VALIDATION OF THE SPANISH DALLAS PAIN QUESTIONNAIRE

DISSERTATION

Presented to the Graduate Council of the University of North Texas in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

By

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The purpose of this study was to validate the Spanish version of the Dallas Pain Questionnaire (DPQ). Not only does the DPQ offer the potential of statistical and clinical diagnostic value but also is easily interpretable across cultural lines. No such instrument has presently been validated for the Mexican-American population.

A total of 81 Spanish speaking subjects participated in this study. Of these subjects, 56 were classified as chronic pain patients by nature of their medical diagnosis and duration of pain. The 25 normal subjects were family members of the chronic pain patients and members of the Northern New Mexico Hispanic community chosen at random.

Hypothesis one predicted that reliability would be obtained on Spanish speaking populations based on test-retest with correlation coefficients of the items. The second hypothesis predicted that the Spanish DPQ would have content validity or consistent internal structure on those items that measure the trait or behavior of interest based upon factor analysis approaches and internal consistency measures. Hypothesis three predicted that the Spanish
version of the DPQ would significantly correlate with the English version of the DPQ on all four factors.

All four hypotheses were supported. The Spanish DPQ showed reliability over time based on test-retest. The statistics revealed an internally reliable test, alpha coefficient analysis and factor analysis. The validity was supported by significant correlations with the English DPQ and discrimination between chronic and nonchronic pain patients.

While all four hypotheses were upheld, interpretation of the present findings should be moderated by recognition of the limitations of the studies. Future studies should test larger samples to improve confidence in the psychometric properties of the instrument. Still notable limitations of the questionnaire are that the Spanish DPQ is a form that is more accurately viewed as a global measure.
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VALIDATION OF THE SPANISH DALLAS PAIN QUESTIONNAIRE

In the United States today when two people meet, inevitably one of the questions asked will be "What do you do?" Our identity is intrinsically involved in what we do. For those who suffer from chronic pain, this identity can be drastically altered. Productivity becomes impaired, lifestyles change, personal relationships change, self-esteem can be lowered. Hopelessness and helplessness can become the attitude of a once vigorous person (Lawlis & Keeping, 1988).

Chronic pain is manifested in many forms, from headaches, hand pain, jaw tension and pain, to joint pain. However the most common pain complaint is that of lower back pain. Low back pain is believed to affect about 80 percent of all individuals at some time during their active lives (Achterberg & Lawlis, 1980).

Not only is there great personal loss and involvement in chronic pain, but there is a great financial component as well. This can serve to cloud and complicate the work that is done with chronic pain patients. In a survey of inpatient facilities in California (Pheasant, 1977), 72,645 patients were admitted for back-ache in one year. Based on these data, he estimated the national in-hospital treatment
cost to be 1.38 billion dollars. Sixty percent of that was spent on the 25 percent of the patients who had surgical treatment. It has been estimated that the cost for all complications of pain, including out-patient care, loss of work productivity, and compensation payments could be as high as 50 billion dollars annually (Bonica, 1977).

Much harder to evaluate than this heavy financial component is the patient's loss both psychologically and socially. Patients with low back pain are known to experience high levels of anxiety, depression, and feelings of hopelessness and despair (Bonica, 1977b). Both patients and physicians express inward feelings of anger and frustration as the pain continues (Maltbie, Cavenar, Hannett, & Sullivan, 1978). Two-thirds of all chronic pain patients report decreased libido, and one-third report deterioration in their marriages (Maruta & Osborne, 1978).

To complicate this complicated picture even further, pain is a very subjective matter and a very difficult concept to define. One of the best efforts is that of Sternbach (1968).

Pain is an abstract concept which refers to: 1) a personal, private sensation of hurt; 2) a harmful stimulus which signals current or impending tissue damage; 3) a pattern of response which operates to protect the organism from harm. These responses can be
described in terms which reflect certain concepts, i.e., in neurological, physiological, behavioral and affective "languages." (p. 12)

Lawlis (1980) states that pain is usually considered a signal, letting us know that something is wrong. However, once the signal has been noted, any sustained response to the pain can become maladaptive and detrimental to a total lifestyle. Pain can be a shield to hide our insecurities, an excuse for lack of ambition ("Oh my aching back!") and even a retirement fund or a money tree. It may even be a national resource or slogan - ("Give until it hurts."). Pain can be a sanctuary or haven, or perhaps a clock to pass the time. It can be a source of gratification, a sleeping pill, a codeine high, or--at very least--a chance to give oneself permission to take a needed respite.

Interpersonally, pain can be a whip to control one's physician, a pulpit from which to preach a gospel. It can be a weapon to injure friends or family, or a conversational topic for friendly discussion. It can be a form of manipulation, either for the self-perceived victim of selfish children, or as an excuse to be selfish after a lifetime of giving.

Review of the literature of this very complex subject revealed pain to be perhaps the most universal consequence of stress encountered by human beings. Regardless of
sophisticated, technological-surgical-medical advances and a broad, wealthy pharmaceutical industry, pain continues to be a most common and ubiquitous symptom for which patients seek medical care (Achterberg & Lawlis, 1984; Lawlis & McCoy, 1983). It has been estimated that nearly 80 percent of Americans experience significant low back episodes at some time in their lives.

Since pain has traditionally been conceptualized as a neurophysiological event that signals tissue damage, research regarding pain mechanisms initially focused on its presumed nociception characteristics (Hinnant, 1985). Recently, a radiographic imaging technique that has documented degenerative processes, has demonstrated poor correlations between degenerative processes and symptomatology (Mayer et al., 1986). Specific medical diagnoses based on pain alone have been difficult to make because of the subjectivity involved (Cuencas, 1988).

This renewed and increased interest in a multicomponent view of pain has led to investigations which sought to manipulate psychological variables in order to facilitate medical treatment. It is surprising that the increased understanding of psychological actions that modulate pain has not greatly influenced the procedures utilized in the assessment of chronic pain (Tready, Janiner & Friedman, 1982).
Adding to the complexity of this complicated subject is the wide variety of theories of pain. They are numerous and varied in their approach. Among them Nigl (1984) reported that Schieff in 1958 proposed the specificity theory of pain which was the first systematic physiological explanation of the pain experience. The specificity theory maintained that pain is a specific sensation, independent from the other senses, in which the transmission of pain information was thought to be along a direct path from peripheral pain receptors to a pain center in the brain.

