in their perceptions of pain intensity or activity limitation. Participants in the blame conditions ('employer' and 'other') did, however, report greater concurrent mood distress, behavioural disturbance, poorer response to past treatment and lesser expectations of future treatment benefits than those who blamed no-one. These effects were stronger for the 'employer blame' condition than for the 'other blame' condition (commonly doctors and other drivers).

Further support for the view that blame may negatively influence an individual's experience of chronic pain is a report by Ferrari and Russell (2001). These authors argue that blame is a factor in recovery from chronic whiplash and present data from various sources indicating that individuals presenting with chronic whiplash are almost exclusively not-at-fault drivers. They argue that a biopsychosocial model of pain provides a possible explanation for the apparent rare manifestation of chronic pain in at-fault drivers. Various factors are presented as being operative in the not-at-fault driver but unlikely to manifest in the at-fault driver. For example, there are possible differences in volition to discuss the accident. On the one hand, the at-fault driver might experience feelings of guilt, remorse and shame about the accident having caused it, and therefore be more guarded about repeating

the story. On the other hand, the not-at-fault driver may be feeling annoyed or even angry and resentful at having been hurt and inconvenienced by someone else's actions. These drivers may be less guarded about retelling the story. Consequently, accident details, including pain and injury suffered, might receive more focus and attention from not-at-fault drivers. This focus and attention may be maintained over time by possible litigation, insurance claims and medical investigations. Apart from the initial legal formalities involving motor vehicle accidents, the at-fault driver may be less likely to involve him/herself in any additional procedures and therefore have less exposure to a process which revolves around a person's pain and injury (Ferrari & Russell, 2001).

Further support for the notion that not-at-fault drivers of motor vehicle accidents may be at greater risk of adverse psychological outcomes than at-fault divers is presented in an article by Delahanty et al. (1997). Participants were 81 women and 92 men recruited from a regional trauma centre of a major hospital in the United States. A control group of 43 respondents from the same hospital also participated in the study. Measures included the Impact of Events Scale (Horowitz, Wilner & Alvarez, 1979), The Symptom Checklist-90-R (Derogatis, 1977), The Ways of Coping Checklist (Folkman & Lazarus, 1990), The Structure Clinical Interview for the DSM-III-R (Spitzer, Williams, Gibbon & First, 1990). Blood pressure and heart rate

levels were also recorded. Results indicated that not-at-fault drivers reported more long-term distress and were marginally more likely to be diagnosed with Post-Traumatic Stress Disorder (PTSD) than at-fault drivers or controls. There were no differences between groups in self-report of injury severity. Three months following the accident, not-at-fault drivers reported feeling more threatened by the accident and indicated a greater likelihood that they would experience the same kind of event in the future. Both at-fault and not-at-fault drivers reported more intrusive thoughts than controls during the first three months of the accident, but only not-at-fault drivers continued to report more intrusive thoughts than controls at 6 and 12 months post-accident. At-fault-drivers used more self-blame coping than not-at-fault drivers. Within the first month after the accident 41% of at-fault drivers met criteria for PTSD, compared with 61% of not-at-fault drivers. One year post-accident 13.6% of at-fault drivers continued to meet the criteria for PTSD, compared with more than 40% of not-at-fault drivers. No differences between groups were found for measures of heart rate or blood pressure.

Conclusion

This literature review introduced and discussed the nature and conceptualization of pain with major emphasis on chronic pain. A historical understanding of pain was briefly outlined and traced through to modern theoretical developments in current pain literature. The distinction between acute and chronic pain was drawn as was that between organic and psychogenic pain. It was argued that a composite picture of all pain conditions and in particular chronic pain must include consideration of some combination of psychological, biological, and environmental factors. It was further argued that the psychology of pain is critical for understanding and managing the physical and psychosocial wellbeing of chronic pain patients. One psychological construct which appears to play a role in adjustment to chronic pain is that of blame attribution. Current research has indicated a strong and significant relationship between blame and adjustment to chronic pain. While much attention has been paid to the relationship between other chronic illness and/or injuries it appears that little research has investigated the apparent relationship between chronic pain and blame specifically. Further research in needed to determine whether the results obtained by DeGood and Kieran (1996) are purely a product of chance. In addition, there is an absence of research into the relationship between blame and chronic illness and or injury outside of the United States of American and the United Kingdom.

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Chapter 2 – Research Article

Abstract

DeGood and Kiernan (1996) demonstrated that chronic pain patients who assigned blame to others for their pain reported greater concurrent mood distress, behavioural disturbance, poorer response to past treatment, and lesser expectations of future treatment benefits than participants who did not blame anyone for their pain. The present study partially replicated the DeGood and Kiernan study. Subjects were 210 (110 males and 100 females) chronic pain patients from the Flinders Medical Centre Pain Management Unit in Adelaide, South Australia. Participants completed self-report measures of demographic, psychosocial, and behavioural variables. Contrary to DeGood and Kiernan's (1996) results, other-blame was not found to be a significant predictor of poor response to past pain treatments. Rather, linear multiple regression analyses revealed that a perceived sense of control over pain was a significant predictor of confidence in past pain relief treatments. A logistic regression revealed that time since onset of pain was the only significant predictor of the tendency to blame others. Implications of this study for chronic pain research and treatment are discussed.

Introduction

Chronic pain poses a significant social, economic, psychological, and medical problem (Pearce & Mays, 1994b; Rose & Fitzgerald, 1987). It is a health dilemma of enormous proportions, affecting a large number of Australians and their families (Blyth et al., 2001). Chronic pain frequently continues unabated for years (Williams & Erskine, 1995). Consequently, it may diminish or eliminate quality of life and often leads to desperation and despair (Banks & Kerns, 1996; Williams & Erskine, 1995). In the absence of appropriate treatment, the likelihood that psychosocial risk factors will interfere with adaptation and possible recovery from continual pain is increased. Such psychosocial risk factors may include anxiety, depression, disability, de-condition as a result of fear avoidance behaviour, preoccupation with the cause of pain (Main & Spanswick, 2000; Martensson, Marklund, & Fridlund, 1999;) and arguably, blaming others for one's pain (DeGood, & Kiernan, 1996). This latter factor, namely the reported relationship between blame and chronic pain, is the main focus of this paper.

Almost a decade ago DeGood and Kiernan (1996) published an article which reported that the assignment of blame for the cause of pain, may have important implications for treatment among those who experience chronic pain. These researchers argued that some chronic pain patients believe that "their pain and suffering resulted from the intent or negligence of some identifiable person or persons" (p.153). According to DeGood & Kiernan (1996) this belief enhances feelings of anger, decreases motivation to become invested in treatment, heightens one's sense of suffering, and may encourage the need for revenge. Each of these factors is thought to interfere with efforts to adapt to the

chronic pain condition (DeGood & Kiernan, 1996). The results of DeGood and Kiernan's (1996) study demonstrated that chronic pain patients who assigned blame to others for their pain reported greater concurrent mood distress, behavioural disturbance, poorer response to past treatment, and lesser expectations of future treatment benefits than participants who did not blame anyone for their pain. These effects were stronger for those who blamed their employer than for those who blamed other individuals, commonly doctors or other drivers.

Despite providing empirical support for their assertion that chronic pain is associated with greater dysfunction if patients blame another for their pain in comparison to patients who do not assign blame, DeGood and Kiernan's work does not appear to have generated any further interest in the area. However, review of the literature reveals an extensive body of research concerned with the relationship between blame attribution and health outcomes on different medical conditions. The first and most frequently cited study to investigate blame attribution and health outcomes is that of Bulman and Wortman (1977). In that investigation, 29 severely disabled accident victims were interviewed to assess the relationship between blame attribution for their accidents and subsequent ability to cope with their condition. Coping scores were obtained from patients' therapists. Findings indicated that blaming another and the belief that the accident could have been avoided successfully predicted poor coping; self-blame successfully predicted good coping.

Bulman and Wortman's (1977) publication prompted immediate interest and generated a number of additional investigations aimed at addressing potential limitations and methodological concerns, as well as extending the findings to other populations and

other negative life experiences (Sholomskals, Steil, & Plummer, 1990). Sholomskals, et al. (1990) and Tennen and Affleck (1990) reviewed the published studies exploring the associations between blaming and subsequent adjustment to serious illness or negative life events. Both reviews suggest that other-blame is one attribution consistently associated with poor adjustment regardless of the subject population or particular negative life event under investigation. Furthermore, the association between other-blame and poor adjustment emerges across a wide range of methodologies and continues to be a robust finding even after considerable time has passed since onset of an illness or the occurrence of a negative life event, though several investigations have demonstrated a decrease in attributional concern over time following a major illness or traumatic event (Downey, Silver, Wortman, 1990; Michela & Wood, 1983; Schulz & Decker,1985; Silver, Boon, & Stones, 1983).

A more current example of work in this area is an article investigating mothers' adjustment to the birth of a child with Down syndrome (Hall & Marteau, 2003). It was reported that those mothers who blamed others reported higher levels of anger, anxiety, depression, and parenting stress and more negative attitudes towards their children with Down's Syndrome than did those mothers who made causal attributions but did not blame and those who made no attributions to others. Blame of others and its negative association with adjustment has also been reported among traumatic brain injured patients (Hart, Bogner, Whyte, & Polansky, 2003), serious motor vehicle accident victims (Delahanty et al., 1997), heart attack (Affleck, Tennen, Croog, & Levine, 1987) and cancer patients (Taylor, Lichtman, & Wood, 1984).

Extensive efforts have been directed towards understanding blame and identifying the mechanisms which might explain the relationship between blame-attribution and adjustment. Typically, researchers have focused on attributional processes: the information people use in making causal inferences, and what they do with this information to answer causal questions. Attribution theory maintains that the causes one allocates for an illness or injurious experience will have significant implications for the action he/she takes in response to it (Kelley & Michela, 1980).

Safeguarding one's self-esteem, maintaining beliefs of a just world, and the desire for control are all theorized mediators between attributional processes and adjustment. Most investigators, however, have relied on Heider's (1958) theory of perceived control when investigating and explaining attributional effects on adjustment (Turnquist, Harvey, & Anderson, 1988). It is hypothesised, that "by attributing factors under one's control (i.e., self-attribution), one can cope with the current physical and emotional sequeael of illness as well as with the threat of a future recurrence" (p.59 Turnquist, Harvey, & Anderson, 1988). Thus, the implication for those who blame others is that these individuals attribute their illness to uncontrollable factors and subsequently may be unable to assume responsibility over rehabilitation (Sholomskals, Steil, & Plummer, 1990). Equivocal support for perceptions of control as well as other proposed mediators between attributions and adjustment has been reported (Caver, 1997; Frazier & Schauben, 1994; Wallston, 1992). Several possible explanations for the inconsistent findings have been described in the literature (Macleod, 1999; Parker, 1999;Turnquist, Harvey, & Anderson). A thread running through some of the arguments pertains to Shaver's (1985) theory of blame. Shaver (1985) argues that causality, responsibility and

blame are three conceptually distinct concepts. Blame, unlike causality and responsibility involves consideration of the moral accountability of others and thus is "more likely to carry affective connotations that can lead to poor psychological adjustment" (Hall & Marteau, 2003, p.416). These proposed distinctions between causality, responsibility and blame may account for the some of the inconsistent results within the blame-adjustment literature. Nevertheless, it remains unclear exactly how blame-attributions are related to the adjustment of various life-threatening events and serious illnesses.

Despite the complexities surrounding the nature of other-blame and the proposed mediators between the blame-adjustment relationship, as previously mentioned, other-blame and poor adjustment continues to be a robust finding. Given that many studies have found a relationship between blaming others for one's disability/injury and greater perceived negative consequences, it would be plausible to predict that the same would hold true for chronic pain patients. One possibility is that there is a general trend for people with disabling conditions who blame others for that condition to suffer more negative consequences than those who do not blame others for their condition. Another possibility is that this difference found between chronic pain patients who blame others for their pain and those who do not is the product of chance or sample characteristics. The purpose of the current study was to investigate whether or not DeGood and Kiernan (1996) findings are replicable. The study was conducted in the Flinders Medical Centre Pain Management Unit. Whereas the study addressed the same constructs as those of DeGood and Kiernan (1996), it differed from the earlier study in the measures used, employing instead measures already in use in the clinic. Nonetheless, this might be seen as a useful element, in that if the findings were replicated under these conditions,

confidence in the robustness of the effect would be considerably enhanced. Thus the aims of the current study reflected the goals of DeGood and Kiernan's (1996) investigation: namely, to examine attribution of blame in relationship to various concurrent self-reported demographic, psychosocial, and behavioural measures and to examine possible predictors of self-reported response to past pain relief treatments. An additional aim of the current study, one not explored by DeGood and Kiernan (1996), was to examine which variables best predict the tendency to blame.

Method

Subjects

There were 210 participants: 110 males and 100 females. Participants were aged between 19 and 65 years (M = 42.2years, SD = 9.62). Fifty-six percent of participants had achieved less than year 9 high school education, 29.9 % had between year 9 and year 12 high school education, and 13.7% had trade certificates or other higher education certificates or degrees. Almost half (n = 100) of the sample was unemployed, retired, or homemakers. The remaining participants (n = 110) were working full-time, part-time, retraining, or studying. Forty-seven percent of the sample reported having pain for 2 years or less, 12.5% reported having pain between 3 and 5 years, and 40.5% reported having pain of longer duration. Eighty-eight percent of the sample had been given some form of diagnosis; however the individual diagnoses were too diverse to permit meaningful analysis. The data for the subjects were obtained from information collected at the Flinders Medical Centre Pain Management Unit; all subjects were participants in that Center's Comprehensive Outpatient Pain Education and Rehabilitation Program (COPER) for a period of 3 weeks fulltime.