In opposition to the specificity theory, Goldscheider (1984) developed the pattern theory (Melzach & Wall, 1965). Goldscheider's work in this area led to the development of the idea that pain was the result of stimulus intensity, and central summation, the key concepts behind the pattern theory (Bonica, 1980).

Melzack and Wall (1965, 1970) developed a modern variant of the pattern theory that has been termed the "gate control" theory. It was developed to account for many of the shortcomings and discrepancies between recently obtained physiological data and existing theories of pain. Scientific evidence of peripheral system specialization suggested part of the specificity theory but there was no empirical support for the assumption of a direct relation between pain intensity and pain perception. Bonica (1980)
stated that available scientific evidence led Melzack and Wall to conclude that the quality and intensity of pain was multi-determined. Consequently, the gate control theory was formulated as a general theory which would allow explanation of the specialization of fibers and receptors, spatial and temporal patterning, and psychological process in pain perception and response. This theoretical model implies a combined mechanism which accounts for the interaction of the three systems. The gate control theory, in the author's words, suggested the following:

(1) the substantia gelatinosa functions as a gate control system that modulated the afferent patterns before they influence the T cells; (ii) the afferent patterns on the dorsal column system act in part at least, as a central control trigger which activates selective brain processes that influence the modulating properties of the gate control system; and (iii) the T cells activate neural mechanisms which comprise the action system responsible for response and perception (Melzack & Wall, 1965; p. 974).

Cuencas (1988) noted that although contradictory evidence has recently accumulated which seriously questions the gating hypothesis, the historic significance of the gate control theory cannot be overemphasized. According to Bonica (1980), Melzack and Wall's theory helped reintroduce
electric stimulation as a therapeutic modality and created a

tremendous upsurge of electrophysiologic and neurochemical
research on pain mechanisms. The gate control theory of
pain also has assisted in broadening the scope of
definitions of pain and treatment approaches. This
multidimensional view of pain which suggests that psychology
has much to contribute to the understanding and treatment of
pain is consistent with the growing field of behavioral
medicine or health psychology (Turk et al., 1983).

The variations in pain are as numerous as the theories of
pain. Further review of the literature revealed that
researchers (Achterberg & Lawlis, 1980; Turk et al., 1983),
having recognized the diversity in type of pain as well as
the difficulties in determining appropriate treatment
procedures, have suggested that health practitioners must
learn to recognize that chronic pain is not due to isolated
causes but is instead the result of multiple, interactive
causes.

Turk et al. (1983) have categorized pain into five
different types: (a) acute pain, usually a limited pain of
six months or less, (b) chronic periodic pain which is
frequently an intermittent recurring pain such as migraine
headache; (c) chronic, intractable, benign pain, which is
usually ever present but to a varying degree of intensity,
such as low back pain; (d) chronic progressive pain, such as
the pain associated with cancer; and (3) experimentally-induced pain of the type used in the research laboratory.

Cuencas (1988) pointed out that because of the fact that pain varies in duration, intensity, quality, and its meaning, it has been helpful to attempt to categorize or distinguish among different types of pain. Pain fibers, that ascend or descend via the lateral spinothalamic fasciculus, are connected to the spinal cord through the spinal ganglion and dorsolateral fasciculus. They terminate on neurons in the dorsal horn of the cord gray matter also called substantia gelatinosa. The intensity of pain signals can be modified markedly as they pass through the neuronal synapse of the gray matter of the dorsal horns, especially in response to simultaneous signals transmitted by mechanoreceptors sensory nerves fibers and in response to signals entering the dorsal horns from the brain via corticofugal fibers.

According to Guyton (1986), as the pain pathways pass into the brain, they separate into two channels or pathways, the "pricking pathway" and the "burning/aching pathway." The pricking pain pathway terminates in the ventrobasal complex in close association with areas of termination of the tactile sensation fibers of both the dorsal-leminiscal system and the spinothalamic system. From here signals are
transmitted into other areas of the thalamus and to the somatic sensory cortex. The pricking pain pathway therefore, is more a sensory mode of perception thought to be more important for localizing pain and not interpreting it. The burning and aching pain fibers terminate in the reticular area of the brain stem and in the intralaminar-nuclei of the thalamus. These are parts of the reticular activating system which sends signals to all points of the brain, especially the thalamus, hypothalamus, and cerebral cortex. The signals that are transmitted through the burning pain pathway can be localized only to very gross areas of the body. Since the higher cortical process is very important in individuals' perceptions and reactions to pain, the cerebral cortex may be involved in the qualitative interpretation of the pain stimulus. All these complex mechanisms somehow demonstrate the relevance of cognitive attentional and behavioral process in pain management (Pomerleau & Bradley, 1979).

Melzack and Wall (1970) emphasized the relevance of the time-course of pain. Transient pain was described as pain of brief duration and little consequence. Usually there has been little damage and rarely has there been any accompanying preoccupation or anxiety. The prick of a hypodermic or stubbed toe would exemplify this type of pain. Acute pain, on the other hand, has usually involved a
combination of pain, tissue damage, and anxiety. The anxiety may have been related to the treatment attempts for relief of pain. There may have been anxiety and fear of future consequences and the possibility of death or prolonged suffering.

It was further noted that Beecher (1956) has studied the relationship of the significance of the wound to the pain experience. In this classical study, evidence was found for a marked functional or psychogenic component to the subjective pain experience which prompted a renewed and expanded interest in pain research. Chronic pain that persists after routine medical and/or surgical interventions frequently is classified as a psychogenic pain in contrast to organic pain that has resulted from detectable tissue damage. Traditional psychological theories have suggested that individuals develop pain as a psychological defense mechanism. In other words, hypochondriacal defenses would allow individuals to avoid dealing with intrapsychic conflicts by focusing on physical complaints. Clinically, these individuals are defined by the presentation of persistent pain complaints without any evidence of organic pathology while individuals with definable organic pathology have been assumed to have "real" pain. Trief, Elliott, Stein, and Frederickson (1987) have suggested that the
distinction between functional and organic patients should be discarded.

Six classes of physiological spinal pain syndromes were noted in a study by Brown (1975). The six classes include:

(a) a spondylogenic syndrome, which was identified by pain caused by disease of the intervertebral disc accompanied by mechanical deficiency and osteoarthritis. Many of the pain sensations in this disorder were explained as a result of muscle spasms secondary to the spinal column tissue damage;

(b) Osteogenic syndromes were defined as pain symptoms due to the presence of lesions or inflammation of rheumatoid spondylitis;

(c) Neurogenic pain syndromes were found to result from compression of spinal nerve roots or neoplasm in the spinal cord;

(d & e) Vascular and viscerogenic pain syndromes were defined by changes in the blood vessels of facies surrounding the organs and cavities near the spinal column; and

(f) Iatrogenic pain syndrome which may have resulted from previous medical treatment. Spinal stenosis, pseudoarthritis, and neural adhesions may have resulted from surgical procedures. These conditions may have led to postoperative pain and a diminution of relief from surgical correction of the original problem.

It was further reported that Jacobson (1970) described three types of tension-pain disorders. Primary disorders were reported to be a result of physical or mental
exhaustion and fatigue which could lead to headache or backache. The secondary disorder was defined as the result of pain caused by an organic cause which could lead to the pain-tension-pain cycle. Back pain patients tended to brace themselves in an attempt to reduce movement of the spinal column. The restriction of movement led to a reduction of elasticity, range of motion, and the tightened painful muscle groups. Finally, Jacobson described the mixed tension-pain disorder which resulted in injury and pain due to physical activity and exertion while under emotional stress or adverse conditions.

A more optimistic addition to this complex subject has emerged in recent literature and studies. Cuencas (1988) pointed out that pain perception involves not only electrical impulses from afferent fibers but also neurochemical events involving endogenous opiate-like peptide molecules which are found throughout the ascending and descending pain pathways. According to Fisher-Williams et al. (1981), research has indicted that a large number of peptides may be produced in specific cells of the brain. With regard to this assumption, Pert, Snowman, and Snyder (1974) discovered that neurons in the brain contain specialized receptors that respond to opiates. In their research into the neurochemistry of pain, Terenius and Wahlstron (1975) reported the existence of a substance in
human cerebrospinal fluid which had a specific affinity for opiate receptors that had been extracted from rat brains. They called this chemical morphine-like factors. Hughes, Smith, Kosterlitz, Fothergill, Morgan, and Morris (1975) suggested that the brain produces two morphine-like factors, which they identified as very small peptide chains, each containing five amino acids. They synthesized these substances and found that the artificial "enkephalins" acted as potent opiates. The two enkephalins, labeled leu-enkephalin and met-enkephalin, were found to bind with opiate receptors even more effectively than morphine.

Carlson (1986) reported that cells producing one of the endogenous opiates synthesized them and also synthesized specialized enzymes that cut the precursor peptides apart at specific locations. The active fragments were stored in vesicles, and the unneeded ones destroyed. Akil, Watson, Young, Lewis, Khachaturina, and Waler (1984) reported three precursors peptides. The first, pro-opiomelanocortin gave rise to several hormones found in the pituitary gland, only one of which served an opiate-like function "beta-endorphin." Beta-endorphins are produced in the neuronal perikarya of the hypothalamus, the thalamus, amygdala, and the central gray matter which contains endorphin projections from the region of the acruate nucleus of the hypothalamus. Although endorphins have not been located in
the dorsal spinal cord, this does not mean that endorphins do not play a major role in pain perception or inhibition. The second, pro-enkephalin, gives rise only to enkephalins of which there are several types. The enkephalins have been found mainly in those areas of the brain associated with pain control, including the periventricular area, the periaqueductal gray, the midline raphe nuclei, the substantia gelatinosa of the dorsal horns in the spinal cord, and the intralaminar nuclei of the thalamus. Finally, the prodynorphin gives rise to several different kinds of dynorphins, another class of opiates that are active in the brain.

Sherman and Liebeskind (1980) found evidence that beta-endorphin-like materials can be found in cerebrospinal fluid after medial brain stem electrical stimulation has relieved pain. It has also been discovered that cerebrospinal fluid endorphin levels are lower in chronic pain patients than in normal subjects. This difference, however, only appears to be significant in chronic neurogenic pain; pain of psychogenic origin does not have the same effect (Almay, Johannson, Knorring, Terenius, & Wahlstrom, 1978).

Electrical stimulation of particular locations within the brain can cause analgesia (Reynolds, 1969). The most effective locations appear to be within the periaqueductal
gray matter and the rostroventral medulla. Mayer and Liebesking (1974) reported that electrical stimulation of the periaqueductal gray matter produced analgesia in rate equivalent to that produced by at least 10 milligrams of morphine per kilogram of body weight, which is a large dose. Thus, analgesic brain stimulation apparently triggers the neural mechanisms that reduce pain. It is well known now, that the periaqueductal gray matter and the rostroventral medulla are two components of a pain-attenuating circuity, which inhibit the firing of neurons in the dorsal horn of the spinal cord gray matter, and their axons give rise to the spinothalmic tract. This activity directly diminishes the signal that gives rise to sensations of pain. In addition, local injections of opiates into the hypothalamus produce change in body temperature which suggests that endogenous opiates may play a role in thermoregulation (Martin & Bacino, 1978). The administration of the drug naloxone reverses the effects of opiates, and disrupts thermoregulatory responses (Holaday, Wei, Loh, & Li, 1978). Endogenous opiates also are involved in the control of blood pressure (Holaday, 1983) and may even be involved in learning, especially in mechanisms of reinforcement (Belluzzi & Stein, 1982). Fields and Levine (1984) have suggested that expectation, environmental cues, stress, and pain may all activate the analgesic system. Their findings
suggested the need for re-evaluation of the analgesia mechanisms involved in acupuncture, hypnosis, and TENS.

The clear challenge, and perhaps the most difficult to address, that has emerged from this illusive and many faceted concept of pain is how to approach assessment. The assessment of pain has traditionally been an unsolvable puzzle for both researchers and clinicians. This is, in part, because measuring pain involves a complex task. This task determines to what degree sensory, cognitive, and emotional factors, as well as soci-cultural based attitudes affect the individual psychological "make-up," while reporting pain (Clark, 1984). The measurement of pain, however is essential not only for the study of pain mechanisms but also becomes critical for optimum treatment planning and for accurately evaluating treatment outcome (Keins, Turk, & Reedy, 1985).