Instruments and Procedure

Standard procedure of the COPER program requires that all patients complete a comprehensive pain research questionnaire. For the purposes of the current study, items were identified to reflect those of DeGood and Kiernan's (1996) pain questionnaire booklet whenever possible. Measures and items used for the present study are outlined below.

Blame attribution was empirically defined as participants' responses to the questionnaire item "Do you blame someone for your present pain/disability? YES/NO" and "If yes, please indicate who you blame."

Current and previous levels of pain of participants were assessed by the following statements: "Please rate the intensity of your pain by circling a number in the following scales; 0 = no pain at all to 10 = worst pain imaginable" followed by "How intense is your pain at this moment? What was the usual level of your pain in the last week?

The functional status of participants was assessed by using the Roland Morris Disability Questionnaire (RMDQ; Roland & Morris, 1983). This self-report questionnaire contains 24 items designed to assess current functionality according to the individual's perceptions about what they can and cannot do. Examples include "I stay at home most of the time because I am in pain" and "I only walk a short distance because of my pain". The scoring is based on the number of positive responses. An individual score could range from 0 (no disability) to 24 (severe disability). The RMDQ is regarded as a reliable, valid, and responsive outcome measure. The RMDQ has demonstrated moderately strong construct validity and very high internal consistency (Beurskens de Vet & Köke, 1996; Corcoran & Fischer, 2000; Stroud, McKnight, & Jensen, 2004).

Current and anticipated pain was measured as "Please indicate which statement best describes your pain" followed by 8 options ranging from 1 "Always present; always the same intensity" to 8 "Rarely present. I have pain episodes but there are days or weeks in between."

The Fear Questionnaire (FQ; Marks & Mathews, 1979) includes three 5-item subscales for agoraphobia, social phobia, and blood/injury phobia for measuring phobic

avoidance. Participants were asked to indicate on a scale from 0 (not avoid it) to 8 (always avoid it) how much they "would avoid each of the situations listed because of the fear or other unpleasant feelings" (Marks & Mathews, 1979 p.263). Examples include "Hospitals" and "Being criticised". Scores can range from 0 to 40 on each scale. The total phobic score (possible range between 0-120) is the sum of scores on these three subscales. The FQ and its subscales have high retest reliability (Marks & Mathews, 1979).

The Depression, Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995) is designed to provide relatively pure measures of the three related negative affective states. The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia, and inertia (e.g., "I did not seem to experience any positive feeling at all"). The Anxiety scale assesses autonomic arousal, skeletal muscular effects, situation anxiety, and subjective experience of anxious affect (e.g., I was aware of episodes of dryness of my mouth"). The Stress scale assesses difficulty relaxing, nervous arousal, and being easily upset or agitated, irritable or overactive, and impatient (e.g., "I found it hard to wind down"). The Depression and Anxiety scales demonstrate sound convergent validity with other scales designed to distinguish between depression and anxiety. Alpha coefficients for the three 14-item scales are as follows: Depression = .91, Anxiety = .84, and Stress = .90 (N = 2914; Lovibond & Lovibond, 1995)

Participants' fear of movement and re-injury was assessed using the Tampa Scale of Kinesiophobia (Kori & Miller, & Todd 1991). The Tampa Scale is designed to measure maladaptive pain behaviours in chronic pain sufferers. This self-report measure

is concerned with individuals' beliefs about the meaning they ascribe to pain and in particular, their fear of harm and re-injury from physical movement. Thus, it does not measure loss of function per se but rather fear of moment that may be the cause of loss of function. Participants were asked to respond to 17 items by ticking one of the following response options: strongly disagree, disagree, agree, or strongly agree. Examples of items include "I'm afraid that I might injure myself if I exercise" and "If I were to try to overcome it, my pain would increase". The Tamper Scale has demonstrated good content validity, high construct validity, reliability and high internal consistency (Kori & Miller, & Todd 1991.

Participants' perceived control over pain was assessed by using the Pain-related Control Scale and the Pain-related Self-statements Scale (Flor, Behle & Birbaumer, 1994). Each scale contains 9 items, with each item ranging from 0 (almost never) to 5 (almost always). Examples from the Pain-related Control Scale include "If I stay calm and relax, things will get better" and "I'll manage". Examples from the Pain-related Self-statements Scale include "This pain is killing me" and "I can help myself" (Corcoran & Fischer, 2000).

Results

The choice of statistical analyses was guided, in the first instance, by the work of DeGood and Kiernan (1996). Box's test of equality of covariance matrices indicated that the dependent variables, psychological distress, pain, functionality, and demographics, were not suitable for multivariate analysis of variance. Univariate analyses were therefore conducted for each dependent variable. Univariate analysis of variance and chi-square

tests of independence were employed to compare respondents who blamed others for their pain to respondents who did not blame others for their pain, on variables related to pain and functioning, employment, psychological distress, and confidence in past and future pain relief treatments.

Demographic variables

There were no significant group differences for gender, $\chi^2(1) = .505$ p = .477, age, $F(1, 206) = .001$, p = .970, length of time with pain, $F(1,190) = 2.416$, p = .122 , employment status, $\chi^2(1) = 1.622$, p = .203 or source of income, $\chi^2(2) = .6$ p = .741.

More than half of the participants (N = 126) indicated that they did not blame others for their pain. Five participants blamed themselves for their pain problem and were excluded from further analysis. The remaining participants (N = 85) blamed another for their pain. Because chronic pain and/or injury resulted from a variety of incidents including work, home, and motor vehicle accidents no distinction was made between targets of blame. Table 1 shows the results of comparisons between those ascribing blame and those not ascribing blame.

Table 1

Demographic characteristics

	Independent variable		
Dependent variables	**Blame Others n**	**Blame No-one n**	***P***
Gender			
Female	43	57	.97
Male	42	68	
Employment status			
Employed	40	70	.20
Unemployed	45	55	
Source of income			
Wage	30	48	
Compensation	44	62	.74
Government assistance	10	11	

Pain intensity and interference with activity.

Participants who blamed others for their pain reported greater intensity of pain "at this moment", F (1,209) = 4.708, p<.05, and "in the last week", F (1,209) = 5.519, p<.05, than those participants who did not assign blame. Participants attributing blame to others for their pain were not significantly more likely to report less functional ability than participants from the non-blame group, F (1,209) = 1.237, p = .267.

Confidence in past and future treatment for pain

There was no significant difference between those participants who blamed others for their pain and those participants who blamed no-one with regard to level of

confidence in previous pain relief treatments, F (1,209) = .014, p = .907, or possible future treatments, F (1,209) = .431, p = .512.

Psychological distress

Participants ascribing blame to others reported significantly higher levels of depression, anxiety, and stress than those participants not attributing blame to others, F (1, 208) = 8.657, p < .005. The blame group participants were also significantly more likely than the no-blame group to employ catastrophizing self-statements concerning day-to-day pain management, F(1,209) = 5.347, p < .05. Moreover, participants blaming others reported greater fear of movement than those participants blaming no-one, F (1,209) = 6.100, < .05. Participants in the no-blame group were not significantly more likely than the blame group to perceive control over their pain, F 1,209) = .512, p = .475.

Table 2
Psychosocial, and behavioural characteristics by blame condition

Characteristics	Condition			
	Blame others		Blame no-one	
	M	SD	M	SD
Age in years	42.2	10.2	42.2	9.3
Duration of pain in years	3.9	4.2	5.6	8.8
Pain intensity at assessment	6.6*	0 .2	6.0*	0.2
Pain intensity pre-assessment	7.0*	1.6	6.4*	1.8
RMDQ - Interference with activity	13.96	4.8	3.2	4.6
DASS - Depression, anxiety, stress	51.1*	29.2	39.3*	28.1
TSK-FC - Fear of movement	43.6*	8.10	40.5*	9.5
Pain-related control	22.2	9.5	23.2	8.9
Pain-related catastrophizing	26.7	10.0	23.3	10.0
Confidence in future treatment	2.5*	1.1	2.6*	1.1
Confidence in past treatment	2.2	1.2	2.2	1.1

Note: * $P < 0.05$.

Beliefs about past pain relief treatments

Following DeGood and Kiernan (1996), a linear multiple regression analysis was conducted with confidence in response to past treatment as the dependent variable and age, gender, pain intensity at the moment, pain intensity over the last week, length of time in pain, interference with activity, negative affective states, pain related control, catastrophizing, employment status and blame as predictors (Table 3). The analysis explained 12.6% of the variance and

results showed that perceived self-control over pain was the only significant variable in explaining the variance in confidence in past pain relief treatments, t (185) = 3.57, $p < .001$, B = .032 Thus, individuals were most likely to believe that past medical treatment had provided relief from pain if they also believed that they themselves could assert some control over their own pain.

Table 3
Significant predictor variable of confidence in past pain treatments extracted from a Linear Regression Analysis

	B	S.E.	Beta	t	Sig.
(constant)	2.7	.71		3.76	.000
Age	.001	.01	.01	.18	.86
Gender	.05	.16	.03	.33	.75
Pain now	-.04	.06	-.10	-.73	.47
Pain last week	-.08	.06	-.13	-1.34	.18
Years in pain	-.01	.01	-.04	-.60	.55
RMDQ	.01	.02	.02	.29	.77
FQ	-.01	.01	.10	1.20	.23
DASS	-.02	.01	-.07	-.76	.45
TSK-FC	-.02	.01	-.14	-1.62	.11
Control	-.03	.01	.30	3.57	.000
Catastrophizing	.02	.01	-.20	-1.94	.05
Work status	.30	.15	.12	1.71	.09
Blame	.13	.15	.06	.83	.41

Tendency to blame

In an attempt to determine what may underlie the tendency to blame, a logistic regression analysis was conducted using blame scores (yes = 1, no = 0) as the dependent variable and all other factors as independent variables. Logistic regression analysis allows an evaluation of the effects of multiple independent variables (discrete or otherwise) on a categorical dependent variable. Hosmer-Lemeshow (H-L) goodness-of-fit statistic test yielded a χ_2 (8) of 10.353 and was insignificant ($p>.05$), suggesting that the model was fit to the data well. The statistical significance of individual regression coefficients is tested using the Wald Chi-square statistic (Table 4). Number of years in pain, $t(176) = 5.89$, $p < .05$, oods Ratio = .90, was the only significant predictor of the tendency to assign blame; individuals were less likely to blame others if more time had elapsed since the onset of their pain condition. Total variance explained by the model was 15.4%. The validity of the predicted probabilities shows the prediction for those chronic pain patients that did not blame others for their pain was more accurate than for those who did. The observation was also supported by the magnitude of sensitivity (47.3 %) compared to that of specificity (77.5 %). Sensitivity measures the proportion of correctly classified events (i.e., thos0e who blamed others) whereas, specificity measures the proportion of correctly classified nonevents (those who did not blame others). The overall correct prediction was 64.8 %, an improvement over the chance level (Peng, Lee, & Ingersoll, 2002).

Table 4
Logistic regression analysis of tendency to blame

Predictor	β	SE β	Wald's χ^2	*p*	*e* β
Years in Pain	-.11	.05	5.8	. 02	.90
Age in years	.01	.02	.22	.64	1.01
Confidence in past treatment	.23	.19	1.54	.21	1.26
Confidence in future treatment	-.12	.18	.44	.51	.89
Gender	.05	.39	.02	.90	1.05
Education level	-.37	.24	2.43	.12	.69
Pain intensity now	.13	.13	.92	.34	1.14
Last/week pain intensity	.16	.14	1.27	.26	1.17
RMDQ - functional status	-.05	.04	1.22	.27	.96
MM - Phobic avoidance	-.03	.03	1.24	.27	.97
DASS - negative affective states	.01	.01	2.72	.10	1.02
TSK - fear movement/re-injury	-.002	.03	.01	.93	.10
PRCS - Pain-related control	-.03	.02	2.26	.13	.97
PRSS - Pain-related catastrophizing	.04	.02	3.21	.08	1.04
Sources of Income	.05	.12	.20	.66	1.05
Employment status	.61	.35	3.02	.08	1.85
Constant	-2.48	1.95	1.62	.203	.08

Discussion

The present study examined the reported association between blame and a range of demographic, psychosocial, and pain-related behavioural measures. At the bivariate level, this study revealed several significant differences between those participants ascribing blame to others for their pain and those participants not ascribing blame to others for their pain. Specifically, those participants assigning blame to others reported greater distress and more negative pain-related behaviour. Participants who blamed others for their pain were significantly more likely to have elevated negative-affective states, namely depression, anxiety and stress, than those participants who did not assign blame. Additional measures of pain-related distress employed in the present case revealed that participants ascribing blame to others for their pain were significantly more likely to report maladaptive pain behaviour (i.e., fear of movement and re-injury) and significantly less likely to report confidence in the ability of future treatment to provide relief from pain. These results lend support to that of DeGood and Kiernan's (1996) report of the association of other-blame with poorer emotional well-being, more behavioural problems, and lesser expectations of future treatment benefits.

One possible explanation for these results, as DeGood and Kiernan (1996) suggested, is that blaming others for one's pain may contribute to a greater level of distress and suffering relative to non-blame related pain. It is important to note however, that this type of statistical analysis can only demonstrate that other-blame and distress co-occur. In other words, the approach taken by DeGood and Kiernan (1996) and the present study provide no evidence that other-blame plays

a causal role in the origin or course of psychological distress. Thus, another interpretation of the results could be that blaming others for one's pain is symptomatic of greater psychological distress (Downey, et al., 1990; Macleod, 1999; Silver & Wortman, 1980). Support for this interpretation is demonstrated in longitudinal studies which provide a stronger test of the causal nature of blame-attribution on distress. Downey, Silver, and Wortman's (1990) study demonstrated that blame-attributions about the loss of a child to SIDs did not predict subsequent changes in distress once the effects of earlier symptoms were controlled. Rather, these researchers found that distress predicted a subsequent increase in the amount of time parents ruminated about blaming others for their loss. Two other longitudinal studies (Affleck, McGrade, Allen, & McQueeney, 1985; Major, Mueller, & Hilderbrandt, 1985) reported similar results regarding the direction of influence between attributions and ditress.