Once again many varieties of pain measurement have been used in the assessment approach. Kalenowski (1985) stated that description and comparison are the two intentions that lie behind any attempt to measure clinical pain.

Achterberg and Lawlis (1984) suggested that the most meaningful correlation of pain has been scaling methods, either numerical or visual, that have objectified the self-report of pain. Achterberg and Lawlis (1984) also pointed out that laboratory techniques have often been crucial in carrying out precise manipulation of variables in well
controlled studies. Nevertheless, the results of the analogue studies have provided little information that can be used to understand clinical pain, especially pain related to chronic disease or disability.

Scott and Huskisson (1976) argued that visual analogue scales further refine the numerical scales. While Keins et al. (1985) pointed out subjective evaluation of pain as being an important factor in determining motivation for treatment and treatment adherence. Among proponents of a cognitive-behavioral perspective of chronic pain that emphasizes patient's perceptions and appraisals are Sanders (1979), Keefe (1982), and Turk and Weins (1983).

Less documented in the literature have been instruments for pain assessment. Kerns et al. (1985) developed the West Haven-Yale Multidimensional Pain Inventory (WHYMPI) designed to provide a brief, but comprehensive assessment of the subjective experience of pain, that could be included as part of an extended assessment protocol in conjunction with other procedures.

The Pain Disability Index (PDI) was developed by Tait, Pollard, Margolis, Duckro, and Krause (1987). The PDI is a seven-item instrument designed to be used as part of a multifaceted clinical assessment battery. It provides important self-report information on levels of disability
related to pain, which could be used in developing treatment plans.

Cuencas (1988) pointed out the need for a time-efficient assessment procedure based on a cognitive-behavioral perspective. In answer to this need, his study of the Dallas Pain Questionnaire, a 16-item visual analogue scale designed to assess the impact of chronic pain patients' daily-work-leisure activities, as well as perceived anxiety-depression and social interest, yielded promising results.

Interpretation of the present findings should be moderated by recognition of the limitation of the studies. Even though a total of 143 subjects participated in this study, some computational analyses were performed with samples of moderate sizes. Large samples should be tested to improve confidence in the psychometric properties of the instrument. Several limitations of the questionnaire should also be noted. First, the DPQ is a form that is more accurately viewed as a global measure. The functional and emotional factors that emerged in the analysis are suggestive and should be researched further. Second, the DPQ has all the shortcomings of any self-report measure.

Despite its limitations, the DPQ appears to have utility both for clinical research purposes and for use in a population with chronic back and related pain problems. The DPQ should be used clinically in combination with physical
assessment, systematic observation of pain behaviors, physiological and functional capacities evaluation, and other measures of the pain experience. As part of a multifaceted clinical assessment battery, the DPQ can provide, through its four categories (daily-work leisure activities, anxiety-depression, and social interests), important self-report information on levels of activities related to pain, which could be used in developing treatment plans. Because of its psychometric properties and ease of administration, the DPQ also has research utility, especially in the longitudinal research increasingly conducted on patients with chronic pain (Cuencas, 1988).

This maze of information has served to make it very apparent that there is much to be tested, evaluated and validated within this complex subject of pain. Most notably lacking in the assessment of pain is validation of instruments for minorities.

The purpose of this study was the validation of the Spanish version of the DPQ. Not only does the DPQ offer the potential of statistical and clinical diagnostic value but it also is easily interpretable across cultural lines. No such instrument has presently been validated for the Mexican-American population.
Hypotheses

Various correlational hypotheses were based on the principles of linear relationship and factor analysis to validate the Spanish DPQ under study.

Hypothesis one. It was predicted that reliability would be obtained on Spanish speaking populations based on test-retest correlational approaches.

Hypothesis two. It was predicted that the Spanish DPQ would have content validity or consistent internal structure on those items that measure the trait or behavior of interest based upon factor analysis approaches and internal consistency measures.

Hypothesis three. It was predicted that the Spanish version of the DPQ would significantly correlate with the English version of the DPQ on all four factors.

Hypothesis four. It was predicted that the Spanish DPQ would discriminate between chronic and non-chronic pain patients.

Method

Subjects

A total of 81 Spanish speaking subjects participated in this study. Of these subjects 56 were classified as chronic pain patients by nature of their medical diagnosis and duration of pain. These subjects were outpatients undergoing pain management training and treatment in a
program that provided physical therapy, functional activities, biofeedback, imagery training, individual and group therapy. This program is designed and maintained by the Margaret Strong Pain Clinic, in Sante Fe, New Mexico. The 25 normal subjects were family members of the chronic pain patients and members of the Northern New Mexico Hispanic community chosen at random. Ages ranged from 15 to 94 years, with the mean age of 41 years.

**Instrument**

The Spanish DPQ is a translation by Cuencas (1988) of the DPQ which is a 16-item visual analogue tool (see Appendix A), and was developed by Lawlis, McCoy, and Selby (1987) for the purpose of evaluating subject's cognitions about the percentage that chronic pain affects four aspects of the patient's life: (a) daily activities including pain and intensity, personal care, lifting, walking, sitting, standing, and sleeping; (b) work and leisure activities including social life, traveling, and vocational; (c) anxiety-depression including anxiety and mood, emotional control, and depression; and (d) social interest that includes interpersonal relationship, social support, and punishing responses. Each item contains its own visual analogue scale (see Appendix A). The scales are divided into five to eight small segments in which the subject is asked to mark an "X" which indicates where his or her pain...
falls on that continuum. Fourteen out of 16 visual scales are anchored at the beginning with works such as "no pain" and zero percent, close to the middle "some," and at the end with "all the time" and 100 percent. Similar words are used according to the item's information. Two items, sections XI and XIII (anxiety/mood and emotional control), are anchored in an opposite direction with 100 percent at the beginning of the scale and zero percent at the end. Psychopathology in this case is indicated following that direction. One of the advantages of this time-efficient and scoring procedures, is that the DPQ's 16-item visual analogue scale can be answered in three to five minutes and it is very easy to score in 50 to 60 seconds or less.

Cuencas's (1988) study of the original DPQ revealed reliabilities of: Daily Activities, .971; Work/Leisure Activities, .984; Anxiety/Depression, .943; and Social Interest, .961. The validity ranges were: Daily Activities (with functional capacity), .63 to .67; Work/Leisure Activities, .63 to .70; and Anxiety/Depression (MMPI measures), .33 to .52. The Social Interest factor was .28.

Procedure

Outpatients completed the Spanish DPQ as a part of a psychological assessment battery required by the program on their day at the clinic. Even though instructions were
printed on the questionnaire (see Appendix A) assistance to the patients was provided by the examiner when extra explanation was needed.

In order to test hypothesis one, all subjects were tested and then retested on their next visit to the clinic. For hypothesis two, the English and Spanish versions were administered at the same time to bilingual patients. Biographical data was collected for age and sex type. To test hypothesis four, normal subjects (non-chronic pain) were selected from family members of the chronic pain patients and from members of the Northern New Mexico Hispanic community.

Chronic pain patients were defined as pain patients who had at least two months of pain and were referred by a physician for treatment of chronic pain.

Results

In order to test hypothesis one, a correlation coefficient of the items was performed. The results (see Table 1) suggest a reliability over time on all but one item, personal care. It is of interest to note that the significance could predictably have been influenced by the fact that this study was performed in the context of a treatment program, affecting more change among subjects.
Table 1

<table>
<thead>
<tr>
<th>Test-Retest Reliability Coefficient</th>
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<tr>
<td>Pain/Intensity</td>
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<tr>
<td>Personal Care</td>
</tr>
<tr>
<td>Lifting</td>
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<tr>
<td>Walking</td>
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<td>Sitting</td>
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<td>Standing</td>
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<tr>
<td>Sleeping</td>
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<tr>
<td>Social Life</td>
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<tr>
<td>Traveling</td>
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<tr>
<td>Vocational</td>
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<tr>
<td>Anxiety/Mood</td>
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<tr>
<td>Emotional Control</td>
</tr>
<tr>
<td>Depression</td>
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<tr>
<td>Interpersonal Relationship</td>
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<tr>
<td>Punishing Responses</td>
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<td>Daily Activities</td>
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<tr>
<td>Work Activities</td>
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<tr>
<td>Anxiety</td>
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<tr>
<td>Social</td>
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Note.  \( N = 37; \) df = 50.

*p < .10; ****p < .01; *****p < .001.
Further, as demonstrated in Table 2, the means and standard deviations of the general factors were compared, indicating extremely small and nonsignificant differences. The fact that although the test-retest correlations were significant, their magnitude was of a moderate level. The combination of these two results would imply that the correlation

<table>
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<th>Source</th>
<th>M</th>
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<td><strong>Daily Activities</strong></td>
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</tr>
<tr>
<td>Retest</td>
<td>29.56</td>
<td>8.49</td>
</tr>
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<td><strong>Work Activities</strong></td>
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<td></td>
</tr>
<tr>
<td>Test</td>
<td>13.68</td>
<td>2.48</td>
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<tr>
<td>Retest</td>
<td>14.52</td>
<td>2.53</td>
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<tr>
<td><strong>Anxiety</strong></td>
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<td></td>
</tr>
<tr>
<td>Test</td>
<td>10.96</td>
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</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test</td>
<td>10.64</td>
<td>3.91</td>
</tr>
<tr>
<td>Retest</td>
<td>11.68</td>
<td>4.02</td>
</tr>
</tbody>
</table>
coefficient may have been decreased by the lack of variance in the range of scores.

The second hypothesis was supported by alpha coefficients for the overall factors and a two factor analysis (see Tables 3 and 4). The factors of daily activities, work, anxiety, and social aspects were significant for the total initial testing \((N = 81)\), as well as the retesting \((N = 37)\) with substantial and acceptable levels. As a supportive analysis, the English version was also analyzed for homogeneity to compare the original development of the DPQ as well as demonstrating an appropriate standard for validity. As can be seen in Table 4, the homogeneity of this test was supported by not only the alpha type reliability, but also the factor analysis. This does give credence to the internal validity of this kind of test. It should also be noted that the Varimax Factor Analysis was computed, terminating when any latent root decreased to below 1.00. The relative loading on this two factor solution accounted for 79 percent of the total variance, depicting the large majority of common variance attributable to what was named a general pain response factor (factor 2) and a functional factor (factor 1). The general response factor was named based on the fact that every item significantly weighted on it despite a Varimax
Table 3

**Homogeneity-Reliability (Alpha)**

<table>
<thead>
<tr>
<th></th>
<th>Initial Testing (N = 81)</th>
<th>Secondary Testing--Spanish (N = 37)</th>
<th>English (N = 56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Activities</td>
<td>.95</td>
<td>.88</td>
<td>.97</td>
</tr>
<tr>
<td>Work/Leisure Activities</td>
<td>.95</td>
<td>.90</td>
<td>.94</td>
</tr>
<tr>
<td>Anxiety Depression</td>
<td>.92</td>
<td>.72</td>
<td>.89</td>
</tr>
<tr>
<td>Social Interest</td>
<td>.93</td>
<td>.91</td>
<td>.84</td>
</tr>
</tbody>
</table>

*p < .0001.

solution. The functional factor was so named because of the high loadings of the functional items involved.

Using the English version of the DPQ as the standard to validate the Spanish version of the DPQ, an inter-item
Table 4

**DPQ Factor Structure Matrix**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor I Functional</th>
<th>Factor II Global</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain/Intensity</td>
<td>.408</td>
<td>.590</td>
</tr>
<tr>
<td>Personal Care</td>
<td>.353</td>
<td>.250</td>
</tr>
<tr>
<td>Lifting</td>
<td>.494</td>
<td>.664</td>
</tr>
<tr>
<td>Walking</td>
<td>.398</td>
<td>.678</td>
</tr>
<tr>
<td>Sitting</td>
<td>.665</td>
<td>.544</td>
</tr>
<tr>
<td>Standing</td>
<td>.526</td>
<td>.725</td>
</tr>
<tr>
<td>Sleeping</td>
<td>.579</td>
<td>.659</td>
</tr>
<tr>
<td>Social Life</td>
<td>.534</td>
<td>.729</td>
</tr>
<tr>
<td>Traveling</td>
<td>.487</td>
<td>.747</td>
</tr>
<tr>
<td>Vocational</td>
<td>.544</td>
<td>.683</td>
</tr>
<tr>
<td>Anxiety/Mood</td>
<td>.471</td>
<td>.659</td>
</tr>
<tr>
<td>Emotional Control</td>
<td>.342</td>
<td>.637</td>
</tr>
<tr>
<td>Depression</td>
<td>.368</td>
<td>.814</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>.309</td>
<td>.800</td>
</tr>
<tr>
<td>Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Support</td>
<td>.498</td>
<td>.646</td>
</tr>
<tr>
<td>Punishing Responses</td>
<td>.054</td>
<td>.898</td>
</tr>
</tbody>
</table>