A notable difference between the present results and those of DeGood and Kiernan (1996) is the relationship between other-blame and self-reported pain intensity. DeGood and Kiernan (1996) reported no significant difference in pain intensity between those who blamed others and those who did not blame others and thus concluded that the greater level of distress found in other-blamers relative to non-blamers could not be explained by actual level of pain intensity. They consequently argued that respondents who blame others for their pain are subject to "a degree and range of suffering that goes well beyond the usual response to no-blame related pain" (DeGood and Kiernan, 1996 p.158). The present finding that other-blamers reported greater pain intensity than non-blamers casts doubt on this interpretation.

Another noteworthy difference between this study and that of DeGood and Kiernan (1996) relates to the association between blame and response to past treatment. These authors reported that the most powerful predictor of poor response to past treatments was the tendency of patients to blame others for their pain, with numbers of past treatments also a significant predictor. On the basis of this result together with their other findings DeGood and Kiernan (1996) argued that the tendency to blame others is a salient feature in pain behaviour of some patients and may contribute to less successful treatment outcomes. The current study was not able to replicate the finding showing other-blame as a significant predictor of poor response to past treatments. Rather, the present analysis, which employed a more comprehensive list of predictors, revealed lesser perceived control over pain as a significant predictor of poor response to past treatments. In other words, the tendency to make coping statements about self-control over pain was associated with greater confidence in past pain-relief treatments.

Although there is a paucity of research specifically examining the relationship between perceived control over one's pain and confidence in past pain relief treatments, the finding is in concert with prevailing views, that perceived control over pain can be a critical factor in adjustment to and treatment of chronic pain (Main & Booker, 2000; Pearce & Mays, 1994a).

The final analysis undertaken by this study was employed in order to identify possible key differences between respondents who blame others for their pain and those who do not. The use of logistic regression was designed to overcome the limitations of the reliance on multiple bivariate analyses involving blaming tendency, as employed by DeGood and Kiernan (1996). The present

approach revealed that the longer participants had been in pain the less likely they were to blame others for their condition. All remaining constructs made no further contribution to the variance of the tendency to blame. This finding greatly simplifies the picture. First, it suggests that the tendency to blame is associated with proximity to time of onset. A clear implication of this finding is that attributing blame to others is a developmental process, being most pronounced in the early stages of chronic pain and declining with the passage of time. While clearly the case here, attributing blame to others does not always decline over time. For example, Scholomskas, Stiel, and Plummer's (1990) study of traumatic spinal cord injured patients "showed that the assignment of blame to another was more likely if the time since the accidental event was longer" (p565). Other researchers have also found attributional concerns remain consistent with respect to time (Affleck, Tennen, Croog, & Levine, 1987; Rudy, 1980, Taylor et al., 1984). Overall, these findings suggest that attributional content (e.g. blame others) and its association with distress/adjustment may change with the passage of time since onset of a particular condition (Downey, Silver, & Wortman, 1990).

Alternatively, it is possible that blaming others is less likely the longer one has been in pain due to provision of appropriate compensation for ongoing impairments. Receiving appropriate compensation often rests on whether or not someone else is at fault or to blame for the claimants injuries. Once compensation issues have been resolved, blaming others for one's pain may no longer have any meaning or value (Cassidy et al., 2000).

The second point of note is that no other variable among those measured was significantly associated with the tendency to blame. In other words, variables

found to be related to blaming tendency at the bivariate level (see table 2) ceased to have a significant association when the possible effect of other variables was controlled for, inviting the tentative conclusion that the tendency to blame represents a natural transmission route of chronic pain in the psychological adjustment to pain.

These results must be interpreted in light of the characteristics of the sample and methodology employed. The sample consisted of respondents who were selected for treatment at an outpatient chronic pain program, and thus it is unclear to what extent the findings are generalizable to other chronic pain populations. Future studies are needed, first to confirm the results of the present investigation and second to extend the results to chronic pain patients not presenting at hospital-based pain management programs.

Conclusion

Despite patterns of findings demonstrating attribution of blame to be related at the bivariate level with a number of factors, the results of this study indicate that the association of blaming with elevated pain intensity, negative affective states, fear of movement and confidence in future treatment ceased to be significant in this analysis. The implication of this finding is that the tendency to blame others is heightened in the early stages following trauma and co-occurring with elevated pain intensity, negative affective states, fear of movement and confidence in future treatment (table 3). In this depiction the tendency to blame is not itself the cause of problems of distress and adjustment but part of a

development process in the course to chronic pain. Nonetheless the clear conclusion to be drawn is that tendency to blame should not be assumed to be necessarily problematic and in itself an obstacle to adjustment and recovery for chronic pain patients.

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FLINDERS MEDICAL CENTRE
PAIN MANAGEMENT & REHABILITATION UNIT

COPER PROGRAM

(Comprehensive Outpatient Pain Education and Rehabilitation Program)

PATIENT INFORMATION

1 Date: _____

2 Have you attended Flinders Medical Centre previously? YES/NO (circle one)

3 If YES, what is your UNIT or MEDICAL RECORD number? _____

4 Mr/Mrs/Ms/Miss 1 LAST NAME_____

2 PREVIOUS NAME (if any)_____

3 FIRST NAME(S)_____

DOB_____AGE_____

5 ADDRESS:_____

_____6 POSTCODE_____

7 TELEPHONE (Home)_____(Work/Other)_____

8 Are you of Aboriginal or Torres Strait Islander descent? YES/NO (circle one)

9 If you require an interpreter, please state which language_____

10 If you receive a pension, please state pension number_____

11 Name of your local doctor (GP)_____

12 Your GP's address and telephone number_____

_____POSTCODE_____TELEPHONE_____

13 Name of specialist doctor you have recently seen (or who has referred you to this program)_____

14 Your specialist's address and telephone number_____

_____POSTCODE_____TELEPHONE_____

For Office Use Only				

15 Do you have private health insurance cover? YES/NO (circle one)

16 If YES, what is the name of the Insurer?_____

17 Your Membership Number:_____18 Your Medicare Number_____

19 Have you been assessed by any other Pain Units? If so, please circle the Unit/s.

Royal Adelaide Hospital / Repatriation General Hospital/ Other _____

IF THIS VISIT IS AS A RESULT OF A WORK PLACE OR MOTOR VEHICLE ACCIDENT/INJURY, PLEASE PROVIDE THE FOLLOWING INFORMATION

20 **Workplace accident or injury**. Please provide the name and address of your Case Manager or other person responsible for accounts

NAME:_____21 ADDRESS_____

_____POSTCODE_____

22 YOUR CLAIM No._____

23 EMPLOYER_____PHONE_____

24 **Motor Vehicle Accident**. If you are entitled to compensation for associated medical costs by the SGIC (Third Party) please advise SGIC CLAIM NUMBER:_____

If your visit is a result of workplace accident/injury, motor vehicle accident or some other legal matter, please advise of name and address of your lawyer.