*Note. N = 81.*
correlation of Spanish/English yielded a significant correlation (see Table 5), therefore supporting the third hypothesis that there would be a significant correlation between the Spanish and the English DPQ. Every item correlated at a significant level ($p < .001$); however, it was again noted that the lowest coefficient was with personal care. This area apparently created differential perceptions among the subjects and may be problematic for measurement.

The results of the analysis of variance on chronic and nonchronic patients yielded a significant difference between groups (see Tables 6 and 7), showing strong support for hypothesis four. As can be seen in Table 6, the means of the chronic pain sample were greater than the nonchronic pain sample, indicating greater impact of pain upon the different aspects of function; however, the standard deviations were relatively equal. The Spanish version of the DPQ discriminates between chronic and nonchronic pain patients.
Table 5

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
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<tr>
<td><strong>Inter-Item Correlation</strong></td>
<td><strong>of</strong></td>
<td><strong>Spanish/English</strong></td>
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<tr>
<td>Pain/Intensity</td>
<td>1</td>
<td>.742</td>
</tr>
<tr>
<td>Personal Care</td>
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<td>.474</td>
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<tr>
<td>Lifting</td>
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<tr>
<td>Walking</td>
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<tr>
<td>Sitting</td>
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<td>.872</td>
</tr>
<tr>
<td>Standing</td>
<td>6</td>
<td>.806</td>
</tr>
<tr>
<td>Sleeping</td>
<td>7</td>
<td>.846</td>
</tr>
<tr>
<td>Social Life</td>
<td>8</td>
<td>.831</td>
</tr>
<tr>
<td>Traveling</td>
<td>9</td>
<td>.795</td>
</tr>
<tr>
<td>Vocational</td>
<td>10</td>
<td>.798</td>
</tr>
<tr>
<td>Anxiety/Mood</td>
<td>11</td>
<td>.622</td>
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<tr>
<td>Emotional Control</td>
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<td>.410</td>
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<tr>
<td>Depression</td>
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<td>.740</td>
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<tr>
<td>Interpersonal Relationship</td>
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<td>.727</td>
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<tr>
<td>Social Support</td>
<td>15</td>
<td>.828</td>
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<tr>
<td>Punishing Responses</td>
<td>16</td>
<td>.749</td>
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<tr>
<td>Daily Activities</td>
<td>17 D</td>
<td>.870</td>
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<tr>
<td>Work Activities</td>
<td>18 W</td>
<td>.844</td>
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<tr>
<td>Anxiety</td>
<td>19 A</td>
<td>.646</td>
</tr>
<tr>
<td>Social</td>
<td>20 S</td>
<td>.831</td>
</tr>
</tbody>
</table>

Note. N = 56.

*p < .001
Table 6
Means and Standard Deviations of Pain and Control Group

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td><strong>Pain Group</strong></td>
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<td></td>
</tr>
<tr>
<td>Daily Activities</td>
<td>29.96</td>
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<tr>
<td>Work Activities</td>
<td>13.68</td>
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<tr>
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<td>10.96</td>
<td>3.19</td>
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<td>3.91</td>
</tr>
<tr>
<td><strong>Control Group</strong></td>
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<td></td>
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<tr>
<td>Daily Activities</td>
<td>11.56</td>
<td>7.80</td>
</tr>
<tr>
<td>Work Activities</td>
<td>4.68</td>
<td>4.14</td>
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<tr>
<td>Anxiety</td>
<td>4.28</td>
<td>2.87</td>
</tr>
<tr>
<td>Social</td>
<td>4.60</td>
<td>3.75</td>
</tr>
</tbody>
</table>

Note.  \( p < .001 \).
Table 7

Analysis of Variance of Pain Versus Control Group

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Daily Activities</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Group</td>
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<td>4232</td>
<td>83.49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Error</td>
<td>48</td>
<td>50.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Work Activities</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>1012.5</td>
<td>86.96</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Error</td>
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<td>11.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Anxiety</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
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<td>557.78</td>
<td>60.57</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Error</td>
<td>48</td>
<td>9.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>456.02</td>
<td>31.01</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Error</td>
<td>48</td>
<td>14.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion

It was hypothesized that the Spanish DPQ would have significant reliability over time, based on test retest. Even though this hypothesis was supported, it was suggested that the significance could have been greater had it not been for the influence of the treatment program.
The treatment program focuses on wellness and drug-free management of pain. Drug intake is replaced with positive pain management techniques which involve imagery, breathing, proper body mechanics accompanied by an overall positive relearning of different life/pain approaches. As stated, this could predictably have a very influential impact on retest pain reports.

In support of hypothesis two, the statistics did reveal a very homogeneous test, not only by alpha coefficient but by factor analysis as well. It leads one to think that chronic pain is a total experience rather than a specific one. In other words, it is not purely a physical limitation, it is not purely a psychological response; but it involves the total participation of one's life, which includes social, vocational, and all other factors. This bears out the idea in the introduction (Lawlis, 1980) of pain becoming a metaphor. It becomes a slogan, a shield, a topic of conversation, a tool for use when interacting with significant others; in short, a new life identity.

Hypothesis three was strongly supported by its close relationship with the English version of the DPQ. Although clinical impressions were not subject to statistical processes to validate the Spanish DPQ, it was noted that the levels of incapacity were strongly related to the scores on the test. People who scored high on the impact of pain were
generally not recommended for surgery because of overriding psychological factors. It was also noted that successful patients showed greatest change over time.