25 Your lawyer's NAME_____26 ADDRESS_____

_____POSTCODE_____PHONE_____

With regard to workplace accident/injury or motor vehicle accident or other legal claim;

27 Has your compensation case been settled? YES/NO (circle one)

28 If you received a compensation payment, was it satisfactory? YES/NO (circle one)

29 If not settled, when do you think your case will be settled?

Please check ONE of the following

1 In the next six months [ ]
2 In the next twelve months [ ]
3 In the next 1 – 2 years [ ]
4 More than 2 years away [ ]
5 I have no idea [ ]

PAIN HISTORY

Would you please describe the pain problem that brings you to the Pain Unit

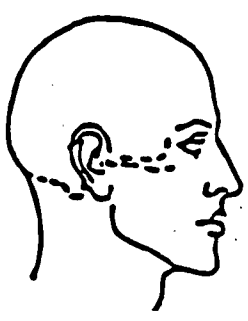
_____

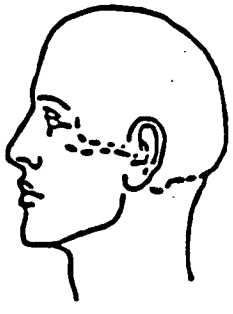
_____

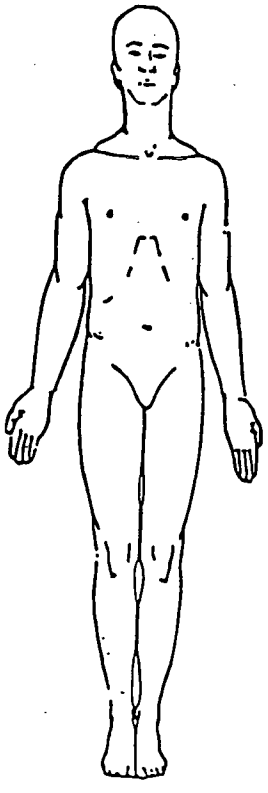
_____

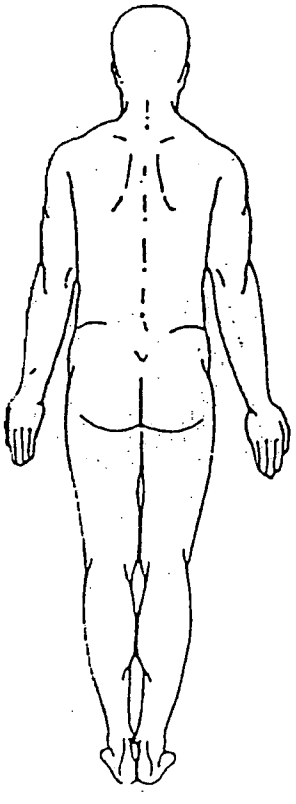
_____

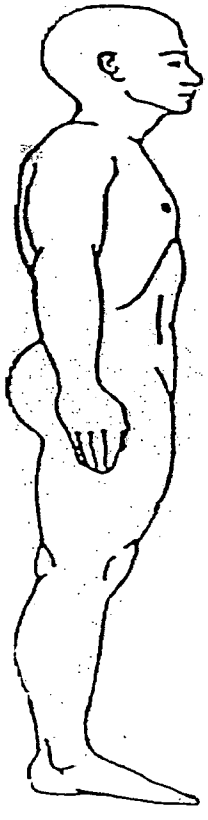
Please indicate with an X on these figures where your main pain is.
Shade any area where your pain spreads.
Please number 2,3,4, etc any other areas where you have pain.

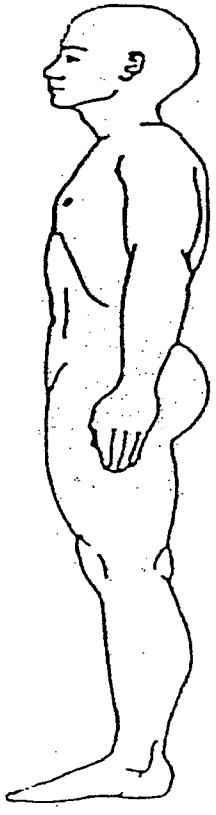












31 Are there any questions you would like your doctor to answer during your assessment at this Pain Unit?

(please write any questions).....

.....

.....

I confirm payment will be met by the relevant organisation/insurer. I accept full responsibility for any such outstanding accounts that may not be accepted by insurance company/solicitor.

Signature:_____ Date:_____

Disclosure of Information

Would you please complete and sign the Authorization to Disclose Information (below) so that the Pain Unit can obtain from other treating practitioners any relevant information that may be of assistance in your attendance within the Unit.

I, _____ do hereby authorise the Pain Management Unit to discuss my pain problems with other professionals and I authorise release of information held in medical records by any medical or allied health practitioner regarding my condition and prior treatment which may be of help to me during my attendance at the Pain Management Unit of the Flinders Medical Centre. Furthermore, I understand that a report will be written following my interdisciplinary pain assessment and a copy of the report will be provided to my referring doctor, to my case manager and to me.

Signed_____ Date_____

Witness_____ Date_____

PAIN RESEARCH STUDY

I understand that the COPER Program will include information provided in this assessment for research aimed at improving chronic pain management. I understand that such use of my information will be anonymous and confidential and will only be used in research reviewed by the Ethics Committee of FMC. I give consent to the COPER Program to make use of my assessment results for such research purposes.

Signed_____ Date_____

Witness_____ Date_____

5 Do you live .... (please check one)

1 [ ] Alone
2 [ ] With partner only
3 [ ] With partner and child/children
4 [ ] With child/children only
5 [ ] With other relative/s
6 [ ] With friend/s or flatmate/s

6 What is your highest level of education (please check one)

1 [ ] Less than Year 9 High School
2 [ ] Year 9 (Intermediate)
3 [ ] Year 11 High School (Leaving)
4 [ ] Year 12 High School (HSC)
5 [ ] Trade Certificate/s
6 [ ] TAFE Certificate/Diploma
7 [ ] CAE Diploma/Degree
8 [ ] University Degree
9 [ ] Other (specify)_____

7 For how long have you lived in Australia? (please check one)

1 [ ] All my life
2 [ ] More than 10 years
3 [ ] 10 years or less

8 What is/was your main occupation before your pain/injury?_____

9 What is your current work status? (please check one)

1 [ ] Working full-time
2 [ ] Working part-time
3 [ ] Working voluntarily (unpaid)
4 [ ] Home Duties
5 [ ] Retired
6 [ ] Student
7 [ ] Unemployed due to pain
8 [ ] Retraining
9 [ ] Unemployed for other reasons (specify)_____

10 What is/are all current source/s of your income? (check as many as apply to you)

1 [ ] Savings/investments
2 [ ] Superannuation pension
3 [ ] Wages/Salary
4 [ ] Partner's salary/earnings
5 [ ] Workers comp. Insurance
6 [ ] Commonwealth Gov Payment (Centrelink)
7 [ ] Other (please specify_____

11 Is your work restricted due to pain
1 YES [ ] 2 NO [ ] 3 Not Applicable [ ]

12 Is your work restricted by medical certificate?
1 YES [ ] 2 NO [ ] 3 Not Applicable [ ]

13 If not working (and you are not retired) how long since you last worked?
_____(years)_____(months)

14 If not working now, do you have a job to go back to?
1 YES [ ] 2 NO [ ] 3 Not Applicable [ ]

15 If not working now and you would like to return to work, do you feel you are currently able to work at your regular job? (check one)

1 [ ] As able to work as I was before my pain/injury

2 [ ] Able to work on reduced hours or duties

3 [ ] Unable to work at my regular job at all

4 [ ] Unable to work at any job at all

16 When did your pain first start? Please be exact as possible

DAY [ ] MONTH [ ] YEAR [ ]

17 How did your pain begin? (check one; if more than one applies, check the one that applies best in your case)

1 [ ] Accident at work
2 [ ] At work, but not an accident
3 [ ] Accident at home
4 [ ] Motor Vehicle accident
5 [ ] After surgery
6 [ ] After an illness
7 [ ] After dental procedure
8 [ ] Pain just began; no known cause
9 [ ] Other reasons (please describe_____

18 Do you blame someone for your present pain/disability YES/NO

19 If yes, please indicate who you blame_____

Perceived response to past treatment

How confident are you that past medical (e.g., medication, surgery) treatments have provided relief for your pain?

1 2 3 4 5

|_____|_____|_____|_____|

Not at all confident

completely confident

Discouragement re future treatment

How confident are you that future medical (e.g., medication, surgery) treatments will provide relief for your pain?

1 2 3 4 5

|_____|_____|_____|_____|

Not at all confident — completely confident

20 Please indicate which statement best describes your pain (if none fits exactly, please check the statement that fits your pain most closely)

1 [ ] Always present; always the same intensity
2 [ ] Always present; intensity varies
3 [ ] Usually present, but short periods without pain
4 [ ] Often present; but pain-free periods lasting up to several hours
5 [ ] Often present, but I am pain-free for much of the day
6 [ ] Occasionally present for brief periods every day
7 [ ] Occasionally present for brief periods but not every day
8 [ ] Rarely present. I have pain episodes but there are days or weeks in between

21 What makes your pain worse? (you can check all that apply to you)

1 sitting	7 household chores	12 cold weather	17 sex
2 standing	8 everything	13 hot weather	18 stress
3 lying down	9 loud noise	14 wet weather	19 tension
4 lifting	10 working	15 weather changes	20 driving
5 bending	11 any movement	16 walking	21 going up/down stairs
6 no clear reason			

Other (please describe)_____

22 What makes your pain better? (you can check all that apply to you)

1 sitting	8 watching TV	14 cold weather	20 sex
2 standing	9 working	15 hot weather	21 alcohol
3 lying down	10 warm/hot bath	16 pressure	22 rest
4 stretching	11 warm/hot shower	17 massage/rubbing	23 nothing
5 relaxing	12 tablets	18 walking	24 being with other people
6 reading	13 hot/cold packs	19 keeping busy	25 keeping my mind off it
7 sleep			

Other (please describe)_____

23 Please rate the **intensity** of your pain by circling a number in the following scales.
For each item, 0 = 'no pain at all' and 10 = 'worst pain imaginable.'

1 How intense is your pain **at this moment**?

0	1	2	3	4	5	6	7	8	9	10
No pain									Worst pain Imaginable	

2 What was the **usual** level of your pain **in the last week**?

0	1	2	3	4	5	6	7	8	9	10
No pain									Worst pain Imaginable	

24 **MEDICATION**

My present medication has the following effects on my pain (please check the one that best fits your recent experience with medication)

1 [ ] It relieves my pain entirely for some hours (complete relief)
2 [ ] It relieves my pain but does not ever get rid of it entirely (moderate relief)
3 [ ] It takes the edge off my pain and that is all (little pain relief)
4 [ ] It does not relieve my pain at all (no pain relief)
5 [ ] It makes my pain worse

25 Do you think that you need more medication or stronger medication than you are currently taking? To answer, circle **one** number on the scale below.

1	2	3	4	5
Agree	Agree	Unsure	Disagree	Disagree strongly

26 Please list **all of the medications** you are taking at present **for all reasons**:

Medication	Dose	How often?	Any side effects?	Date started
.....				
.....				
.....				
.....				
.....				

27 Please list all of the medications you have taken **in the past** for your pain:

Medication	Dose?	How often?	Side effects?	Date?	Comments?

28 Please list any allergies you may have

.....

.....

29 Has a doctor given you a diagnosis or name for the cause of your pain problem?
If so, please write the diagnosis below

.....

30 Based on your experience so far, what do you realistically expect will happen to your pain in the coming months? (check ONE)

1. [ ] It will get worse
2. [ ] It will not change
3. [ ] It will be reduced by 25%
4. [ ] It will be reduced by 50%
5. [ ] It will be reduced by 75%
6. [ ] It will be completely relieved or cured

31 If your pain could be reduced, but not completely removed, how much of a reduction would there need to be for you to feel you can live with it?

My pain would have to be reduced by _____% for me to be able to live with it.

32 Do you believe that your pain may be due to a serious disease which your doctors have not found or have not told you about? (please check one of the options below)

1. [ ] YES
2. [ ] NO
3. [ ] NOT SURE

DISABILITY QUESTIONNAIRE

When you have pain you may find it difficult to do some of the things you normally do. This list contains some sentences that people have used to describe themselves when they have pain. When you read them you may find that some describe you very well as you are today. As you read the list, think of yourself today. When you read a sentence that describes you today, put a {✓} against it. If the sentence does not describe you then leave the box blank and go on to the next one. Remember, only tick the sentence if you are sure that it describes you today.