It should be noted that the test discriminated between chronic and nonchronic pain patients. Although it might have been obvious from the content of the items (impact of pain upon function) that the normal patients would score zero, it should be pointed out that the items apparently related to some pain syndrome in many of the control subjects. The scores are not discrete as to samples and does support the notion that pain impact is a continuum. This has great relevance with regard to work performance. It demonstrates that many people perform vocationally with the burden of pain. For example, some of the nurses included in the normal group indicated as much as 50 percent pain impact upon their vocation, yet they maintained their job performance. This indicates that, in return to work decisions to be made by physicians, it may not be necessary to be completely free of pain in order to return to work, but rather a pain tolerance level and proper mechanics of pain management are the important factors to be addressed.

Interpretation of the present findings should be moderated by recognition of the limitation of the studies. As was noted with the study by Cuencas (1988), larger samples should be tested to improve confidence in the
psychometric properties of the instrument. Still notable limitations of the questionnaire are that the Spanish DPQ is a form that is more accurately viewed as a global measure. The functional and emotional factors continue to emerge in the analysis as suggestive and need to be researched further. The English and Spanish versions of the DPQ also have all the shortcomings of any self-report (especially blue-collar workers under Workmen's Compensation) from earnest self-assessment.

The Spanish version of the DPQ revealed additional influences that need further research, most notably was the heavy cultural influences. To be questioned in the self-report is the heavy "macho" influence of the Hispanic male. The cultural concept in the religious view that "suffering is a necessary part of life," needs to be taken into consideration. A portion of the normal population contained several nurses. A high pain involvement was revealed in this population although they were not reported as chronic pain patients. Also of interest in the limitations is that, while validating an instrument for a non-English speaking Hispanic population, a large population of non-Spanish reading subjects were revealed, which greatly hindered data collection. There was also a variety of approaches when answering the questionnaire which added to the difficulty of the scoring.
Despite its limitations, the Spanish version of the DPQ appears to have utility for clinical and research purposes in a population with chronic back and related pain problems. As Cuencas (1988) found and suggested for the English version, the Spanish DPQ should be used clinically in combination with physical assessment, systematic observation of pain behaviors, physiologic and functional capacities, and other measures of pain experience. It is supported that as part of a multifaceted clinical assessment battery, the Spanish DPQ can provide, through its four categories (daily work activities, work/leisure activities, anxiety/depression, and social interest), an important self-report from a non-English speaking population who have heretofore been at a disadvantage when attempting to relate information on levels of activities related to pain. As pointed out by this study and Cuencas's (1988) study, because of its psychometric properties and ease of administration, the English and Spanish versions of the DPQ also have research utility, especially in the longitudinal research increasingly conducted on patients with chronic pain. The Spanish version is seen as extremely important as the numbers of Hispanic laborers and their work-related injuries increase in the Southwest.
Appendix A

Dallas Pain Questionnaire

Spanish
Cuestionario Dallas Para Dolor

Nombre: ____________________ Fecha de nacimiento: ______

Fecha: ____________________ Ocupación: ____________________

Favor de leer: Este cuestionario ha sido diseñado para dar información al doctor de cómo tu vida ha sido afectado por el dolor. Debes estar seguro de que sean tus respuestas. No preguntas a otra persona que conteste el cuestionario por ti. Favor de marcar una "X" a través de la línea que exprese tus pensamientos de 0 a 100 en cada section.

Sección I: Dolor e intensidad

Hasta qué grado requieres de medicamentos o sustancias que calmen el dolor para estar confortable?

Nada Algo Todo el tiempo
0% (____:____:____:____:____:____) 100%

Sección II: Cuidado personal

Cuánto interfiere el dolor con tu cuidado personal (levantándote de la cama, lavándote los dientes, vistiendo, etc.)?

Nada (no pain) Algo No puedo levantarme de la cama
0% (____:____:____:____:____:____) 100%

Sección III: Levantando

Cuánta limitación tienes al levantar?

Nada (puedo levantar como lo hacía) Algo No puedo levantar nada
0% (____:____:____:____:____:____) 100%
Seccion IV: Caminado

Comparando que tan lejos podias caminar antes del accident o problema de espalda, cuanto limita el dolor tu caminar ahora?

<table>
<thead>
<tr>
<th>Puedo caminar</th>
<th>Casi lo mismo</th>
<th>Muy poco</th>
<th>No puedo caminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% (<strong><strong><strong><strong>:</strong></strong></strong></strong>:<strong><strong><strong><strong>:</strong></strong></strong></strong>:________) 100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Seccion V: Sentandote

El dolor de espalda me limita sentarme en una silla hasta el punto de:

<table>
<thead>
<tr>
<th>No dolor, igual que antes</th>
<th>Algo</th>
<th>No poder sentarme</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% (<strong><strong><strong><strong>:</strong></strong></strong></strong>:<strong><strong><strong><strong>:</strong></strong></strong></strong>:________) 100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Seccion VI: Parandote

Cuanto interfiere el dolor con tu tolerancia al pararte por periodos largos?

<table>
<thead>
<tr>
<th>Nada, igual que antes</th>
<th>Algo</th>
<th>No puedo pararme</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% (<strong><strong><strong><strong>:</strong></strong></strong></strong>:<strong><strong><strong><strong>:</strong></strong></strong></strong>:________) 100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Seccion VII: Durmiendo

Cuanto interfiere el dolor cuando duermes?

<table>
<thead>
<tr>
<th>Nada, igual que antes</th>
<th>Algo</th>
<th>No puedo dormir</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% (<strong><strong><strong><strong>:</strong></strong></strong></strong>:<strong><strong><strong><strong>:</strong></strong></strong></strong>:________) 100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D____ x3 ___%

Seccion VIII: Vida Social

Cuanto interfiere el dolor con tu vida social (bailar, jugar, saliendo fuera, comiendo con amigos, etc.)?

<table>
<thead>
<tr>
<th>Nada, igual que antes</th>
<th>Algo</th>
<th>No actividades perdida total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% (<strong><strong><strong><strong>:</strong></strong></strong></strong>:<strong><strong><strong><strong>:</strong></strong></strong></strong>:<strong><strong><strong><strong>:</strong></strong></strong></strong>:<strong><strong><strong><strong>:</strong></strong></strong></strong>) 100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sección IX: Viajando
Cuánto interfiere el dolor cuando viagas en automóvil?