---

1. I stay at home most of the time because of my pain {1}
2. I change positions frequently to try to get my pain comfortable {2}
3. I walk more slowly than usual because of my pain {3}
4. Because of my pain I am not doing any of the jobs I usually do around the house {4}
5. Because of my pain, I use a handrail to get up stairs {5}
6. Because of my pain, I lie down to rest more often {6}
7. Because of my pain, I have to hold on to something to get out of an easy chair {7}
8. Because of my pain I try to get other people to do things for me {8}
9. I get dressed more slowly than usual because of my pain {9}
10. I only stand up for short periods of time because of my pain {10}
11. Because of my pain, I try not to bend or kneel down {11}
12. I find it difficult to get out of a chair because of my pain {12}
13. I am in pain almost all of the time {13}
14. I find it difficult to turn over in bed because of my pain {14}
15. My appetite is not very good because of my pain {15}
16. I have trouble putting on my socks (or stockings) because of my pain {16}
17. I only walk short distances because of my pain {17}
18. I sleep less well because of my pain {18}
19. Because of my pain, I get dressed with help from someone else {19}
20. I sit down most of the day because of my pain {20}
21. I avoid heavy jobs around the house because of my pain {21}
22. Because of my pain, I am more irritable and bad tempered with people than usual {22}
23. Because of my pain, I go up stairs more slowly than usual {23}
24. I stay in bed most of the time because of my pain {24}

(Roland & Morris, 1983)

DISTRESS ASSOCIATED WITH YOUR PAIN

Please answer all the items
Fill in a circle next to each statement that applies to you over the last week where:
⓪= does not apply to me at all
①=applies to me to some degree or sometimes
②=applies to me to a considerable degree or a good part of the time
③=applies to me very much, or most of the time

Statement	Fill in one circle
1 I found it hard to wind down	⓪ ① ② ③
2 I was aware of episodes of dryness of my mouth	⓪ ① ② ③
3 I did not seem to experience any positive feeling at all	⓪ ① ② ③
4 I experienced episodes of breathing difficulty (eg rapid breathing, breathlessness in the absence of physical exertion)	⓪ ① ② ③
5 I found it difficult to work up the initiative to do things	⓪ ① ② ③
6 I tended to over-react to situations	⓪ ① ② ③
7 I experienced trembling (eg in the hands)	⓪ ① ② ③
8 I felt that I was using a lot of nervous energy	⓪ ① ② ③
9 I was worried about situations in which I might panic and make a fool of myself	⓪ ① ② ③
10 I felt that I had nothing to look forward to	⓪ ① ② ③
11 I found myself getting agitated	⓪ ① ② ③
12 I found it difficult to relax	⓪ ① ② ③
13 I felt down –hearted and blue	⓪ ① ② ③
14 I was intolerant of anything that kept me from getting on with what I was doing	⓪ ① ② ③
15 I felt that I was close to panic	⓪ ① ② ③
16 I was unable to become enthusiastic about anything	⓪ ① ② ③
17 I felt I was not worth much as a person	⓪ ① ② ③
18 I felt that I was rather touchy	⓪ ① ② ③
19 I was aware of the action of my heart in the absence of physical exertion (eg sense of heart rate increase, heart missing a beat)	⓪ ① ② ③
20 I felt scared without any good reason	⓪ ① ② ③
21 I felt that life was meaningless	⓪ ① ② ③

(Lovibond & Lovibond, 1995)

SOME COMMON BELIEFS ABOUT PAIN

Please read each item carefully in terms of your own pain. For each item please indicate your agreement/disagreement by ticking one of the boxes provided. Please ensure that each tick is entirely within one box. Please complete all items.

		Strongly Disagree	Disagree	Agree	Strongly Agree
1	I'm afraid that I might injure myself if I exercise				
2	If I were to try to overcome it, my pain would increase				
3	My body is telling me I have something dangerously wrong				
4	My pain would probably be relieved if I were to exercise				
5	People aren't taking my medical condition seriously enough				
6	My accident has put my body at risk for the rest of my life				
7	Pain always means I have injured my body				
8	Just because something aggravates my pain does not mean its dangerous				
9	I am afraid that I might injure myself accidentally				
10	Simply being careful that I do not make any unnecessary movements is the safest thing I can do to prevent my pain from worsening				
11	I wouldn't have this much pain if there weren't something potentially dangerous going on in my body				
12	Although my condition is painful, I would be better off if I were physically active				
13	Pain lets me know when to stop exercising so that I don't injure myself				
14	It's really not safe for a person with a condition like mine to be physically active				
15	I can't do all the things normal people do because it's too easy for me to get injured				
16	Even though something is causing me a lot of pain, I don't think it's actually dangerous				
17	No one should have to exercise when he/she is in pain				

(Kori & Miller, 1991)

SITUATIONS I TEND TO AVOID

Please fill in a circle that describes how much you would avoid the following situations where: ⓪= would not avoid it, ①=slightly avoid it, ②=definitely avoid it, ③=always avoid it

Situation	Fill in one circle
1 injections or minor surgery	⓪ ① ② ③
2 eating or drinking with other people	⓪ ① ② ③
3 hospitals	⓪ ① ② ③
4 travelling alone or by bus	⓪ ① ② ③
5 walking alone in busy streets	⓪ ① ② ③
6 being watched or stared at	⓪ ① ② ③
7 going into crowded shops	⓪ ① ② ③
8 talking to people in authority	⓪ ① ② ③
9 sight of blood	⓪ ① ② ③
10 being criticised	⓪ ① ② ③
11 going alone far from home	⓪ ① ② ③
12 thought of injury or illness	⓪ ① ② ③
13 speaking or acting to an audience	⓪ ① ② ③
14 large open spaces	⓪ ① ② ③
15 going to the dentist	⓪ ① ② ③
16 other situations (describe)	⓪ ① ② ③

(Marks & Mathews, 1983)

PAIN RELATED THOUGHTS

Most of the time, we have an internal conversation with ourselves. We encourage ourselves, for example, to do certain things, we blame ourselves if we have made a mistake, and we reward ourselves for our accomplishments. When we are in pain, we also say certain things to ourselves that are different from what we say when we are feeling good.
Below, are listed typical thoughts of people in pain. Please read each of the statements, and then mark how often you have this thought *when your pain is severe.* Please circle the appropriate number on the scale ranging from 0=almost never to 5=almost always.

		Almost never					Almost always
1	If I stay calm and relax, things will be better	0	1	2	3	4	5
2	I cannot stand this pain any longer	0	1	2	3	4	5
3	I can do something about my pain	0	1	2	3	4	5
4	No matter what I do my pain doesn't change	0	1	2	3	4	5
5	I need to relax	0	1	2	3	4	5
6	I'll manage	0	1	2	3	4	5
7	I need to take some pain medication	0	1	2	3	4	5
8	I will soon be better again	0	1	2	3	4	5
9	This will never end	0	1	2	3	4	5
10	I am a hopeless case	0	1	2	3	4	5
11	There are worse things than my pain	0	1	2	3	4	5
12	I'll cope with it	0	1	2	3	4	5
13	When will it get worse again?	0	1	2	3	4	5
14	This pain is killing me	0	1	2	3	4	5
15	I can't go on anymore	0	1	2	3	4	5
16	This pain is driving me crazy	0	1	2	3	4	5
17	Distraction helps best	0	1	2	3	4	5
18	I can help myself	0	1	2	3	4	5

(Flor, 1993)

Thank you for completing this questionnaire. We know it has been a time-consuming and tiring task.

However, your pain problem is important to us. We want to have as much accurate information as possible so we can understand your problem.

Flinders Medical Centre Pain and Rehabilitation Unit – COPER PROGRAM