Nada  Algo  No puedo
igual que antes  vajar

0% (____:____:____:____:____:____:____:____) 100%

Sección X: Vocacional

Cuánto interfiere el dolor con tu trabajo?

Nada  Algo  No puedo
no interferencia  trabajar

0% (____:____:____:____:____:____:____:____) 100%

W____ x5____%

Sección XI: Ansiedad/Humor

Cuánto control sientes que tienes sobre las demandas que to hacen?

(sin cambiar)
Total  Algo  Ninguno

100% (____:____:____:____:____:____:____:____) 0%

Sección XII: Control emociones

Cuánto control tienes sobre tus emociones?

(sin cambiar)
Total  Algo  Ninguno

100% (____:____:____:____:____:____:____:____) 0%

Sección XIII: Depresión

¿Tan deprimido te has sentido desde que te inició el dolor?

No deprimido  Demasiado
significante  por la depresión
mente

0% (____:____:____:____:____:____:____:____) 100%

A____ x5 ____%
Sección XIV: Relaciones interpersonales

Cuánto piensas que el dolor te ha hecho cambiar tus relaciones con los demás?

No cambio

Han cambiado drasticamente

0% (___:___:___:___:___:___:___:___:___:___) 100%

Sección XV: Soporte social

Cuánta ayuda necesitas de otros durante tu dolor (para hacer tus tareas, cocinar, etc.)?

No necesito

Todo el tiempo

0% (___:___:___:___:___:___:___:___:___:___) 100%

Sección XVI: Conducta negativa

Cuánta irritación, frustración y coraje piensas que otros expresan a causa de tu dolor?

Nada

Algo

Todo el tiempo

0% (___:___:___:___:___:___:___:___:___:___) 100%

S___ x5 ___%
Solo Para Uso Del Personal

Resumen Del Cuestionario Para Dolor

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>.</td>
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<tr>
<td>90%</td>
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<tr>
<td>80%</td>
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<tr>
<td>70%</td>
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<td>60%</td>
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<tr>
<td>50%</td>
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<tr>
<td>40%</td>
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<tr>
<td>30%</td>
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</tr>
<tr>
<td>20%</td>
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<tr>
<td>10%</td>
<td>.</td>
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<tr>
<td>0%</td>
<td>.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>D</th>
<th>T</th>
<th>A</th>
<th>S</th>
</tr>
</thead>
</table>

D = Actividades diarias
T = Actividades de trabajo y diversion
A = Ansiedad/Depresion
S = Interes social
Appendix B

Dallas Pain Questionnaire

English
Dallas Pain Questionnaire

Name_________________________ Date of Birth________________

Today's Date ________________ Occupation_____________________

Please read: This questionnaire has been designed to give your doctor information as to how your pain has affected your life. Be sure that these are your answers. Do not ask someone else to fill out the questionnaire for you. Please mark an "X" along the line that expresses your thoughts from 0 to 100 in each section.

Section I: Pain and Intensity

To what degree do you rely on pain medications or pain relieving substances for you to be comfortable?

None Some All the time

0% (________:________:________:________:________:________) 100%

Section II: Personal Care

How much does pain interfere with your personal care (getting out of bed, teeth brushing, dressing, etc.)?

None Some I cannot get out of bed

(no pain) (I can lift as I did)

0% (________:________:________:________:________:________) 100%

Section III: Lifting

How much limitation do you notice in lifting?

None Some I cannot lift anything

(I can lift as I did)

0% (________:________:________:________:________:________) 100%
Section IV: Walking

Compared to how far you could walk before your injury or back trouble, how much does pain restrict your walking now?

I can walk the same Almost the same very little I cannot walk

0% (________:____:____:____:____:____) 100%

Section V: Sitting

Back pain limits my sitting in a chair to:

None, pain same as before Some I cannot sit at all

0% (________:____:____:____:____:____) 100%

Section VI: Standing

How much does your pain interfere with your tolerance to stand for long periods?

None same as before Some I cannot stand

0% (________:____:____:____:____:____) 100%

Section VII: Sleeping

How much does pain interfere with your sleeping?

None same as before Some I cannot sleep at all

0% (________:____:____:____:____:____) 100%

D x3 ___%  

Section VIII: Social Life

How much does pain interfere with your social life (dancing, games, going out, eating with friends, etc.)?

None same as before Some No activities total loss

0% (____:____:____:____:____:____:____:____:____) 100%
Section IX: Traveling

How much does pain interfere with traveling in a car?

None  Some  I cannot
same as before

0% (___:____:____:____:____:____:____) 100%

Section X: Vocational

How much does pain interfere with your job?

None  Some  I cannot
No interference  work

0% (___:____:____:____:____:____:____) 100%
W____ x5____%

Section XI: Anxiety/Mood

How much control do you feel that you have over demands made on you?

(No Change)
Total  Some  None

100% (___:____:____:____:____:____:____) 0%

Section XII: Emotional Control

How much control do you feel you have over your emotions?

(No Change)
Total  Some  None

100% (___:____:____:____:____:____:____) 0%

Section XIII: Depression

How depressed have you been since the onset of pain?

Not depressed  Overwhelmed significantly

0% (___:____:____:____:____:____:____) 100%
A____ x5 ____%
**Section XIV: Interpersonal Relationships**

How much do you think your pain has changed your relationships with others?

<table>
<thead>
<tr>
<th>Not Changed</th>
<th>Drastically Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% (_____ : _____ : _____ : _____ : _____ : _____ : _____ : _____)</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Section XV: Social Support**

How much support do you need from others to help you during this onset of pain (taking over chores, fixing meals, etc.)?

<table>
<thead>
<tr>
<th>None needed</th>
<th>All the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% (_____ : _____ : _____ : _____ : _____ : _____ : _____ : _____)</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Section XVI: Punishing Response**

How much do you think others express irritation, frustration or anger toward you because of your pain?

<table>
<thead>
<tr>
<th>None</th>
<th>Some</th>
<th>All the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% (_____ : _____ : _____ : _____ : _____ : _____ : _____ : _____)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>S_____ x5 _____%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
References


Modification and validation for outpatient use. *Journal of Psychopathology and Behavioral Assessment*, 7, 301-315.


